

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	U	Yes	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Cyclotetrasiloxane, octamethyl-			1.0	NJ		No	
Cyclotrisiloxane, hexamethyl-			1.0	NJ		No	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC5	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	Jmw-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	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	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	
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	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:	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	
Dichlorodifluoromethane	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	U	U	Yes	
Trichlorofluoromethane	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	JB	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	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	
Bromochloromethane	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	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	
Methylcyclohexane	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	
Bromodichloromethane	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	U	U	Yes	
1,1,2-Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	UG/L	1.0	U	U	Yes	
1,2-Dibromoethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC5MS	Method:	Aroclor	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
Aroclor-1016	3.1	UG/L	1.0			Yes	
Aroclor-1221	1.0	UG/L	1.0	U	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	U	U	Yes	
Aroclor-1254	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
Sample Number:	E3PC5MS	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)	0.56	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	0.50	UG/L	1.0			Yes	
Aldrin	0.56	UG/L	1.0			Yes	
delta-BHC	0.05	UG/L	1.0	U	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	U	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	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:	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	U	U	Yes	
Pentachlorophenol	42	UG/L	1.0			Yes	
Pyrene	29	UG/L	1.0			Yes	
Hexachloroethane	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)methane	5.0	UG/L	1.0	U	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	
Hexachlorobutadiene	5.0	UG/L	1.0	U	U	Yes	
Caprolactam	5.0	UG/L	1.0	U	U	Yes	
2-Methylnaphthalene	5.0	UG/L	1.0	U	U	Yes	
Hexachlorocyclopentadiene	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	U	U	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2-Chloronaphthalene	5.0	UG/L	1.0	U	U	Yes	
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Dimethylphthalate	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	
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-Chlorophenylphenylether	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-Nitrosodiphenylamine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5-Tetrachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenylphenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenzene	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	
Butylbenzylphthalate	5.0	UG/L	1.0	U	U	Yes	
3,3'-Dichlorobenzidine	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthracene	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	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)anthracene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)perylene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6-Tetrachlorophenol	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	BPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC5MSD	Method:	Aroclor	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
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	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
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	U	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	U	U	Yes	
Toxaphene	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	BPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC5MSD	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		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
Dichlorodifluoromethane	5.0	UG/L	1.0	U	U	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	U	U	Yes	
Chlorobenzene	40	UG/L	1.0			Yes	
Chloroethane	5.0	UG/L	1.0	U	U	Yes	
Trichlorofluoromethane	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	JB	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	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	
Bromochloromethane	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	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	
Methylcyclohexane	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	
Bromodichloromethane	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	U	U	Yes	
1,1,2-Trichloroethane	5.0	UG/L	1.0	U	U	Yes	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	5.0	UG/L	1.0	U	U	Yes	
1,2-Dibromoethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	BPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC5MSD	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
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	U	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)	5.0	UG/L	1.0	U	U	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	U	Yes	
Pentachlorophenol	45	UG/L	1.0			Yes	
Pyrene	29	UG/L	1.0			Yes	
Hexachloroethane	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)methane	5.0	UG/L	1.0	U	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	
Hexachlorobutadiene	5.0	UG/L	1.0	U	U	Yes	
Caprolactam	5.0	UG/L	1.0	U	U	Yes	
2-Methylnaphthalene	5.0	UG/L	1.0	U	U	Yes	
Hexachlorocyclopentadiene	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	U	U	Yes	
1,1'-Biphenyl	5.0	UG/L	1.0	U	U	Yes	
2-Chloronaphthalene	5.0	UG/L	1.0	U	U	Yes	
2-Nitroaniline	10	UG/L	1.0	U	U	Yes	
Dimethylphthalate	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	
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-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-Nitrosodiphenylamine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5-Tetrachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenyl-phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenzene	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	
Butylbenzylphthalate	5.0	UG/L	1.0	U	U	Yes	
3,3'-Dichlorobenzidine	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthracene	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)fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluoranthene	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)anthracene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)perylene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6-Tetrachlorophenol	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC7	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	7mw-05	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
Dichlorodifluoromethane	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	
Trichlorofluoromethane	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	JB	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	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	
Bromochloromethane	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	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	
Methylcyclohexane	5.0	UG/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichloromethane	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	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	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Cyclotrisiloxane, hexamethyl-			1.0	NJ		No	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC7	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	<i>Tm w-05</i>	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	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	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	
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	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:	E3PC7	Method:	BNA	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	<i>7mw-05</i>	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	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	
Hexachloroethane	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)methane	5.0	UG/L	1.0	U	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	
Hexachlorobutadiene	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-Methylnaphthalene	5.0	UG/L	1.0	U	U	Yes	
Hexachlorocyclopentadiene	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-Chloronaphthalene	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	
Dimethylphthalate	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	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	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-Nitrosodiphenylamine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5-Tetrachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenyl-phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Pentachlorophenol	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	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphthalate	5.0	UG/L	1.0	U	U	Yes	
3,3'-Dichlorobenzidine	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthracene	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)fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluoranthene	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)anthracene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)perylene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6-Tetrachlorophenol	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC7	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	TNW-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
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	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
Sample Number:	E3PC8	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-01	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	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	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	
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	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:	E3PC8	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-01	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
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	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
Sample Number:	E3PC8	Method:	BNA	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-01	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
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	
Hexachloroethane	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)methane	5.0	UG/L	1.0	U	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	
Hexachlorobutadiene	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-Methylnaphthalene	5.0	UG/L	1.0	U	U	Yes	
Hexachlorocyclopentadiene	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-Chloronaphthalene	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	
Dimethylphthalate	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	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-Chlorophenylphenylether	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-Nitrosodiphenylamine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5-Tetrachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenylphenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Pentachlorophenol	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	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphthalate	5.0	UG/L	1.0	U	U	Yes	
3,3'-Dichlorobenzidine	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthracene	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)fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluoranthene	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)anthracene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)perylene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6-Tetrachlorophenol	5.0	UG/L	1.0	U	U	Yes	
Triacontane			1.0	NJ		No	
1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester			1.0	NJ		Yes	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC8	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-01	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	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	JB	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	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	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	U	U	Yes	
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	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	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Cyclotetrasiloxane, octamethyl-			1.0	NJ		No	
Cyclotrisiloxane, hexamethyl-			1.0	NJ		No	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC9	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	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	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
Sample Number:	E3PC9	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	F13-02	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
Dichlorodifluoromethane	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	
Trichlorofluoromethane	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	JB	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	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	
Bromochloromethane	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	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	
Methylcyclohexane	5.0	UG/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichloromethane	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	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	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Cyclotetrasiloxane, octamethyl-			1.0	NJ		No	
Cyclotrisiloxane, hexamethyl-			1.0	NJ		No	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PC9	Method:	Pest	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
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	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	
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	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:	E3PC9	Method:	BNA	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
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	
Hexachloroethane	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)methane	5.0	UG/L	1.0	U	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	
Hexachlorobutadiene	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-Methylnaphthalene	5.0	UG/L	1.0	U	U	Yes	
Hexachlorocyclopentadiene	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-Chloronaphthalene	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	
Dimethylphthalate	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	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	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-Nitrosodiphenylamine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5-Tetrachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenyl-phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Pentachlorophenol	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	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphthalate	5.0	UG/L	1.0	U	U	Yes	
3,3'-Dichlorobenzidine	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthracene	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)fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluoranthene	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)anthracene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)perylene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6-Tetrachlorophenol	5.0	UG/L	1.0	U	U	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
Sample Number:	E3PD0	Method:	Aroclor	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PB-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	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
Sample Number:	E3PD0	Method:	BNA	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PS-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	
Hexachloroethane	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)methane	5.0	UG/L	1.0	U	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	
Hexachlorobutadiene	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-Methylnaphthalene	5.0	UG/L	1.0	U	U	Yes	
Hexachlorocyclopentadiene	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-Chloronaphthalene	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	
Dimethylphthalate	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	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	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-Nitrosodiphenylamine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5-Tetrachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenyl-phenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Pentachlorophenol	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	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphthalate	5.0	UG/L	1.0	U	U	Yes	
3,3'-Dichlorobenzidine	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthracene	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	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)anthracene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)perylene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6-Tetrachlorophenol	5.0	UG/L	1.0	U	U	Yes	
Total Alkanes			1.0	J		Yes	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PD0	Method:	VOA_Low_Med	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PB-01	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
Dichlorodifluoromethane	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	
Trichlorofluoromethane	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	B	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	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	
Bromochloromethane	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	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	
Methylcyclohexane	5.0	UG/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichloromethane	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	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	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-Tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Cyclotetrasiloxane, octamethyl-			1.0	NJ		No	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	E3PD0	Method:	Pest	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	pp - 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
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	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	
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	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:	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	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	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	
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	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: SBLK25	Method: BNA	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
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	
Hexachloroethane	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)methane	5.0	UG/L	1.0	U	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	
Hexachlorobutadiene	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-Methylnaphthalene	5.0	UG/L	1.0	U	U	Yes	
Hexachlorocyclopentadiene	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-Chloronaphthalene	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	
Dimethylphthalate	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	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-Chlorophenylphenylether	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-Nitrosodiphenylamine	5.0	UG/L	1.0	U	U	Yes	
1,2,4,5-Tetrachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
4-Bromophenylphenylether	5.0	UG/L	1.0	U	U	Yes	
Hexachlorobenzene	5.0	UG/L	1.0	U	U	Yes	
Atrazine	5.0	UG/L	1.0	U	U	Yes	
Pentachlorophenol	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	
Fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Pyrene	5.0	UG/L	1.0	U	U	Yes	
Butylbenzylphthalate	5.0	UG/L	1.0	U	U	Yes	
3,3'-Dichlorobenzidine	5.0	UG/L	1.0	U	U	Yes	
Benzo(a)anthracene	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)fluoranthene	5.0	UG/L	1.0	U	U	Yes	
Benzo(k)fluoranthene	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)anthracene	5.0	UG/L	1.0	U	U	Yes	
Benzo(g,h,i)perylene	5.0	UG/L	1.0	U	U	Yes	
2,3,4,6-Tetrachlorophenol	5.0	UG/L	1.0	U	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:		Sample Time:	
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoromethane	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	
Trichlorofluoromethane	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	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	
Bromochloromethane	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	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	
Methylcyclohexane	5.0	UG/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichloromethane	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	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	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031	SDG No:	B3PC2	Lab Code:	KAP
Sample Number:	VBLK5Q	Method:	VOA_Low_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	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	4.5	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	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	U	U	Yes	
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	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	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	VBLKFS	Method:	VOA_Low_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	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	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	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	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	U	U	Yes	
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	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	
Tetrachloroethane	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	UJ	Yes	

Case No:	43102	Contract:	EPW11031	SDG No:	E3PC2	Lab Code:	KAP
Sample Number:	VHBLK01	Method:	VOA_Low_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
Dichlorodifluoromethane	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	
Trichlorofluoromethane	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	B	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	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	
Bromochloromethane	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	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	
Methylcyclohexane	5.0	UG/L	1.0	U	U	Yes	
1,2-Dichloropropane	5.0	UG/L	1.0	U	U	Yes	
Bromodichloromethane	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	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	
Tetrachloroethene	5.0	UG/L	1.0	U	U	Yes	
2-Hexanone	10	UG/L	1.0	U	U	Yes	
Dibromochloromethane	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	U	U	Yes	
Isopropylbenzene	5.0	UG/L	1.0	U	U	Yes	
1,1,2,2-tetrachloroethane	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-Trichlorobenzene	5.0	UG/L	1.0	U	U	Yes	
1,2,3-Trichlorobenzene	5.0	UG/L	1.0	U	UJ	Yes	

National Functional Guidelines Report #09

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

VOA_Low_Med	Sample=E3PC2	Location=TMW-01	Matrix=Water	Level=LOW
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National Functional Guidelines Report #09

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=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

National Functional Guidelines Report #09

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=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

National Functional Guidelines Report #09

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

VOA_Low_Med	Sample=E3PC5	Location=TMW-03	Matrix=Water	Level=LOW
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National Functional Guidelines Report #09

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

VOA_Low_Med	Sample=E3PC7	Location=TMW-05	Matrix=Water	Level=LOW
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National Functional Guidelines Report #09

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	RT (mins)	Concentration		Lab Qualifier

National Functional Guidelines Report #09

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

National Functional Guidelines Report #09

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

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

National Functional Guidelines Report #09

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

National Functional Guidelines Report #09

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

National Functional Guidelines Report #09

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

National Functional Guidelines Report #09

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
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National Functional Guidelines Report #09

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

CAS 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

National Functional Guidelines Report #09

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

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

National Functional Guidelines Report #09

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

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

National Functional Guidelines Report #09

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

Tentatively Identified Compounds

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

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

National Functional Guidelines Report #09

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

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

National Functional Guidelines Report #09

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

Tentatively Identified Compounds

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

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

National Functional Guidelines Report #09

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

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

National Functional Guidelines Report #09

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

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

National Functional Guidelines Report #09

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

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 29 Nov 2012

FROM: Timothy Prendiville, Supervisor (SR-6J)
Superfund Contract Management Section

TO: Data User: MDEQ

We have reviewed the data for the following case:

SITE NAME: C+H Tamarack Operations (MI)

CASE NUMBER: 43102 SDG NUMBER: E3PC2

Number and Type of Samples: 8 water samples

Sample Numbers: E3PC2-C5; C7-C9; DO

Laboratory: Kap Technologies Hrs for Review: _____

Following are our findings:

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



Contract Laboratory Program

Sample Delivery Group (SDG) Cover Sheet

SDG Number E3PC2 Case Number 43102 Contract Number EPW11031
Lab Code KAP SDG Turnaround 21 DAY Delivery CLIN(s) _____

First Sample Received in SDG E3PC2 Last Sample Received in SDG E3PC9
First Sample Receipt Date 11/07/2012 Last Sample Receipt Date 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				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Note: There are a maximum of 20 **field** samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature Date 11/16/12

0005

February 2010



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

Case No: 43102
DAS No:
SDG No: E3 PC2 L

Date Shipped: 11/6/12	Chain of Custody Record	Sampler Signature: <i>John Hilberg</i>	For Lab Use Only
Carrier Name: UPS	Relinquished By (Date / Time)	Received By (Date / Time)	Lab Contract No: EPW11031
Airbill: 1Z5490W42210082645	1 <i>John Hilberg</i> 11/6/12-1550		Unit Price:
Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite-A2 The Woodlands TX 77380 (281) 367-0065	2.		Transfer To:
	3.	<i>Andrea V. H.</i>	Lab Contract No:
	4.	11/7/12 10:20	Unit Price:

ORGANIC SAMPLE No.	MATRIX/ 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
E3PC2	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 1st 2nd
E3PD0	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

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): <i>John Hilberg</i>	Cooler Temperature Upon Receipt: 2.9a	Chain of Custody Seal Number: 132745, 132746
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
CLP VOA = CLP TCL Volatiles - water, SVOAPSTPCB = CLP TCL Semivolatiles and Pesticides/				

TR Number: 5-094688160-110212-0007

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 15000 Conference Center Dr., Chantilly, VA. 20151-3819 Phone 703/818-4200; Fax 703/818-4602



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

0284

Case No: 43102
DAS No:
SDG No: E3PC2 L

Date Shipped: 11/6/12 Carrier Name: UPS Airbill: 1Z5490W42210082654 Shipped to: KAP Technologies Inc. 9391 Grogan's Mill Rd. Suite-A2 The Woodlands TX 77380 (281) 367-0065	Chain of Custody Record		Sampler Signature: John Spielberg	For Lab Use Only Lab Contract No: EPI 11031 Unit Price: Transfer To: Lab Contract No: Unit Price:	
	Relinquished By	(Date / Time)	Received By		(Date / Time)
	1 John Spielberg	11/6/12 - 1030			
	2				
	3.		Audrey Store		
	4.		11/7/12 10:20		

ORGANIC SAMPLE No.	MATRIX/ 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
E3PC3	Ground Water/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302077 (Not preserved), 51302078 (Not preserved), 51302079 (HCL), 51302080 (HCL) (4)	TMW-02	11/5/12 - 1350	ME3PC3	S-5281.02
E3PC4	Ground Water/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302083 (Not preserved), 51302084 (Not preserved), 51302085 (HCL), 51302086 (HCL) (4)	TMW-02D	11/5/12 - 1350	ME3PC4	↓ .03

Shipment for Case Complete: <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): John Spielberg	Cooler Temperature Upon Receipt: 3.3°C	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? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
CLP VOA = CLP TCL Volatiles - water, SVOAPSTPCB = CLP TCL Semivolatiles and Pesticides/				

TR Number: 5-094688160-110212-0008

LABORATORY COPY



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

Case No: 43102

DAS No:

SDG No:

E3PC2

L

Date Shipped: 11/6/12	Chain of Custody Record	Sampler Signature: John Gulley	For Lab Use Only
Carrier Name: UPS	Relinquished By (Date / Time)	Received By (Date / Time)	Lab Contract No: EPW11031
Airbill: 1Z5490W42210082663	1. John Gulley 11/6/12 - 11:20		Unit Price:
Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite-A2 The Woodlands TX 77380 (281) 367-0065	2.		Transfer To:
	3.		Lab Contract No:
	4.		Unit Price:

ORGANIC SAMPLE No.	MATRIX/ 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
E3PC5	Ground Water/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302089 (Not preserved), 51302090 (Not preserved), 51302091 (Not preserved), 51302092 (Not preserved), 51302093 (HCL), 51302094 (HCL), 51302095 (HCL), 51302096 (HCL), 51302097 (HCL), 51302098 (HCL) (10)	TMW-03	11/5/12 - 1610	ME3PC5	S-5281.04

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC: E3PC5	Additional Sampler Signature(s): John Gulley	Cooler Temperature Upon Receipt: 3.2°C	Chain of Custody Seal Number: 132749, 132750
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
CLP VOA = CLP TCL Volatiles - water, SVOAPSTPCB = CLP TCL Semivolatiles and Pesticides/				

TR Number: 5-094688160-110212-0009

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, 15000 Conference Center Dr., Chantilly, VA. 20151-3819 Phone 703/818-4200; Fax 703/818-4602

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

Org 7

Case No:	43102
DAS No:	
SDG No:	E3PC2

L

Date Shipped: 11/7/12 Carrier Name: UPS Airbill: 1Z5490W42210082681 Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite-A2 The Woodlands TX 77380 (281) 367-0065	Chain of Custody Record		Sampler Signature: <i>John Spilberg</i>	For Lab Use Only Lab Contract No: EPW11031 Unit Price: Transfer To: Lab Contract No: Unit Price:	
	Relinquished By	(Date / Time)	Received By		(Date / Time)
	1. <i>John Spilberg</i>	11/7/12 - 840			
	2.				
	3.		<i>Nicole Hogue</i>		
	4.		11/8/12 9:35		

ORGANIC SAMPLE No.	MATRIX/ 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
E3PC7	Ground Water/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302109 (Not preserved), 51302110 (Not preserved), 51302111 (HCL), 51302112 (HCL) (4)	TMW-05	11/6/12 - 1006	ME3PC7	8-5294.01
E3PC9	Field QC/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302121 (Not preserved), 51302122 (Not preserved), 51302123 (HCL), 51302124 (HCL) (4)	FB-02	11/6/12 - 1430	ME3PC9	↓ .03 high

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): <i>John Spilberg</i>	Cooler Temperature Upon Receipt: 2.1°	Chain of Custody Seal Number: 132753, 132754
Analysis Key:	Concentration: L = Low/M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
CLP VOA = CLP TCL Volatiles - water, SVOAPSTPCB = CLP TCL Semivolatiles and Pesticides/				

TR Number: 5-094688160-110212-0011

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

Orig⁶

Case No:	43102
DAS No:	
SDG No:	E3PC2
L	
For Lab Use Only	
Lab Contract No:	EPW11031
Unit Price:	
Transfer To:	
Lab Contract No:	
Unit Price:	

Date Shipped: 11/7/12	Chain of Custody Record	Sampler Signature: John Spielberg
Carrier Name: UPS	Relinquished By (Date / Time)	Received By (Date / Time)
Airbill: 1Z5490W42210082672	1 John Spielberg 11/7/12 - 9:15	
Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite-A2 The Woodlands TX 77380 (281) 367-0065	2.	
	3.	Neelke Hoque
	4.	11/8/12 9:35

ORGANIC SAMPLE No.	MATRIX/ 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
E3PC6	Ground Water/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302103 (Not preserved), 51302104 (Not preserved), 51302105 (HCL), 51302106 (HCL) (4)	TMV-04	not sampled	ME3PC6	
E3PC8	Field QC/ JOHN SPIELBERG	L/G	CLP VOA (21), SVOAPSTPCB (21)	51302115 (Not preserved), 51302116 (Not preserved), 51302117 (HCL), 51302118 (HCL) (4)	FB-01	11/5/12 - 1310	ME3PC8	8-5294.02

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): John Spielberg	Cooler Temperature Upon Receipt: 1.9°C	Chain of Custody Seal Number: 132751, 132752
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
CLP VOA = CLP TCL Volatiles - water, SVOAPSTPCB = CLP TCL Semivolatiles and Pesticides/				

TR Number: 5-094688160-110212-0010

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, 15000 Conference Center Dr., Chantilly, VA. 20151-3819 Phone 703/818-4200; Fax 703/818-4602

LABORATORY COPY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ~ REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Sample Delivery Group: E3P02 CERCLIS No: TBA
Case No: 43102 Site Name/Location: C+H Tamarack Operations (MT)
Contractor or EPA Lab: Kap Technologies Data User: MDER
No. of Samples: 8 Date Sampled or Date Received: 29 Nov 2012

Have Chain-of-Custody records been received? Yes ☒ No ☐
Have traffic reports or packing lists been received? Yes ☒ No ☐
If no, are traffic reports or packing list numbers written on the Chain-of-Custody Record?
Yes ☐ No ☐
If no, which traffic report or packing list numbers are missing?

Are basic data forms in? Yes ☒ No ☐
No of samples claimed: 8 No. of samples received:

Received by: Pat Ayner Date: 29 Nov 2012

Received by LSSS: Pat Ayner Date: 3 Dec 2012

Review started: 12-13-12 Reviewer Signature: Dulrah Cunniff

Total time spent on review: 19.5 Date review completed: 12-18-12

Copied by: A. C. Hawley Date: December 20, 2012

Mailed to user by: Pat Ayner Date: 27 Dec 2012

DATA USER:

Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: Date:

Data review received by: Date:

Inorganic Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input type="checkbox"/> T if OK
Organic Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input type="checkbox"/> T if OK
Dioxin data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input type="checkbox"/> T if OK
SAS Data Complete	<input type="checkbox"/> Suitable for Intended Purpose <input type="checkbox"/> T if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

Received by Data Mgmt. Coordinator for Files. Date:

Appendix F
Area Well Logs



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:

Tax No:	Permit No:	County: Houghton	Township: Calumet			
Well ID: 31000000630		Town/Range: 56N 33W	Section: 26	Well Status: Active	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection: 400' w/sw of Wyandotte and Hancock St.; Village of Laurium; Florida location				
		Well Owner: Penninsular Gas Co.				
Elevation:		Well Address:		Owner Address:		
Latitude: 47.221024				Lake Linden Ave.		
Longitude: -88.457636				Laurium, MI		
Method of Collection: Section - Centroid						

Drilling Method: Auger/Bored	Pump Installed: No
Well Depth: 7.00 ft.	Pressure Tank Installed: No
Well Type: Replacement	Pressure Relief Valve Installed: No
Casing Type: PVC plastic	
Casing Joint: Unknown	
Casing Fitting: None	
Height: 3.00 ft. above grade	
Diameter: 2.00 in. to 1.57 ft. depth	
Borehole: 7.00 ft. depth	

Static Water Level: 4.50 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Unknown	See Comments	0.50	0.50
	See Comments	3.00	3.50
	See Comments	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	
10.00 5.00 ft. 1.50 ft. and 6.50 ft.	
Fittings: None	

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags Additives Depth
Unknown	0.00 None
Geology Remarks: stratum 1: silty sand loam w/organics stratum 2: silty clayey sand w/gravel (fill) stratum 3: silty clayey sand w/gravel brown to red-brown (SC-SM)	

Wellhead Completion: Other

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Brad Davis
Type Distance Direction	Employment: Subcontractor
Other 0 ft.	

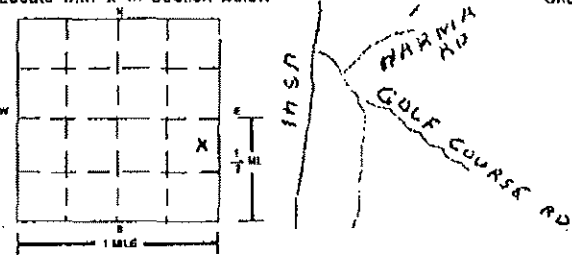
Abandoned Well Plugged: Yes	Contractor Type: Water Well Drilling Contractor Reg No:
	Business Name: Maxim Technologies
	Business Address:

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

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

2

TAX NO:		MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD				PERMIT NO: <u>W9731179</u>	
1. LOCATION OF WELL		Township Name	Fraction	Section No.	Town No.	Range No.	
County <u>HOUGHTON</u>		<u>OSCEOLA</u>	<u>1/4 N 1/4 SE 1/4</u>	<u>26</u>	<u>56N</u>	<u>33W</u>	
Distance and Direction from Road Intersection		3. OWNER OF WELL					
<u>ON HARMMA ROAD EAST OF GOLF COURSE ROAD</u>		Address <u>KARLY DIANE BENOVA</u> <u>RTE 2 BOX 1330</u> <u>CALUMET, MICH. 49913</u>					
Street Address & City of Well Location		Address Same as Well Location <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Locate with 'x' in Section Below		4. WELL DEPTH: <u>125</u> ft. Date Completed <u>9/26/97</u>					
		<input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well					
2. FORMATION DESCRIPTION		5. <input checked="" type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug					
		<input type="checkbox"/> Hollow Rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted <input type="checkbox"/>					
		6. USE: <input checked="" type="checkbox"/> Household <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public					
		<input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat Pump					
		<input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>					
		7. CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Other					
		Height: Above/Below Surface: <u>2</u> ft.					
		Diameter: <u>6</u> in. to <u>22</u> ft. depth					
		Weight: <u>18.92</u> lbs./ft.					
		BORE HOLE: <input checked="" type="checkbox"/> Drive Shoe <input type="checkbox"/> Shale Packer					
		Diameter: <u>8</u> in. to <u>25</u> ft. depth					
		<u>6</u> in. to <u>125</u> ft. depth					
		8. SCREEN: <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Gravel-Packed					
		Type _____ Diameter _____					
		Slot/Gauze _____ Length: _____					
		Set Between _____ ft. and _____ ft.					
		FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank Above Screen					
		9. STATIC WATER LEVEL: <u>17</u> ft. Below Land Surface <input type="checkbox"/> Flowing					
		10. PUMPING LEVEL: Below Land Surface					
		<u>110</u> ft. After <u>1</u> hrs. Pumping at <u>10</u> G.P.M.					
		<input type="checkbox"/> Plunger <input checked="" type="checkbox"/> Bailor <input type="checkbox"/> Air <input type="checkbox"/> Test Pump					
		11. WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade					
		<input type="checkbox"/> Basement Offset <input type="checkbox"/> Well House					
		12. WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From <u>0</u> to <u>25</u> ft.					
		<input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other					
		No. of Bags <u>5</u> Additives _____					
		13. NEAREST SOURCE OF POSSIBLE CONTAMINATION:					
		Type <u>SEPTIC</u> Distance <u>60</u> ft. Direction <u>EAST</u>					
		Type _____ Distance _____ ft. Direction _____					
USE A 2ND SHEET IF NEEDED		14. PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only					
15. ABANDONED WELL PLUGGED? <input type="checkbox"/> Yes <input type="checkbox"/> No		Manufacturer's Name <u>STA-RITE</u>					
Casing Diameter _____ in. Depth _____ ft.		Model Number <u>10R4502J-02</u> HP <u>1/2</u> Volts <u>230</u>					
PLUGGING MATERIAL: <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite Slurry		Length of Drop Pipe <u>110</u> ft. Capacity <u>10</u> G.P.M.					
<input type="checkbox"/> Cement/Bentonite Slurry <input type="checkbox"/> Concrete Grout <input type="checkbox"/> Bentonite Chips		TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Other					
No. of Bags _____ Casing Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No		PRESSURE TANK:					
16. REMARKS: (Elevation, Source of Data, etc.)		Manufacturer's Name <u>A. D. SMITH</u>					
		Model Number <u>V100</u> Capacity <u>12</u> Gallons <u>36</u>					
17. DRILLING MACHINE OPERATOR:		15. WATER WELL CONTRACTOR'S CERTIFICATION:					
<input checked="" type="checkbox"/> Employee <input type="checkbox"/> Subcontractor		This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.					
Name <u>JEFF ESKOLA</u>		<u>KEBANEN WELL & PUMP</u> <u>31-1722</u>					
		REGISTERED BUSINESS NAME REGISTRATION NO.					
		Address <u>RTE. 1 BOX 238 CALUMET, MICH. 49913</u>					
		Signed <u>George Kabanen</u> Date <u>10-1-97</u>					
		AUTHORISED REPRESENTATIVE					

GW-2224 9/93

GEOLOGICAL SURVEY COPY

Authority: Act 366 PA 1978
Completion: Required
Penalty: 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.



Import ID:

Tax No:	Permit No:	County: Houghton	Township: Calumet				
Well ID: 31000001403 Elevation: Latitude: 47.21833 Longitude: -88.43165 Method of Collection: Interpolation-Map		Town/Range: 56N 33W	Section: 25	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 1 MILE SOUTH OF LAURIUM ON HWY M26; THEN 0.25 MILE EAST OF LAURIUM MICHIGAN					
		Well Owner: HARRY ERKKILA					
		Well Address:			Owner Address: 125 SOUTH PEWABIC LAURIUM, MI 49913		

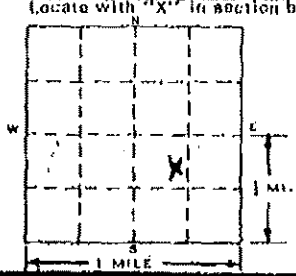
Drilling Method: Cable Tool Well Depth: 205.00 ft. Well Type: Unknown Casing Type: Unknown Casing Joint: Threaded & coupled Casing Fitting: Drive shoe Diameter: 6.00 in. to 25.00 ft. depth Borehole:	Well Use: Unknown Date Completed: 5/22/1972 Height: 2.00 ft. above grade Pump Installed: Yes Pump Installation Date: Manufacturer: F.E. Myers Model Number: B-SG Drop Pipe Length: 168.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: No Pressure Relief Valve Installed: No	Pump Installation Only: No HP: 0.75 Pump Type: Submersible Pump Capacity: Pump Voltage: Drilling Record ID:
Static Water Level: 7.00 ft. Below Grade Well Yield Test: Pumping level 180.00 ft. after 1.00 hrs. at 3 GPM	Yield Test Method: Unknown	
Screen Installed: No Intake: Bedrock Well		
Well Grouted: No		
Wellhead Completion: Pitless adapter		
Nearest Source of Possible Contamination: Type: Septic tank Distance: 75 ft. Direction: Southwest	Drilling Machine Operator Name: Employment: Unknown	
Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor Business Name: EDW SIIRTOLA Business Address:	Reg No: 31-0154
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 Date	

General Remarks:

Other Remarks:

WATER WELL RECORD
ACT 284 PA 1966MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

599

LOCATION OF WELL		Township Name	Fraction	Section Number	Town Number	Range Number
Houghton		Calumet	SENESE	25	56N N/S.	35W E/W.
Distance And Direction from Road Intersections 1 MI. SOUTH OF LAURIUM ON HWY M26, THRU 1/4 MI. EAST OF LAURIUM MICH				3 OWNER OF WELL: HARRY ERIKILA Address 125 SOUTH PEWABIC LAURIUM MICH		
Street Address & City of Well Location Locate with "X" in section below				4 WELL DEPTH: (Completed) Date of Completion 205 ft. MAY 22 1972		
<div style="text-align: center;">Sketch Map: </div>				5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dip <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/>		
				6 USE: <input type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>		
2 FORMATION				7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below Diam. 6 in. to 25 ft. Depth Surface 2 ft. Weight 1845 lb./ft. Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
GRAVELLY SAND		THICKNESS OF STRATUM 25	8 SCREEN: Type: _____ Dia.: _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. Fittings: _____			
HARD LENSE ROCK		180	9 STATIC WATER LEVEL 7 ft. below land surface			
			10 PUMPING LEVEL below land surface 180 ft. after 1 hrs. pumping 2 3/4 g.p.m. _____ ft. after _____ hrs. pumping _____ g.p.m.			
			11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____ Other _____			
			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade			
			13 Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Depth: From _____ ft. to _____ ft.			
			14 Nearest Source of possible contamination 25 feet SW Direction SEPTIC Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
			15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name MYERS Model Number 50727B HP 3/4 Volts 230 Length of Drop Pipe 168 ft. capacity _____ G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating			
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 best of my knowledge and belief. EDW. SIIRTOJA 0154 REGISTERED BUSINESS NAME REGISTRATION NO. Address HANCOCK MICH Signed <i>Edward Siirtola</i> Date 5/16/72 AUTHORIZED REPRESENTATIVE		

JUN 26 1972



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

4
Wellogic

Import ID:

Tax No:		Permit No:		County: Houghton		Township: Calumet	
Well ID: 31000001402		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		56N 33W	25	Active			
		Distance and Direction from Road Intersection: 0.6 MILE EAST OF INTERSECT OF PEPIN ROAD AND M-26					
Elevation:		Well Owner: DAN LEVEQUE					
Latitude: 47.217038		Well Address:				Owner Address:	
Longitude: -88.426249						786 LAKE LINDEN AVENUE	
Method of Collection: Interpolation-Map						LAURIUM, MI 49913	

Drilling Method: Rotary		Pump Installed: Yes		Pump Installation Only: No	
Well Depth: 262.00 ft.		Pump Installation Date:		HP: 0.75	
Well Type: New		Manufacturer: F.E. Myers		Pump Type: Submersible	
Casing Type: Steel - unknown		Model Number: PEPJ710		Pump Capacity: 12 GPM	
Casing Joint: Welded		Drop Pipe Length: 223.00 ft.		Pump Voltage:	
Casing Fitting: Drive shoe		Drop Pipe Diameter:		Drilling Record ID:	
Diameter: 6.00 in. to 25.50 ft. depth		Draw Down Seal Used: No			
Borehole: 8.00 in. to 25.50 ft. depth		Pressure Tank Installed: Yes			
		Pressure Tank Type: Unknown			
		Manufacturer: Amtrol			
		Model Number: 202		Tank Capacity: 30.0 Gallons	
		Pressure Relief Valve Installed: No			
Static Water Level: 9.00 ft. Below Grade		Formation Description		Thickness	Depth to Bottom
Well Yield Test:		Yield Test Method: Unknown			
Pumping level 262.00 ft. after 1.00 hrs. at 4 GPM		Topsoil		4.00	4.00
		Unidentified Consolidated Fm		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.	
Wellhead Completion: Pitless adapter		Geology Remarks:			
Nearest Source of Possible Contamination:		Drilling Machine Operator Name: PAUL ZIEMNICK			
Type		Distance	Direction	Employment: Unknown	
Septic tank		70 ft.	East		
		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:

MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

PERMIT NUMBER: 2572

1 LOCATION OF WELL		31563325002		Tax Parcel No.	
County HOUGHTON		Township Name CALUMET		Fraction NE 1/4 SE 1/4 SE 1/4	
		Section No. 25		Town No. 56 N	
				Range No. 33 W	
Distance And Direction From Road Intersection .6 MILE E OF INTERSECT OF PEPIN RD & M-26				3 OWNER OF WELL LEVEQUE, DAN	
Street Address & City of Well Location				Address 786 LAKE LINDEN AVENUE LAURUM, MI 49913	
Locate with 'x' in Section Below				Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Sketch Map:		4 WELL DEPTH: 262.0 ft.		Date Completed 07/08/94	
		<input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well		5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted	
		6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>		7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Diameter 6.00 in. to 25.5 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter 8.00 in. to 25.5 ft. depth 0.00 in. to 0.0 ft. depth	
2 FORMATION DESCRIPTION		THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM	
TOPSOIL		4.0		4.0	
BEDROCK		258.0		262.0	
				8 SCREEN <input checked="" type="checkbox"/> Not installed Type None Diameter 0.00 SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft. FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Load Packer <input type="checkbox"/> Brenner Check <input type="checkbox"/> Blank above screen 0.0 ft. Other	
				9 STATIC WATER LEVEL: 9.00 ft. below land surface <input type="checkbox"/> Flow	
				10 PUMPING LEVEL: below land surface 262 ft. after 1.0 hrs. pumping at 4 G.P.M. 0 ft. after 0.0 hrs. pumping at 0 G.P.M.	
				11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit	
				12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 25.5 to 4.0 ft. <input checked="" type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other No. of bags of cement 4 Additives	
				13 Nearest source of possible contamination Type Septic Distance 70 ft. Direction E Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
				14 PUMP: <input type="checkbox"/> Not installed <input type="checkbox"/> Pump Installation Only Manufacturer's name MYERS Model number EPJ710HP 3/4 Volts Length of Drop Pipe 223 ft. capacity 12 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturers name Amtrol Model number 202 Capacity Gallons 30	
15 Remarks, elevation, source of data, etc.				16 WATER WELL CONTRACTOR'S CERTIFICATION:	
DIST. 3 OFFICE DNR - ESCANABA, MI JUN 5 1995 Data Source: MDNR				This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.	
				SIIRTOLA WELL DRILLING INC 1677 REGISTERED BUSINESS NAME REGISTRATION NO. Address R#1 BOX 386C, MANCOCK, MI 49930 Signed Date 10/06/94 AUTHORIZED REPRESENTATIVE	
17 Rig Operator's Name:					
Paul Ziemnick					

WATER WELL RECORD ACT 204 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL

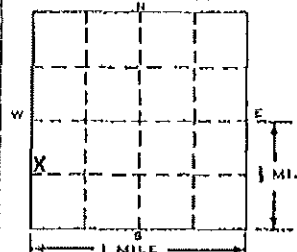
County HOUGHTON	Township Name SCHOOLCRAFT	Fraction SW 1/4 NW 1/4 SW 1/4	Section Number 30	Town Number 56 N/6	Range Number 32 N/W
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Distance And Direction from Road Intersections

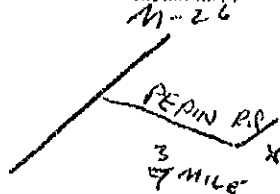
3/4 MILE EAST OF M-26 ON THE PEPIN RD.

Street address & City of Well Location

Locate with "X" in section below



Sketch Map:



3 OWNER OF WELL:

Address

**MARGO PANIAN
 722 WATERWORKS ST.
 CALUMET, MI 49913**

4 WELL DEPTH: (completed) Date of Completion

150 ft. 8/30/82
5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug☐ Hollow rod ☐ Jotted ☐ Bored ☐6 USE: ☒ Domestic ☐ Public Supply ☐ Industry☐ Irrigation ☐ Air Conditioning ☐ Commercial☐ Test Well ☐7 CASING: Threaded ☐ Welded ☒

Diam. _____ Height: Above Ground _____ ft.

6 in. to 25 ft. Depth Surface _____ ft.

_____ in. to _____ ft. Depth Weight **18.97** lbs./ft.Drive Shafts? Yes ☒ No ☐

8 SCREEN: NOT INSTALLED.

Type: _____ Dia: _____

Slot/Gauze _____ Length _____

Set between _____ ft. and _____ ft.

Fittings: _____

9 STATIC WATER LEVEL

20 ft. below land surface

10 PUMPING LEVEL below land surface

140 ft. after **1** hrs. pumping **4** g.p.m.**140** ft. after **2** hrs. pumping **1 1/2** g.p.m.**140** ft. after **2** hrs. pumping **1 1/2** g.p.m.**140** ft. after **2** hrs. pumping **1 1/2** g.p.m.

11 WATER QUALITY in Parts Per Million: UNKNOWN.

Iron (Fe) _____ Chlorides (Cl) _____

Hardness _____ Other _____

12 WELL HEAD COMPLETION: ☐ In Approved Pit☒ Pitless Adapter ☐ 12" Above Grade13 Well Grouted? ☒ Yes ☐ No☒ Neat Cement ☐ Bentonite ☐Depth: From **25** ft. to **SURFACE**.

14 Nearest Source of possible contamination

60 foot **E** Direction **SEPTIC** TypeWell disinfected upon completion ☒ Yes ☐ No15 PUMP: ☐ Not installedManufacturer's Name **MYERS**Model Number **S2JH5258** HP **1/2** Volts **230**Length of Drop Pipe **140** ft. capacity **2 1/2** G.P.M.Type: ☒ Submersible☐ Jet ☐ Reciprocating

2 FORMATION

THICKNESS
OF
STRATUMDEPTH TO
BOTTOM OF
STRATUM

SANDY CLAY AND ROCKS

4

(4)

PORTAGE LAKE LAVA SERIES

146

150

USE A 2ND SHEET IF NEEDED

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 best of my knowledge and belief.

VALLEY WELL & PUMP CORP. 31-1778

REGISTERED BUSINESS NAME

REGISTRATION NO.

Address **RTE 1, Box 212, CALUMET, MI 49913**

Signed

Date **8/30/82**



WATER WELL AND PUMP RECORD

PERMIT NUMBER

1 LOCATION OF WELL		County		Township Name		Fraction		Section Number		Town Number		Range Number	
Houghton		Schoolcraft		NW 1/4 SW 1/4 NW 1/4		30		56 N/S		32 E/W			
Distance And Direction From Road Intersection .6 Mile East of intersect of M-26 and Pepin Rd., then .3 Mile North													
Street Address & City of Well Location													
Locate with "X" in Section Below													
Sketch Map:													
2 FORMATION DESCRIPTION		THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM		3 OWNER OF WELL:							
clayey sand		4		4		Gary Mishica							
clayey sand & gravel		3		7		Address Rte. 1, Box 187A							
bedrock		235		242		Calumet MI 49913							
						Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
						4 WELL DEPTH: Date Completed							
						242 FT. 08 12 91							
						5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug							
						<input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>							
						6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public							
						<input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump							
						<input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>							
						7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded							
						6 in. to 25.5 ft. depth							
						Grouted Drill Hole Diameter							
						8 in. to 25.5 ft. depth							
						Height: Above/Below							
						Surface 1.5 ft.							
						Weight 18/97 lbs./ft.							
						Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
						8 SCREEN: <input checked="" type="checkbox"/> Not Installed							
						Type _____ Diameter _____							
						Slot/Gauze _____ Length _____							
						Set between _____ ft. and _____ ft.							
						FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check							
						<input type="checkbox"/> Blank above screen _____ ft. Other _____							
						9 STATIC WATER LEVEL:							
						20 ft. below land surface <input type="checkbox"/> Flow							
						10 PUMPING LEVEL: below land surface							
						242 ft. after 1 hrs. pumping at 2 G.P.M.							
						ft. after _____ hrs. pumping at _____ G.P.M.							
						11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Fittess adapter <input type="checkbox"/> 12" above grade							
						<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit							
						12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 4 to 25.5 ft.							
						<input type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____							
						No. of bags of cement 4 Additives hi-early							
						13 Nearest source of possible contamination							
						Type septic Distance 175 ft. Direction NE							
						Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
						Was old well plugged? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
						14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only							
						Manufacturer's name Myers							
						Model number 5172 HP 3/4 Volts 230							
						Length of Drop Pipe 232 ft. capacity 11 G.P.M.							
						TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet							
						PRESSURE TANK: Manufacturer's name Amtrol							
						Model number #202 Capacity 30 Gallons							
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.													
Siirtola Well Drilling, Inc. 1677													
REGISTERED BUSINESS NAME REGISTRATION NO.													
Address Rte. 1, Box 386C, Hancock MI 49930													
Signed <u>Paul Siirtola</u> Date 18SEP91													
AUTHORIZED REPRESENTATIVE													

DB7d 2/89



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

7
Wellogix

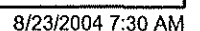
Import ID:

Tax No:	Permit No:	County: Houghton	Township: Schoolcraft				
Well ID: 31000002061 Elevation: Latitude: 47.22009 Longitude: -88.39668 Method of Collection: GPS Std Positioning Svc SA Off		Town/Range: 56N 32W	Section: 29	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 0.3 mi south of Gas Plant Road on Cemetery Road on west side					
		Well Owner: Wilbur Campbell Well Address: 55427 Cemetery Rd Lake Linden, MI 49945					
Owner Address: 217 Calumet Street Lake Linden, MI 49945							

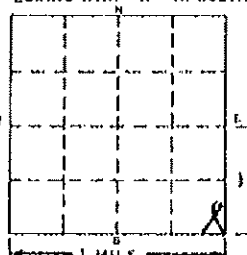
Drilling Method: Cable Tool Well Depth: 143.00 ft. Well Type: New	Well Use: Household Date Completed: 8/18/2008	Pump Installed: Yes Pump Installation Date: 8/18/2008 Manufacturer: Red Jacket Model Number: 50C21112G9 Drop Pipe Length: 128.00 ft. Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No	Pump Installation Only: Yes HP: 0.50 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID:
Casing Type: Steel - black Casing Joint: Casing Fitting: Drive shoe	Height: 1.00 ft. above grade	Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Model Number: V60 Pressure Relief Valve Installed: Yes	Tank Capacity: 20.0 Gallons
Diameter: 5.00 in. to 0.00 ft. depth			
Borehole: 5.00 in. to 143.00 ft. depth			
Static Water Level: 40.00 ft. Below Grade Well Yield Test:	Yield Test Method:	Formation Description	Thickness Depth to Bottom
Screen Installed: No	Intake: Bedrock Well		
Well Grouted: Yes Grouting Material:	Grouting Method: Driven/dry grout Bags Additives Depth None		
Wellhead Completion: Pitless adapter, 12 inches above grade			
Nearest Source of Possible Contamination: Type Distance Direction Septic tank 60 ft. South Drainfield/Dry well 65 ft. South		Drilling Machine Operator Name: Unknown Employment: Employee Pump Installer: Ted Keranen Contractor Type: Water Well Drilling Contractor Business Name: Keranen & Eskola Well Drilling Business Address: 30330 Lincoln School Road, Calumet, MI, 49913	Reg No: 31-2413
		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:



WATER WELL RECORD
ACT 294 PA 1966MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL			3 OWNER OF WELL:		
County	Township Name	Fraction	Section Number	Town Number	Range Number
Houghton	SCHOOL CRAFT	SE 1/4 SE 1/4	29	56 N.	32 W.
Distance And Direction from Road Intersections ABOUT 2 MILES N.E. ON TRAP ROCK RD FROM LAKE LINDEN AT BAY RD INTERSECTION			Address GERALD HARTALA RTE 1, BOX 19E LAKE LINDEN, MI 49945		
Street Address & City of Well Location LAKE LINDEN MI			4 WELL DEPTH: (completed) Date of Completion 69 ft. NOV 3, 1980		
Locate with "X" in section below 			5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dig <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jotted <input type="checkbox"/> Bored <input type="checkbox"/> _____		
Sketch Map:			6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/> _____		
2 FORMATION			7 CASING: Threaded <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Height: Above/Below Diam. _____ Surface _____ ft.		
THICKNESS OF STRATUM			6 in. to 69 ft. Depth Weight 12 1/2 lbs./ft.		
DEPTH TO BOTTOM OF STRATUM			Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/>		
SAND			8 SCREEN: J HUBSON		
SAND - CLAYEY			Type: STAINLESS STEEL 6'		
CLAY			Slot/Gauze: 1012 Length: 6 FT.		
CLAY & GRAVEL			Set between 66 ft. and 69 ft.		
SANDY CLAY			Fittings: STANDARD		
SAND			9 STATIC WATER LEVEL 4 ft. below land surface		
			10 PUMPING LEVEL below land surface 60 ft. after 1 hrs. pumping 20 g.p.m.		
			_____ ft. after _____ hrs. pumping _____ g.p.m.		
			11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____ Other _____		
			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Plastic Adaptor <input type="checkbox"/> 12" Above Grade		
			13 Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> _____ Depth: From _____ ft. to _____ ft.		
			14 Nearest Source of possible contamination 60 feet N Direction SEPTIC Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
			15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name MYERS Model Number SH52-SL HP 1/2 Volts 230 Length of Drop Pipe 44 ft. capacity 2.4 G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating		
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 best of my knowledge and belief. SILVIA WELL DRILLING OISY REGISTERED BUSINESS NAME REGISTRATION NO. Address ROUTE 1, HANCOCK MI Signed <i>Charles Silvius</i> Date 11/14/80 AUTHORIZED REPRESENTATIVE		

DEC 8 1980

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.

9
Wellogic

Import ID:

Tax No:	Permit No:	County: Houghton		Township: Schoolcraft		
Well ID: 31000001568 Elevation: Latitude: 47.21490712 Longitude: -88.38287389 Method of Collection: Interpolation-Map		Town/Range: 56N 32W	Section: 28	Well Status: Active	WSSN:	
		Source ID/Well No:				
		Distance and Direction from Road Intersection: 2 MILE NORTH EAST OF LAKE LINDEN ROAD ON TRAPROCK VALLEY ROAD				
Well Owner: EDWARD J. KRAMER						
Well Address: LAKE LINDEN , MI			Owner Address: ROUTE 1 LAKE LINDEN , MI			

Drilling Method: Cable Tool Well Depth: 73.00 ft. Well Type: Unknown Casing Type: Unknown Casing Joint: Threaded & coupled Casing Fitting: Drive shoe Diameter: 6.00 in. to 69.00 ft. depth Borehole:	Well Use: Household Date Completed: 10/23/1971 Height: 2.00 ft. above grade Pump Installed: No Pressure Tank Installed: No Pressure Relief Valve Installed: No
--	---

Static Water Level: 12.00 ft. Below Grade Well Yield Test: Pumping level 50.00 ft. after 1.00 hrs. at 8 GPM	Formation Description	Thickness	Depth to Bottom
	Clay Gravelly	50.00	50.00
Screen Installed: Yes Screen Diameter: 6.00 in. Screen Material Type: Stainless steel-wire wrapped Slot Length Set Between: 18.00 4.00 ft. 69.00 ft. and 73.00 ft. Fittings: Unknown Well Grouted: No	Gravel Dense	10.00	60.00
	Clay & Sand Gravelly	8.00	68.00
	Sand Water Bearing	5.00	73.00
Wellhead Completion: 12 inches above grade			

Filter Packed: No Blank: *u Nearest Source of Possible Contamination: Type: Septic tank Distance: 60 ft. Direction: North Abandoned Well Plugged: No Reason Not Plugged:	Geology Remarks:
Drilling Machine Operator Name: Employment: Unknown Contractor Type: Water Well Drilling Contractor Business Name: EDW. SIIRTOLA 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:

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL			TOWNSHIP NAME		RANGE NUMBER	
County	Township Name	Fraction	Section Number	Town Number	Range Number	
Houghton	SCHOOL CRAFT	N. 1/4, N. 1/2 E.	28	56N	33W	E/W.
Distance and Direction from Road Intersections			OWNER OF WELL:			
2 MI. NE OF LAKE LINDEN ON TRAP ROCK VALLEY ROAD			EDWARD J KRAMER			
Street address & City of Well Location			Address			
LAKE LINDEN MICH			ROUTE 1 LAKE LINDEN MICH			
Locate with "X" in section below			4 WELL DEPTH: (completed) Date of Completion			
Sketch Map:			73 ft. 10/25/71			
			5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug			
			<input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/>			
			6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry			
			<input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial			
7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/>			Height: Above/Below			
Diam.			Surface 2 ft.			
6 in. to 69 ft. Depth			Weight 19.45 lb./ft.			
in. to ft. Depth			Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
2 FORMATION			8 SCREEN: JOHNSON			
GRAVELLY CLAY	50	50	Type: STAINLESS Dia.: 6 in.			
HEAVY GRAVEL	10	60	Slot/Gauge 018 Length 4 FT.			
GRAVELLY CLAY & SAND	8	68	Set between 69 ft. and 73 ft.			
WATER BEARING SAND	5	73	Fittings: STANDARD			
			9 STATIC WATER LEVEL			
			12 ft. below land surface			
			10 PUMPING LEVEL below land surface			
			50 ft. after 1 hrs. pumping 8			
			ft. after hrs. pumping d.p.m.			
			11 WATER QUALITY in Parts Per Million:			
			Iron (Fe) Chlorides (Cl)			
			Hardness Other			
			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit			
			<input type="checkbox"/> Pillows Adapter <input checked="" type="checkbox"/> 12" Above Grade			
			13 Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
			<input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite			
			Depth: From ft. to ft.			
			14 Nearest Source of possible contamination			
			60 feet NORTH Direction SEPTIC Type			
			Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
			15 PUMP: <input checked="" type="checkbox"/> Not installed			
			Manufacturer's Name			
			Model Number HP Volts			
			Length of Drop Pipe ft. capacity G.P.M.			
			Type: <input type="checkbox"/> Submersible			
			<input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating			
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 best of my knowledge and belief.			
			EDW. SIIRTOLA 0154			
			REGISTERED BUSINESS NAME REGISTRATION NO.			
			Address Hancock MICH			
			Signed Edward Siirtola Date 10/26/71			
			AUTHORIZED REPRESENTATIVE			

USE A 2ND SHEET IF NEEDED

DEC 26 1971

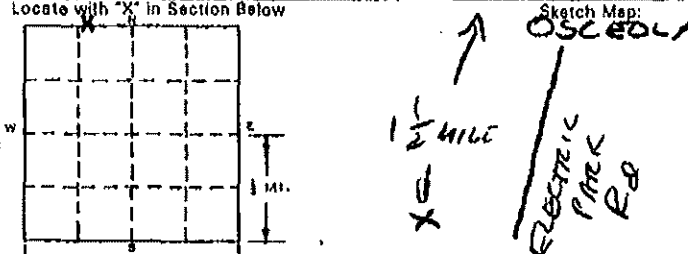
WATER WELL RECORD
ACT 294 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

582

1 LOCATION OF WELL			3 OWNER OF WELL:		
County	Township Name	Fraction	Section Number	Town Number	Range Number
HOUGHTON	SCHOOL CRAFT	SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$	28	56U N/S.	32 W/E/W.
2 DISTANCE AND DIRECTION FROM ROAD INTERSECTIONS			Address		
2 MILES FROM LAKE LINDEN ON THE TRIP ROCK VALLEY ROAD			GUY RHEALT LAKE LINDEN, MICH. 49945		
3 STREET ADDRESS & CITY OF WELL LOCATION			4 WELL DEPTH: (completed) Date of Completion		
LAKE LINDEN MICH			90 ft. JULY 1, 1975		
5 SKETCH MAP:			6 USE: <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Juted <input type="checkbox"/> Bored <input type="checkbox"/>		
6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>			7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below Diam. 6 in. to 69 ft. Depth Surface 2 ft. Weight 18.5 lbs./ft. Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
8 SCREEN:			9 STATIC WATER LEVEL		
Type: _____ Dia.: _____			0 ft. below land surface FLOWING 20 GAL. MIN		
Slot/Gauze _____ Length _____			10 PUMPING LEVEL below land surface		
Set between _____ ft. and _____ ft.			10 ft. after 1 hrs. pumping 60 G.P.M.		
Fittings: _____			_____ ft. after _____ hrs. pumping _____ G.P.M.		
11 WATER QUALITY in Parts Per Million:			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adaptor <input type="checkbox"/> 12" Above Grade		
Iron (Fe) _____ Chlorides (Cl) _____			13 Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/>		
Hardness _____ Other _____			Depth: From _____ ft. to _____ ft.		
14 Nearest Source of possible contamination			15 PUMP:		
100 feet NORTH Direction SEPTIC Type			<input type="checkbox"/> Not installed Manufacturer's Name MYERS Model Number SC525A HP 2 Volts 230 Length of Drop Pipe 21 ft. capacity _____ G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating		
Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			17 WATER WELL CONTRACTOR'S CERTIFICATION:		
16 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. EDW. SIKOTA 0154 REGISTERED BUSINESS NAME REGISTRATION NO. Address RTE 1, HANCOCK MICH Signed (Edward Sikota) Date 7/10/75 AUTHORIZED REPRESENTATIVE		

JUL 28 1975

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORDPERMIT NUMBER

1 LOCATION OF WELL.		County HOUGHTON	Township Name OSCEOLA	Fraction NW 1/4 NE 1/4 NW 1/4	Section Number 34	Town Number 56	Range Number 33 N/S E/W
Distance And Direction From Road Intersection 1 1/2 MILES SOUTH OF OSCEOLA AND 800' WEST OF THE ELECTRIC PARK ROAD.				3 OWNER OF WELL: MR. DENNIS POLZIEN Address OSCEOLA CALUMET, MI 49913 Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
				4 WELL DEPTH: (completed) 152 ft. Date of Completion 6/26/84			
Street Address & City of Well Location Locate with "X" in Section Below 				6 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jolted <input type="checkbox"/>			
				8 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>			
2 FORMATION DESCRIPTION				7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Height: Above/Below <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Surface 2 ft. 6 in. to 43 ft. depth Weight 18.97 lbs./ft. Grouted Drill Hole Diameter <input type="checkbox"/> Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> in. to <input type="checkbox"/> ft. depth <input type="checkbox"/> No <input type="checkbox"/> in. to <input type="checkbox"/> ft. depth			
				8 SCREEN: <input checked="" type="checkbox"/> Not Installed Type _____ Diameter _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank above screen _____ ft. Other _____			
SANDY CLAY AND ROCKS				9 STATIC WATER LEVEL: 5 ft. below land surface <input type="checkbox"/> Flow			
				10 PUMPING LEVEL: below land surface 140 ft. after 2 hrs. pumping at 7 G.P.M. _____ ft. after _____ hrs. pumping at _____ G.P.M.			
SANDY CLAY AND GRAVEL				11 WELL HEAD COMPLETION: <input type="checkbox"/> Pitless adapter <input checked="" type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit			
				12 WELL GROUTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement _____ Additives _____			
SANDY CLAY AND BOULDERS				13 Nearest source of possible contamination Type SEPTIC Distance 75 ft. Direction EAST Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
				14 PUMP: <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name _____ Model number _____ HP _____ Volts _____ Length of Drop Pipe _____ ft. capacity _____ G.P.M. TYPE: <input type="checkbox"/> Submersible <input type="checkbox"/> Jet _____ PRESSURE TANK: Manufacturer's name _____ Model number _____ Capacity _____ Gallons			
PORTAGE LAKE LAVA SERIES				15. Remarks, elevation, source of data, etc.			
USE A 2ND SHEET IF NEEDED				16. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. VALLEY WELL & PUMP CORP. 31-1778 REGISTERED BUSINESS NAME _____ REGISTRATION NO. _____ Address Box 212, CALUMET, MI 49913 Signed <i>[Signature]</i> Date 7/6/84 AUTHORIZED REPRESENTATIVE			

D67d 2/84

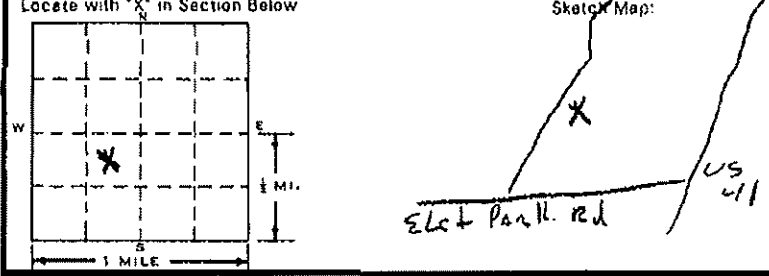
JUL 12 1984 JB

GEOLOGICAL SURVEY COPY

Authority: Act 369 PA 1978
Completion: Required
Penalty: Conviction of a violation of any provision is a

WATER WELL AND PUMP RECORD

PERMIT NUMBER

1 LOCATION OF WELL		2 FORMATION DESCRIPTION		3 OWNER OF WELL	
County Houghton	Township Name Oscoda	Fraction NW 1/4 NE 1/4 SW 1/4	Section Number 34	Town Number 56 N/S	Range Number 33 E/W
Distance and Direction From Road Intersection 3/4 mile W. on Electric Park Rd off US 41 then 3/4 mile W. on East. Calumet MI.		3 OWNER OF WELL: Jackie Wolfe/Rich Soho Address: Calumet, MI			
Street Address & City of Well Location Locate with "X" in Section Below		Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Sketch Map: 		4 WELL DEPTH: 260 ft. Date Completed: 7-28-93 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well			
		5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>			
		6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>			
		7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Height above/below <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Surface 1 ft. 6 in. to 42 ft depth Weight 16.62 lbs./ft. Grouted Drill Hole Diameter <input type="checkbox"/> Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
		8 SCREEN <input checked="" type="checkbox"/> Not Installed Type _____ Diameter _____ Slot/Gauze _____ Length _____ Set between _____ ft and _____ ft FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank above screen _____ ft Other _____			
		9 STATIC WATER LEVEL: 8 ft. below land surface <input type="checkbox"/> Flow			
		10 PUMPING LEVEL below land surface 260 ft after 10 hrs. pumping at 8 G.P.M. _____ ft after _____ hrs. pumping at _____ G.P.M.			
		11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input checked="" type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit			
		12 WELL GROUTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes From _____ to _____ ft <input type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement _____ Additives _____			
		13 Nearest source of possible contamination Type SEWAGE Distance 60 ft. Direction NW Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No			
		14 PUMP: <input type="checkbox"/> Not Installed <input checked="" type="checkbox"/> Pump Installation Only Manufacturer's name Aeromotor Model number _____ HP 3/4 Volts 220 Length of Drop Pipe 200 ft. capacity 6 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's name Con-Air Model number 42-02 Capacity 40 Gallons			
15. Remarks, elevation, source of data, etc. DISCONTINUED		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. S. Koria Kko well drilling 31-1888 REGISTERED BUSINESS NAME REGISTRATION NO. Address Box 24 Topola 49916 Signed [Signature] Date 1-20-94 AUTHORIZED REPRESENTATIVE			
17. Rig Operator's Name: S. Koria Kko MAR 2, 1994					

D67d 2/89



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

13
Wellogic

Import ID:

Tax No:	Permit No:	County: Houghton	Township: Osceola			
Well ID: 31000001410 Elevation: Latitude: 47.210715 Longitude: -88.456858 Method of Collection: Interpolation-Map		Town/Range: 56N 33W	Section: 35	Well Status: Active	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection: 0.375 MILE SOUTHEAST OF US 41 AND 100 FEET SOUTHWEST OF GOLF COURSE ROAD				
		Well Owner: ARNOLD PETERSON				
		Well Address:		Owner Address: ROUTE 1, GOLF COURSE ROAD CALUMET, MI 49913		

Drilling Method: Cable Tool Well Depth: 116.00 ft. Well Type: Unknown Casing Type: Unknown Casing Joint: Welded Casing Fitting: Unknown Diameter: 6.00 in. to 25.00 ft. depth Borehole:	Well Use: Household Date Completed: 12/13/1978 Height: Pump Installed: Yes Pump Installation Date: Manufacturer: Burks Model Number: A3SN6B Drop Pipe Length: 84.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: No Pressure Relief Valve Installed: No	Pump Installation Only: No HP: 0.33 Pump Type: Submersible Pump Capacity: 9 GPM Pump Voltage: Drilling Record ID:
--	--	--

Static Water Level: 11.00 ft. Below Grade Well Yield Test: Pumping level 80.00 ft. after 2.00 hrs. at 10 GPM	Yield Test Method: Unknown	Formation Description	Thickness	Depth to Bottom
		Clay Sandy	6.00	6.00
		Clay & Gravel	8.00	14.00
		See Comments	102.00	116.00

Screen Installed: No Intake: Bedrock Well				

Well Grouted: Yes Grouting Material: Neat cement Grouting Method: Unknown Bags: 0.00 Additives: None Depth: 0.00 ft. to 25.00 ft.	Geology Remarks: PORTAGE LAKE LAVA SERIES
--	---

Wellhead Completion: Pitless adapter	
---	--

Nearest Source of Possible Contamination: Type: Septic tank Distance: 80 ft. Direction: West	Drilling Machine Operator Name: Employment: Unknown
---	--

Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor Business Name: VALLEY PLBG & HTG INC Business Address:	Reg No:
-----------------------------------	---	----------------

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 Date	
----------------------------	--	--

General Remarks:	
Other Remarks:	

WATER WELL RECORD
ACT 294 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL

County HOUGHTON	Township Name OSCEOLA	Fraction SW 1/4 NW 1/4 NE 1/4	Section Number 35	Town Number 56 N 1/2	Range Number 33 E 1/2
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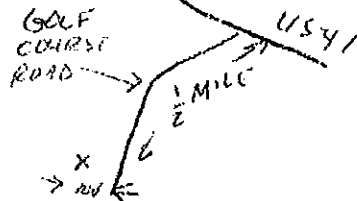
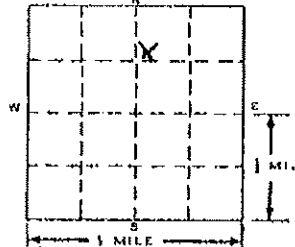
Distance And Direction from Road Intersections

**3/8 MILE SOUTH EAST OF US 41 AND 100'
SOUTHWEST OF GOLF COURSE ROAD.**

Street address & City of Well Location

Locate with "X" in section below

Sketch Map:



3 OWNER OF WELL:

Address

**ARNOLD PETERSON
ROUTE 1, GOLF COURSE RD.
CALUMET, MI 49913**

4 WELL DEPTH: (completed) Date of Completion

116 ft. 12/13/78

5 <input checked="" type="checkbox"/> Cable tool	<input type="checkbox"/> Rotary	<input type="checkbox"/> Driven	<input type="checkbox"/> Dug
<input type="checkbox"/> Hollow rod	<input type="checkbox"/> Jetted	<input type="checkbox"/> Bored	
6 USE: <input checked="" type="checkbox"/> Domestic			
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Industry	
<input type="checkbox"/> Test Well	<input type="checkbox"/> Air Conditioning	<input type="checkbox"/> Commercial	

7 CASING: Threaded ☐ Welded ☒

Height: Above/Below

6 in. to 25 ft. Depth	Surface 1 ft.	Weight 18.9 lb./ft.	Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-----------------------	---------------	---------------------	---

8 SCREEN:

NONE

Type: _____	Dia: _____
Slot/Gauze _____	Length _____
Set between _____ ft. and _____ ft.	
Fittings: _____	

9 STATIC WATER LEVEL

11 ft. below land surface

10 PUMPING LEVEL below land surface

80 ft. after 2 hrs. pumping	10 g.p.m.
ft. after _____ hrs. pumping _____ g.p.m.	

11 WATER QUALITY in Parts Per Million:

UNKNOWN

Iron (Fe) _____ Chlorides (Cl) _____

Hardness _____ Other _____

12 WELL HEAD COMPLETION:

☐ In Approved Pit☒ Pitless Adapter ☐ 12" Above Grade13 Well Grouted? ☒ Yes ☐ No☒ Neat Cement ☐ Bentonite ☐ _____Depth: From **25** ft. to **SURFACE**

14 Nearest Source of possible contamination

80 feet WEST Direction SEPTIC TypeWell disinfected upon completion ☒ Yes ☐ No

15 PUMP:

☐ Not installedManufacturer's Name **BURKS**Model Number **A3SN6B** HP **1/3** Volts **115**Length of Drop Pipe **84** ft. capacity **9** G.P.M.Type: ☒ Submersible☐ Jet☐ Reciprocating

USE A 2ND SHEET IF NEEDED

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 best of my knowledge and belief.

VALLEY PUMP & HTG., Inc. 1681

REGISTERED BUSINESS NAME

REGISTRATION NO.

Address **POB 458, DOLLAR BAY, MI 49922**Signed **Earl B. Jolley**
AUTHORIZED REPRESENTATIVEDate **12/19/78**

JAN 8, 1979

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.

14
Wellogic

Import ID:

Tax No: 31-009-085-028-00	Permit No: W12-31-022	County: Houghton		Township: Osceola		
Well ID: 31000002354 Elevation: Latitude: 47.20825 Longitude: -88.45159 Method of Collection: GPS Std Positioning Svc SA Off		Town/Range: 56N 33W	Section: 35	Well Status: Active	WSSN:	
		Source ID/Well No:				
		Distance and Direction from Road Intersection: 0.5 mile southeast of Hwy US-41 on Golf Course Road on south side				
		Well Owner: Paul & Jill Moyryla				
Well Address: Golf Course Road Calumet, MI 49913		Owner Address: 945 Poplar St. Hancock, MI 49930				

Drilling Method: Cable Tool Well Depth: 265.00 ft. Well Type: New Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe Diameter: 6.00 in. to 25.00 ft. depth Borehole: 9.00 in. to 25.00 ft. depth 6.00 in. to 265.00 ft. depth	Well Use: Household Date Completed: 10/19/2012 Height: 2.00 ft. above grade Pump Installed: Yes Pump Installation Date: 10/19/2012 Manufacturer: Red Jacket Model Number: 100C21112G14 Drop Pipe Length: 250.00 ft. Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Model Number: V100S Pressure Relief Valve Installed: Yes	Pump Installation Only: No HP: 1.00 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: 230 Drilling Record ID: Tank Capacity: 32.0 Gallons
---	--	---

Static Water Level: 59.00 ft. Below Grade Well Yield Test: Pumping level 238.00 ft. after 1.00 hrs. at 1 GPM	Yield Test Method: Bailor	Formation Description	Thickness	Depth to Bottom
		Sand & Stones W/Boulders	5.00	5.00
		Basalt	260.00	265.00

Screen Installed: No Intake: Bedrock Well				

Well Grouted: Yes Grouting Material: Neat cement Grouting Method: Displacement plug Bags: 6.00 Additives: None Depth: 2.00 ft. to 25.00 ft.	Geology Remarks:
--	-------------------------

Wellhead Completion: Pitless adapter, 12 inches above grade
--

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: James Eskola
Type: Septic tank	Employment: Employee
Distance: 100 ft.	Pump Installer: Jeff Eskola
Direction: Southeast	Contractor Type: Water Well Drilling Contractor
Drainfield/Dry well: 100 ft.	Reg No: 31-2413

Business Name: Keranen and Eskola Well Drilling, Inc.
Business Address: 30330 Lincoln School Road, Calumet, MI, 49913

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	Date
---	-------------

General Remarks:

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.

15
Wellogic

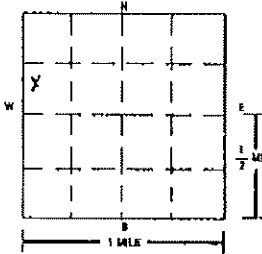
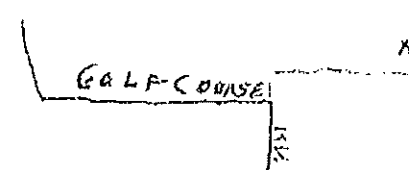
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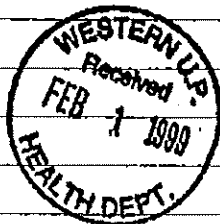
Tax No:	Permit No: W9931023	County: Houghton	Township: Calumet				
Well ID: 31000001450		Town/Range: 56N 33W	Section: 36	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 1500 FEET SOUTHEAST OF GOLF COURSE ROAD					
		Well Owner: JOHN HOLME					
Elevation:		Well Address:		Owner Address:			
Latitude: 47.209512		RR2 BOX 1265		RR2 BOX 1265			
Longitude: -88.446683		CALUMET, MI 49913		CALUMET, MI 49913			
Method of Collection: Interpolation-Map							

Drilling Method: Cable Tool	Pump Installed: Yes	Pump Installation Only: No	
Well Depth: 65.00 ft.	Pump Installation Date:	HP: 0.50	
Well Type: New	Manufacturer: Sta-Rite	Pump Type: Submersible	
Casing Type: Steel - unknown	Model Number: 10P4C025-0	Pump Capacity: 10 GPM	
Casing Joint: Welded	Drop Pipe Length: 40.00 ft.	Pump Voltage:	
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:	
Diameter: 6.00 in. to 28.00 ft. depth	Draw Down Seal Used: No		
Borehole: 6.00 in. to 65.00 ft. depth	Pressure Tank Installed: Yes		
	Pressure Tank Type: Unknown		
	Manufacturer: A.O. Smith		
	Model Number: V-60	Tank Capacity: 6.0 Gallons	
	Pressure Relief Valve Installed: No		
Static Water Level: 13.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Clay	3.00	3.00
Yield Test Method: Test pump	Boulders	1.00	4.00
Pumping level 60.00 ft. after 1.00 hrs. at 8 GPM	Clay & Stones	4.00	8.00
Screen Installed: No	Clay & Boulders	5.00	13.00
Intake: Bedrock Well	Clay & Stones	15.00	28.00
	Unidentified Consolidated Fm	37.00	65.00
Well Grouted: Yes	Grouting Method: Unknown		
Grouting Material	Bags	Additives	Depth
Bentonite dry granular	4.00	None	
Wellhead Completion: Pitless adapter	Geology Remarks:		
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: JEFF ESKOLA		
Type	Employment: Employee		
Septic tank			
	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	Date	

General Remarks:

Other Remarks:

TAX NO:		MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD				<div style="font-size: 2em; float: right; margin-right: 10px;">15</div> PERMIT NO: <u>W 9931023</u>	
1. LOCATION OF WELL		Township Name		Fraction	Section No.	Town No.	Range No.
County <u>Houghton</u>		<u>Calumet</u>		<u>NW 1/4 Sec 36 T4N R14W</u>	<u>36</u>	<u>56</u>	<u>33</u>
Distance and Direction from Road Intersection							
<u>1500 FEET SOUTH EAST OF GOLF COURSE ROAD</u>							
Street Address & City of Well Location							
Address Same as Well Location <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
2. FORMATION DESCRIPTION				3. OWNER OF WELL			
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Locate with 'X' in Section Below</p>  </div> <div style="flex: 1;"> <p>Sketch Map</p>  </div> </div>				Address <u>JOHN HOLME</u> <u>RR 2 BOX 1265</u> <u>CALUMET, MICH. 49913</u>			
				4. WELL DEPTH: <u>65</u> ft. Date Completed <u>12/15/98</u> <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well			
				5. <input checked="" type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow Rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted <input type="checkbox"/>			
				6. USE: <input checked="" type="checkbox"/> Household <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>			
				7. CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Other Diameter: <u>6</u> in. to <u>28</u> ft. depth BORE HOLE: Diameter: <u>6</u> in. to <u>65</u> ft. depth <input checked="" type="checkbox"/> Drive Shoe <input type="checkbox"/> Shale Packer			
				8. SCREEN: <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Gravel-Packed Type _____ Diameter _____ Set/Gauge _____ Length _____ Set Between _____ ft. and _____ ft. FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank Above Screen _____ ft. Other _____			
9. STATIC WATER LEVEL: <u>13</u> ft. Below Land Surface <input type="checkbox"/> Flowing							
10. PUMPING LEVEL: Below Land Surface <u>60</u> ft. After <u>1</u> hrs. Pumping at <u>8</u> G.P.M. <input type="checkbox"/> Plunger <input type="checkbox"/> Bailor <input type="checkbox"/> Air <input checked="" type="checkbox"/> Test Pump							
11. WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade <input type="checkbox"/> Basement Offset <input type="checkbox"/> Well House							
12. WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Neat Cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of Bags <u>4</u> Additives _____							
13. NEAREST SOURCE OF POSSIBLE CONTAMINATION: Type <u>SEPTIC</u> Distance <u>75</u> ft. Direction <u>NW</u> Type _____ Distance _____ ft. Direction _____							
14. PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's Name <u>STA-RITE</u> Model Number <u>OP4C02502</u> HP <u>1/2</u> Volts <u>230</u> Length of Drop Pipe <u>40</u> ft. Capacity <u>10</u> G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Other _____ PRESSURE TANK: Manufacturer's Name <u>HO SMITH</u> Model Number <u>V-60</u> Capacity <u>6</u> Gallons <u>20</u>							
15. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief <u>KERANEN WELL & PUMP 31-1722</u> REGISTERED BUSINESS NAME REGISTRATION NO. Address <u>RR 1 BOX 238 CALUMET, MICH.</u> Signed <u>George Keranen</u> Date <u>1-14-99</u> AUTHORIZED REPRESENTATIVE							
16. REMARKS: (Elevation, Source of Data, etc.)							
17. DRILLING MACHINE OPERATOR: <input checked="" type="checkbox"/> Employee <input type="checkbox"/> Subcontractor Name <u>JEFF ESKOLA</u> <u>MASTER LIST</u>							



USE A 2ND SHEET IF NEEDED

15. ABANDONED WELL PLUGGED? ☐ Yes ☐ No

Casing Diameter _____ in. Depth _____ ft.

PLUGGING MATERIAL: ☐ Neat Cement ☐ Bentonite Slurry
☐ Cement/Bentonite Slurry ☐ Concrete Grout ☐ Bentonite Chips
 No. of Bags _____ Casing Removed? ☐ Yes ☐ No

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

17. DRILLING MACHINE OPERATOR:

☒ Employee ☐ Subcontractor

Name JEFF ESKOLA

MASTER LIST

GW-2-228 9-93

GEOLOGICAL SURVEY COPY

Authority: Act 368 PA 1976
 Completion: Required
 Penalty: 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.

16
Wellogic

Import ID:

Tax No:	Permit No:	County: Houghton	Township: Calumet				
Well ID: 31000001414 Elevation: Latitude: 47.210579 Longitude: -88.434816 Method of Collection: Interpolation-Map		Town/Range: 56N 33W	Section: 36	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 1.2 MILES SOUTH OF LAURIUM ON HIGHWAY M 26					
		Well Owner: ROY HOOGANA					
Well Address:				Owner Address: M-26 LAURIUM, MI 49913			

Drilling Method: Rotary Well Depth: 240.00 ft. Well Type: Unknown Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe Diameter: Borehole:	Well Use: Household Date Completed: 8/30/1981 Height: Pump Installed: Yes Pump Installation Date: Manufacturer: F.E. Myers Model Number: SG72-7B Drop Pipe Length: 231.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Well-X-Trol Model Number: 252 Pressure Relief Valve Installed: No	Pump Installation Only: No HP: 0.75 Pump Type: Submersible Pump Capacity: Pump Voltage: Drilling Record ID: Tank Capacity: 100.0 Gallons
---	--	--

Static Water Level: 20.00 ft. Below Grade Well Yield Test: Pumping level 240.00 ft. after 1.00 hrs. at 2 GPM	Yield Test Method: Unknown	Formation Description	Thickness	Depth to Bottom
		Sand Clayey	4.00	4.00
		Clay & Gravel	8.00	12.00
		Unidentified Consolidated Fm	228.00	240.00

Screen Installed: No Intake: Bedrock Well				

Well Grouted: Yes Grouting Material: Neat cement Bags: 6.00 Additives: None Grouting Method: Unknown Depth: 4.00 ft. to 25.00 ft.	Geology Remarks:
--	------------------

Wellhead Completion: Pitless adapter	
--------------------------------------	--

Nearest Source of Possible Contamination: Type: Septic tank Distance: 50 ft. Direction: East	Drilling Machine Operator Name: Employment: Unknown
---	--

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

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 Date	
---------------------	--	--

General Remarks:
Other Remarks:

WATER WELL AND PUMP RECORD

PART 127 ACT 368, P.A. 1978

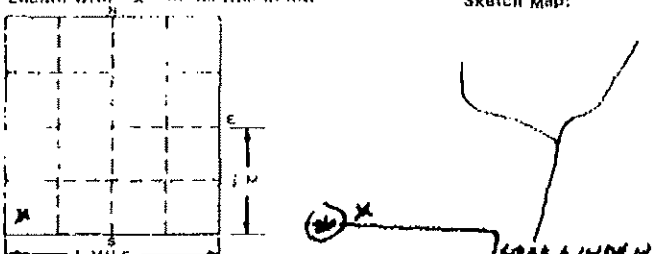
PERMIT NUMBER

1 LOCATION OF WELL		TOWNSHIP NAME		FRACTION		SECTION NUMBER		TOWN NUMBER		RANGE NUMBER	
County <u>HOUGHTON</u>		<u>CALUMET</u>		<u>S.W. 1/4 NE 1/4</u>		<u>36</u>		<u>56</u> (N/S)		<u>33</u> (E/W)	
Distance And Direction From Road Intersection <u>1.2 MILES SOUTH OF LAURIUM ON HIGHWAY M 26</u>											
Street Address & City of Well Location <u>LAURIUM MICH</u>											
Locate with "X" in Section Below											
2 FORMATION DESCRIPTION				THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM					
<u>SAND CLAYEY</u>				<u>4</u>		<u>4</u>					
<u>CLAY & GRAVEL</u>				<u>8</u>		<u>(12)</u>					
<u>BED. ROCK</u>				<u>228</u>		<u>240</u>					
3 OWNER OF WELL: <u>ROY HOOBANA</u>											
Address <u>M-26 LAURIUM MI 49913</u>											
Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
4 WELL DEPTH (completed) <u>240</u> ft. Date of Completion <u>AUG 30 - 81</u>											
5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug											
<input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jettied <input type="checkbox"/>											
6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public											
<input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump											
<input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>											
7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Welded											
<input type="checkbox"/> Plastic <input type="checkbox"/> Height: Above/Below											
_____ in. to _____ ft. depth Surface <u>6</u> ft.											
_____ in. to _____ ft. depth Weight <u>195</u> lbs./ft.											
Grouted Drill Hole Diameter _____ in. to _____ ft. depth Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
8 SCREEN <input checked="" type="checkbox"/> Not installed											
Type _____ Diameter _____											
Slot/Gauze _____ Length _____											
Set between _____ ft. and _____ ft.											
FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Load Packer <input type="checkbox"/> Burner Check											
<input type="checkbox"/> Blank above screen _____ ft. Other _____											
9 STATIC WATER LEVEL: <u>20</u> ft. below land surface <input type="checkbox"/> Flow											
10 PUMPING LEVEL: below land surface											
<u>240</u> ft. after <u>1</u> hrs. pumping at <u>2</u> G.P.M.											
_____ ft. after _____ hrs. pumping at _____ G.P.M.											
11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Well adapter <input type="checkbox"/> 12" above grade											
<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit											
12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From <u>25</u> to <u>4</u> ft											
<input checked="" type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____											
No. of bags of cement <u>6</u> Additives _____											
13 Nearest source of possible contamination											
Type <u>SEPTIC</u> Distance <u>50</u> ft. Direction <u>EAST</u>											
Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
14 PUMP <input type="checkbox"/> Not installed <input type="checkbox"/> Pump Installation Only											
Manufacturer's name <u>MYERS</u>											
Model number <u>3072-78</u> Volts <u>230</u>											
Length of Drop Pipe <u>231</u> ft. capacity _____ G.P.M.											
TYPE <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet _____											
PRESSURE TANK: <u>WELL-X-TROL</u>											
Manufacturer's name _____											
Model number <u>252</u> Capacity <u>160</u> Gallons											
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											
<u>SIRTOLA WELL DRILLING</u> <u>0154</u>											
REGISTERED BUSINESS NAME <u>HANCOCK MI</u> REGISTRATION NO. _____											
Address _____											
Signed <u>Charles Sirtola</u> Date <u>9/1/81</u>											
AUTHORIZED REPRESENTATIVE											

This document paid for with State funds

SEP 28 1981

WATER WELL RECORD
ACT 294 PA 1985MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL		Fraction		Section Number		Town Number		Range Number	
County Houghton	Township Name SCHOOLCRAFT	3W 1/4 3W 1/4 3W 1/4		31		T56 N/8		R32 E/W.	
Distance and Direction from Road Intersections 1/2 mile west of Lake Linden on M 26		Street address & City of Well location Locate with "X" in sketch below		Sketch Map: 		3 OWNER OF WELL: EMIL VINCENT Address RURAL ROUTE CALUMET, MICH 49913			
2 FORMATION		THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM		4 WELL DEPTH: (completed) Date of Completion 165 ft. 6/15/72			
						5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Aug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/>			
						6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>			
						7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Surface 1 ft. Diam. 6 in. to 34 ft. Depth 20 lbs./ft. Drive Shown? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
FORMATION		THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM		8 SCREEN: NONE Type: _____ Dia.: _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. Fittings: _____			
						9 STATIC WATER LEVEL 37 ft. below land surface			
						10 PUMPING LEVEL below land surface 110 ft. after 1/2 hrs. pumping 5 g.p.m. _____ ft. after _____ hrs. pumping _____ g.p.m.			
						11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____ Other _____			
16 Remarks, elevations, etc. (if needed)						12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input type="checkbox"/> Pitless Adapter <input checked="" type="checkbox"/> 12" Above Grade			
						13 Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input checked="" type="checkbox"/> DRILL MUD Depth: From 0 ft. to 31 ft.			
						14 Nearest Source of possible contamination 55 feet N Direction SEPTIC Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
						15 PUMP: <input checked="" type="checkbox"/> Not installed Manufacturer's Name MYERS Model Number SG-52-5A HP 1/2 Volts 220 Length of Drop Pipe 151 ft. capacity _____ G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating			
17 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. KDYKA WELL DRILLING CO. INC. REGISTERED BUSINESS NAME REGISTRATION NO. Address ROUTE 1 BARAGA, MICH 49908 Signed Robert Vitalo Date 2/23/73 AUTHORIZED REPRESENTATIVE									

Wellogic

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD

PERMIT NUMBER

2179

1 LOCATION OF WELL		County <u>Houghton</u>		Township Name <u>Schoolcraft</u>		Fraction <u>SW 1/4 SW 1/4 SW 1/4</u>		Section Number <u>32</u>		Town Number <u>56 N/2</u>		Range Number <u>32 E/W</u>	
Distance And Direction From Road Intersection <u>1/4 MILE NORTH OF BOOT JACK ROAD.</u> <u>ON TRAD ROCK VALLEY Rd. (WEST SIDE)</u>													
Street Address & City of Well Location													
Locate with "X" in Section Below													
3 OWNER OF WELL: <u>Jeff Scott</u>													
Address <u>R1 Box 33B</u> <u>LAKE LINDEN 49945</u>													
Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No													
4 WELL DEPTH: <u>56</u> FT. Date Completed <u>7/20/93</u> <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well													
5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>													
6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>													
7 CASING Diameter <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded Height: Above/Surface <u>1</u> ft. <input type="checkbox"/> Plastic <input type="checkbox"/> Weight <u>18.97</u> lbs./ft. _____ in. to _____ ft depth _____ in. to _____ ft depth _____ in. to _____ ft depth _____ in. to _____ ft depth Grouted Drill Hole Diameter _____ in. to _____ ft depth Drive Shoes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No													
8 SCREEN <input type="checkbox"/> Not Installed Type <u>tele</u> Diameter <u>6"</u> Slot/Gauge <u>#10</u> Length <u>36"</u> Set between <u>56</u> ft and <u>53</u> ft FITTINGS <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check <input checked="" type="checkbox"/> Blank above screen <u>3</u> ft Other _____													
9 STATIC WATER LEVEL: <u>13</u> ft below land surface <input type="checkbox"/> Flow													
10 PUMPING LEVEL below land surface <u>40</u> ft. after <u>2</u> hrs. pumping at <u>12</u> G.P.M. _____ ft. after _____ hrs. pumping at _____ G.P.M.													
11 WELL HEAD COMPLETION <input checked="" type="checkbox"/> Pitless adapter <input checked="" type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit													
12 WELL GROUTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement _____ Additives _____													
13 Nearest source of possible contamination Type <u>City Sewer</u> Distance <u>4.0</u> ft. Direction <u>N</u> Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No													
14 PUMP <input type="checkbox"/> Not installed <input type="checkbox"/> Pump Installation Only Manufacturer's name <u>AEROMOTUM</u> Model number <u>A1250B</u> HP <u>1/2</u> Volts <u>230</u> Length of Drop Pipe <u>40</u> ft. capacity <u>10</u> G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: <u>Well X TRO1</u> Manufacturer's name _____ Model number <u>WX 202</u> Capacity <u>42</u> Gallons													
15. Remarks, elevation, source of data, etc. <u>DISINFECTED</u> <u>NOV 3 1993</u>													
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. <u>Robert A. Larson W.D.</u> <u>07-7779</u> REGISTERED BUSINESS NAME REGISTRATION NO. Address <u>Box 188</u> <u>LAKE MICH.</u> Signed <u>Steve Larson</u> Date <u>10-2-93</u> AUTHORIZED REPRESENTATIVE													
17. Rig Operator's Name: <u>Steve Larson</u>													

WATER WELL AND PUMP RECORD

PERMIT NUMBER

20

1 LOCATION OF WELL		County		Township Name		Fraction		Section Number		Town Number		Range Number	
Houghton		Schoolcraft		Larch Lake		SW 1/4 SE 1/4 NE 1/4		32		56 N/S		32 E/W	
Distance And Direction From Road Intersection						3 OWNER OF WELL:							
.4 mile SW of intersect of S652 & Gay Rd.						Joan Oyati							
Street Address & City of Well Location						Address Rte 1, Box 21							
Valley Rd., Lake Linden						Lake Linden, Mi.							
Locate with "X" in Section Below						Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Sketch Map:						4 WELL DEPTH: Date Completed							
						MO. DAY YEAR <input checked="" type="checkbox"/> New Well 57 FT. 11 20 89 <input type="checkbox"/> Replacement Well							
2 FORMATION DESCRIPTION						5 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Plastic <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded							
THICKNESS OF STRATUM						Height: Above/Below							
DEPTH TO BOTTOM OF STRATUM						Surface 1 ft.							
sand						Weight 18.97 lbs./ft.							
sand, clayey						Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
sand						6 SCREEN: Johnson <input type="checkbox"/> Not Installed							
						Type stainless Diameter 6"							
						Slot/Gauze .010 Length 4'							
						Set between 54 ft. and 57 ft.							
						FITTINGS: <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check							
						<input type="checkbox"/> Blank above screen ft. Other							
						9 STATIC WATER LEVEL:							
						12 ft. below land surface <input type="checkbox"/> 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 COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade							
						<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit							
						12 WELL GROUTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes From to ft.							
						<input type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other							
						No. of bags of cement Additives							
						13 Nearest source of possible contamination							
						Type septic Distance 57 ft. Direction N/E							
						Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
						Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No							
						14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only							
						Manufacturer's name Myers							
						Model number SJ52-J511RHP 1/2 Volts 230							
						Length of Drop Pipe 52 ft. capacity 11 G.P.M.							
						TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet							
						PRESSURE TANK: Amtrol							
						Manufacturer's name Amtrol							
						Model number #202 Capacity 30 Gallons							
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.							
						Siirtola Well Drilling 1677							
						REGISTERED BUSINESS NAME REGISTRATION NO.							
						Address Rte 1, Box 386C, Hancock, Mi.							
17. Rig Operator's Name:						Signed Paul Ziemnick							
Paul Ziemnick						Date 30NOV89							

D87d 12/85

DEC 12 1983

GEOLOGICAL SURVEY COPY

Authority: Act 388 PA 1878
 Completion: Required
 Penalty: Conviction of a violation of any provision is a misdemeanor.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

21 ✓
PERMIT NUMBER: W9831059

1 LOCATION OF WELL		31563233001		Tax Parcel No.	
City HOUGHTON	Township Name SCHOOLCRAFT	Fraction NW 1/4 NW 1/4 NW 1/4	Section No. 33	Town No. 56 N	Range No. 32 W
Distance And Direction From Road Intersection .2 MILE E OF INTERSECT OF TRAPROCK VALLEY RD. & GAY RD., Street Address & City of Well Location			3 OWNER OF WELL PERREAULT, TERRY Address 435 HECLA ST. LAKE LINDEN, MI 49945 Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Locate with 'x' in Section Below N W E 1 mi. - S 1/2 mi.			Sketch Map: Gay Rd. X Traprock Valley Rd. ELEVATION 0.00 msl		
2 FORMATION DESCRIPTION			4 WELL DEPTH: 222.0 ft. Date Completed 09/09/98 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well		
THICKNESS OF STRATUM			5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted		
DEPTH TO BOTTOM OF STRATUM			6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>		
SAND & GRAVEL-CLAYEY			7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Diameter 6.00 in. to 39.0 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter 0.00 in. to 0.0 ft. depth 0.00 in. to 0.0 ft. depth		
SANDSTONE			Height: Above Surface 2.5 ft. Weight 18.97 lbs/ft. Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
			8 SCREEN <input checked="" type="checkbox"/> Not Installed Type None Diameter 0.00 SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft. FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremner Check <input type="checkbox"/> Blank above screen 0.0 ft. Other		
			9 STATIC WATER LEVEL: 36.00 ft. below land surface <input type="checkbox"/> Flow		
			10 PUMPING LEVEL: below land surface 222 ft. after 1.0 hrs. pumping at 15 G.P.H. 0 ft. after 0.0 hrs. pumping at 0 G.P.H.		
			11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit		
			12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Neat cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags _____ Additives _____		
			13 Nearest source of possible contamination Type Septic Distance 106 ft. Direction W Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No		
			14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name RED JACKET Model number 75CNSW1HP 3/4 Volts 230 Length of Drop Pipe 180 ft. capacity 10 G.P.H. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's name Amtrol Model number 202 Capacity Gallons 20		
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.		
Data Source: MDNR			SIIRTOLA WELL DRILLING INC 1677 REGISTERED BUSINESS NAME REGISTRATION NO.		
Rig Operator's Name: Paul Lahti			Address R#1 BOX 386C HANCOCK, MI 49930		
			Signed <i>Paul Lahti</i> Date 09/10/98 AUTHORIZED REPRESENTATIVE		

WATER WELL RECORD

ACT 284 PA 1905

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL

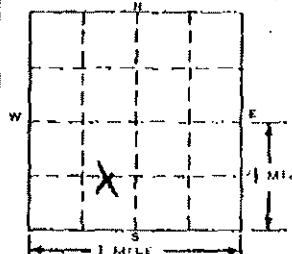
County Houghton Township Name SCHOOL CRAFT Fraction NE 1/4 SE 1/4 SW 1/4 Section Number 33 Town Number 56 N. Range Number 32 NE 1/4

Distance And Direction from Road Intersections
1 MI. N.E. ON TRAP ROCK VALLEY ROAD, THEN 1 MI. EAST.

Street address & City of Well Location LAKE LINDEN MICH

Locate with "X" in section below

Sketch Map:



2 FORMATION

FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
<u>RED-CLAY</u>	<u>48</u>	<u>48</u>
<u>RED-SANDSTONE</u>	<u>102</u>	<u>150</u>

3 OWNER OF WELL:

R. DONALD HIGH
Address RURAL LAKE LINDEN MICH

4 WELL DEPTH: (completed) Date of Completion

150 ft. 10/22/71

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☐ Jetted ☐ Bored

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

7 CASING: Threaded ☒ Welded ☐

Height: Above/Below

5 in. to 48 ft. Depth

Surface 2 ft.Weight 146 lbs./ft.Drive Shoe? Yes ☒ No ☐

8 SCREEN:

Type: _____ Dia.: _____

Slot: Gauge _____ Length _____

Set between _____ ft. and _____ ft.

Fittings: _____

9 STATIC WATER LEVEL

35 ft. below land surface

10 PUMPING LEVEL below land surface

130 ft. after 1 hrs. pumping 5 G.P.M.

_____ ft. after _____ hrs. pumping _____ G.P.M.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) _____ Chlorides (Cl) _____

Hardness _____ Other _____

12 WELL HEAD COMPLETION: ☐ In Approved Pit

☒ Pitless Adapter ☒ 12" Above Grade

13 Well Grouted? ☐ Yes ☒ No

☐ Neat Cement ☐ Bentonite ☐ _____

Depth: From _____ ft. to _____ ft.

14 Nearest Source of possible contamination

60 feet SOUTH direction SEPTIC Type

Well disinfected upon completion ☐ Yes ☐ No

15 PUMP:

☒ Not installed

Manufacturer's Name MYERS

Model Number SB52-5B HP 3 Volts 230

Length of Drop Pipe 25 ft. capacity _____ G.P.M.

Type: ☒ Submersible ☐ Jet ☐ Reciprocating

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 best of my knowledge and belief.

EDW. STIRZOLA 0154

REGISTERED BUSINESS NAME HANCOCK REGISTRATION NO. MICH

Address Elwood St. Date 10/26/71

Signed Elwood St. 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.

24
Wellogic

Import ID:

Tax No: 006-005-026-15	Permit No: W08-31-049	County: Houghton	Township: Franklin
Well ID: 31000002120		Town/Range: 55N 33W	Section: 5
Elevation:		Well Status: Active	WSSN:
Latitude: 47.18576		Source ID/Well No:	
Longitude: -88.51713		Distance and Direction from Road Intersection: 1.2 MILES E OF INTERSECT OF US 41 AND HWY LOCATION RD	
Method of Collection: GPS Std Positioning Svc SA Off		Well Owner: STEVEN PELTO	
		Well Address: 23628 HWY LOCATION RD CALUMET, MI 49913	Owner Address: 23628 HWY LOCATION RD CALUMET, MI 49913

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 242.00 ft.	Pump Installation Date: 10/7/2008	HP: 0.75
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - black	Model Number:	Pump Capacity: 10 GPM
Casing Joint: Threaded & coupled	Drop Pipe Length: 220.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.	Drilling Record ID:
Diameter: 6.00 in. to 25.50 ft. depth	Draw Down Seal Used: No	
	Pressure Tank Installed: Yes	
	Pressure Tank Type: Diaphragm/bladder	
	Manufacturer: Amtrol	
Borehole: 10.00 in. to 25.50 ft. depth	Model Number: CA4202	Tank Capacity: 20.0 Gallons
6.00 in. to 242.00 ft. depth	Pressure Relief Valve Installed: Yes	

Static Water Level: 17.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Gravel & Sand	2.00	2.00
Yield Test Method: Air	Basalt	240.00	242.00
Pumping level 222.00 ft. after 1.00 hrs. at 5 GPM			

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags Additives Depth
Neat cement	8.00 None 4.00 ft. to 25.50 ft.

Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI
Type	Employment: Employee
Septic tank	
Distance	
70 ft.	
Direction	
South	

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:
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.

27
Wellogic

Import ID:

Tax No: 3100900301200		Permit No: W9931152		County: Houghton		Township: Osceola	
Well ID: 31000000787 Elevation: Latitude: 47.190259 Longitude: -88.486685 Method of Collection: QQQ - Centroid				Town/Range: 55N 33W	Section: 3	Well Status: Active	WSSN:
				Source ID/Well No:			
				Distance and Direction from Road Intersection: 0.5 mile east of US-41 on Oneco Road on north side			
Well Owner: Roy Bekkala				Well Address:			
				Owner Address:			
				Calumet, MI 49913		Rt. 2 Box 1015 Calumet, MI 49913	

Drilling Method: Cable Tool	Pump Installed: No
Well Depth: 150.00 ft.	Pressure Tank Installed: No
Well Type: New	Pressure Relief Valve Installed: No
Casing Type: Steel - black	
Casing Joint: Welded	
Casing Fitting: Drive shoe	
Diameter: 6.00 in. to 25.00 ft. depth	
5.00 in. to 40.00 ft. depth	
Borehole: 6.00 in. to 25.00 ft. depth	
5.00 in. to 150.00 ft. depth	

Static Water Level: 5.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Clay & Boulders	40.00	40.00
Yield Test Method: Test pump	Basalt	110.00	150.00
Pumping level 30.00 ft. after 1.00 hrs. at 15 GPM			

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Driven/dry grout
Grouting Material	Bags
Bentonite dry granular	4.00
Additives	None
Depth	0.00 ft. to 40.00 ft.

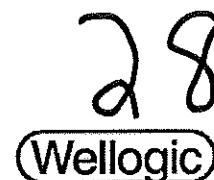
Wellhead Completion: 12 inches above grade	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Joe Moore
Type	Employment: Employee
Septic tank	
Distance: 75 ft.	
Direction: Southeast	
Drainfield/Dry well	
Distance: 80 ft.	
Direction: 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 best of my knowledge and belief.	
Signature of Registered Contractor	Date

General Remarks:
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.

29
Wellogic

Import ID:

Tax No: 31-009-002-003-00	Permit No: W01 31 160	County: Houghton		Township: Osceola		
Well ID: 31000000854		Town/Range: 55N 33W	Section: 2	Well Status: Active	WSSN:	
		Source ID/Well No:				
		Distance and Direction from Road Intersection: 53546 N.Dover Road				
		Well Owner: Donald & Susan Bukema				
Elevation:		Well Address: 53546 N. Dover Road Calumet, MI 49913		Owner Address: P.O. Box 351 Calumet, MI 49913		
Latitude: 47.194075						
Longitude: -88.454585						
Method of Collection: QQQ - Centroid						

Drilling Method: Rotary	Well Use: Household	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 280.00 ft.	Date Completed: 7/26/2003	Pump Installation Date: 7/26/2003	HP: 0.75
Well Type: New	Height: 1.00 ft. above grade	Manufacturer: McDermott	Pump Type: Submersible
Casing Type: Steel - black		Model Number: PEP2W72BA	Pump Capacity: 10 GPM
Casing Joint: Welded		Drop Pipe Length: 180.00 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 29.00 ft. depth		Pressure Tank Installed: Yes	
		Pressure Tank Type: Diaphragm/bladder	
		Manufacturer: Amtrol	
Borehole: 9.00 in. to 29.00 ft. depth		Model Number: WX-202	Tank Capacity: 18.0 Gallons
6.00 in. to 280.00 ft. depth		Pressure Relief Valve Installed: No	

Static Water Level: 6.00 ft. Below Grade	Yield Test Method: Test pump	Formation Description	Thickness	Depth to Bottom
Well Yield Test: 1.00 hrs. at 1 GPM		Sand Silt Clay	4.00	4.00
		Unidentified Consolidated Fm	276.00	280.00

Screen Installed: No	Intake: Bedrock Well			

Well Grouted: Yes	Grouting Method: Grout pipe inside casing	
Grouting Material: Neat cement	Bags: 4.00	Depth: 0.00 ft. to 29.00 ft.

Wellhead Completion: Pitless adapter, 12 inches above grade	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Steve Larson
Type: Septic tank	Employment: Employee
Distance: 60 ft.	
Direction: North	

Contractor Type: Water Well Drilling Contractor	Reg No: 07-0315
Business Name: Robert A. Larson Well Drilling	
Business Address: HCR01 Box 188, Lanse, 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

General Remarks:
Other Remarks: Coordinate Source:Google 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.

30
Wellogic

Import ID:

Tax No: 31-009-002-013-00		Permit No: W04-31-171		County: Houghton		Township: Osceola	
Well ID: 31000001532		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 33W	2	Active			
		Distance and Direction from Road Intersection:					
		0.1 MILE NORTH OF INTERSECTION OF GOLF COURSE ROAD AND HENDRICKSON ROAD					
Elevation:		Well Owner: RICH WIITA					
Latitude: 47.185448		Well Address:				Owner Address:	
Longitude: -88.447082						466 POPLAR STREET	
Method of Collection: Interpolation-Map						LAKE LINDEN, MI 49945	

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 401.00 ft.	Pump Installation Date:	HP: 1.50
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number: 150F211CN5	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 360.00 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: No	
4.00 in. to 381.00 ft. depth	Pressure Relief Valve Installed: No	
Borehole: 6.00 in. to 401.00 ft. depth		
10.00 in. to 26.00 ft. depth		

Static Water Level: 175.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Air	Sand Clayey	2.00	2.00
Pumping level 401.00 ft. after 1.00 hrs. at 6 GPM	Basalt	308.00	310.00
	Sandstone	91.00	401.00

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Unknown		
Grouting Material	Bags	Additives	Depth
Neat cement	10.00	None	4.00 ft. to 26.00 ft.

Wellhead Completion: Pileless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI
Type	Employment: Employee
None	

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

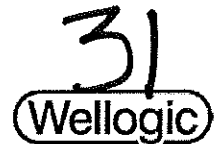
General Remarks:
Other Remarks:



Water Well And Pump Record

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

Failure to comply is a misdemeanor.



Import ID:

Tax No:		Permit No:		County: Houghton		Township: Schoolcraft	
Well ID: 31000001281		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 33W	1	Active			
		Distance and Direction from Road Intersection:					
		1.5 MILES NORTH OF HUBBELL AND 0.25 MILE EAST OF GOLF COURSE ROAD					
Elevation:		Well Owner: GARY HUGHES					
Latitude: 47.188573		Well Address:					
Longitude: -88.445619		Owner Address:					
Method of Collection: Interpolation-Map		ROUTE 1 CALUMET, MI 49913					

Drilling Method: Cable Tool	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 175.00 ft.	Pump Installation Date:	HP: 0.50
Well Type: Unknown	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Unknown	Model Number: 50W09BC	Pump Capacity: 6 GPM
Casing Joint: Welded	Drop Pipe Length: 136.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 27.00 ft. depth	Draw Down Seal Used: No	
Borehole:	Pressure Tank Installed: No	
	Pressure Relief Valve Installed: No	

Static Water Level: 26.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Unknown	Loam Sandy	1.00	1.00
Pumping level 140.00 ft. after 1.00 hrs. at 9 GPM	Clay & Gravel Sandy	13.00	14.00
Pumping level 115.00 ft. after 4.00 hrs. at 6 GPM	See Comments	161.00	175.00

Screen Installed: No	Intake: Bedrock Well

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

Wellhead Completion: Pitless adapter

Nearest Source of Possible Contamination:	Drilling Machine Operator Name:
Type	Employment: Unknown
Distance	
Direction	
Animal yard/Feedlot	
150 ft.	
Southeast	

Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor	Reg No: 31-1778
	Business Name: VALLEY WELL & PUMP	
	Business Address:	

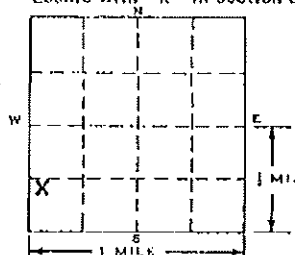
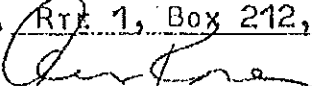
Reason Not Plugged:	Water Well Contractor's Certification
	This well was drilled under my supervision and this report is true to the best of my knowledge and belief.
	Signature of Registered Contractor
	Date

General Remarks:
Other Remarks:

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL		3 OWNER OF WELL:																
County HOUGHTON	Township Name SCHOOLCRAFT	Fraction NW 1/4 SW 1/4 SW 1/4	Section Number 1															
Distance And Direction from Road Intersections 1 1/2 MILES NORTH OF HUBBELL AND 1/4 MILE EAST OF GOLF COURSE ROAD.		Town Number 55 N.S.																
Street address & City of Well Location Locate with "X" in section below		Range Number 33 E.W.																
Sketch Map: 		Address GARY HUGHES ROUTE 1 CALUMET, MI 49913																
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:40%;">2 FORMATION</th> <th style="width:10%;">THICKNESS OF STRATUM</th> <th style="width:10%;">DEPTH TO BOTTOM OF STRATUM</th> </tr> <tr> <td>SANDY LOAM</td> <td>1</td> <td>1</td> </tr> <tr> <td>SANDY CLAY AND GRAVEL</td> <td>13</td> <td>(14)</td> </tr> <tr> <td>JACOBSSVILLE SANDSTONE</td> <td>136</td> <td>150</td> </tr> <tr> <td colspan="3">DRILLED WELL 25' DEEPER INTO JACOBSSVILLE SANDSTONE. TOTAL DEPTH 175'. WATER WAS COMING IN RIGHT AT THE BOTTOM OF THE ORIGINAL WELL CREATING A SAND PROBLEM.</td> </tr> </table>		2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	SANDY LOAM	1	1	SANDY CLAY AND GRAVEL	13	(14)	JACOBSSVILLE SANDSTONE	136	150	DRILLED WELL 25' DEEPER INTO JACOBSSVILLE SANDSTONE. TOTAL DEPTH 175'. WATER WAS COMING IN RIGHT AT THE BOTTOM OF THE ORIGINAL WELL CREATING A SAND PROBLEM.			4 WELL DEPTH: (completed) Date of Completion 175 ft. 7/8/83	
		2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM														
SANDY LOAM	1	1																
SANDY CLAY AND GRAVEL	13	(14)																
JACOBSSVILLE SANDSTONE	136	150																
DRILLED WELL 25' DEEPER INTO JACOBSSVILLE SANDSTONE. TOTAL DEPTH 175'. WATER WAS COMING IN RIGHT AT THE BOTTOM OF THE ORIGINAL WELL CREATING A SAND PROBLEM.																		
		5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jolted <input type="checkbox"/> Bored <input type="checkbox"/>																
		6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>																
		7 CASING: Threaded <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Diam. _____ Height: Above/Below Surface 1 ft. Weight 18.9 lbs./ft. Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
		8 SCREEN: NONE Type: _____ Dia.: _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. Fittings: _____																
		9 STATIC WATER LEVEL 26 ft. below land surface																
		10 PUMPING LEVEL below land surface 140 ft. after 1 hrs. pumping 9 a.p.m. 115 ft. after 4 hrs. pumping 6 a.p.m.																
		11 WATER QUALITY in Parts Per Million: UNKNOWN. Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____ Other _____																
		12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adaptor <input type="checkbox"/> 12" Above Grade																
		13 Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Depth: From 25 ft. to SURFACE																
		14 Nearest Source of possible contamination 150 feet SE Direction CHICKEN YARD Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																
		15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name RED JACKET Model Number 50W09BC HP 1/2 Volts 115 Length of Drop Pipe 136 ft. capacity 6 G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating																
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 best of my knowledge and belief. VALLEY WELL & PUMP CORP. 31-1728 REGISTERED BUSINESS NAME REGISTRATION NO. Address Rte. 1, Box 212, CALUMET, MI 49913 Signed  Date 7/11/83 AUTHORIZED REPRESENTATIVE																

D57d

100M (Rev. 12-69)

JUL 18 1983

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:

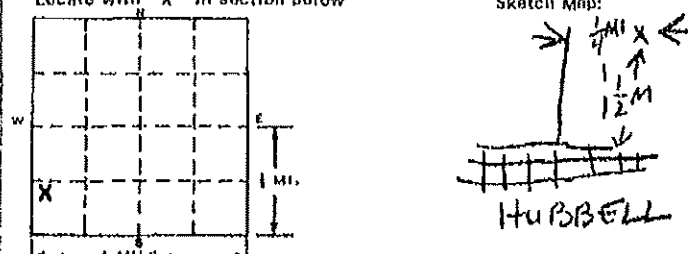
Tax No:		Permit No:		County: Houghton		Township: Schoolcraft	
Well ID: 31000001282		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 33W	1	Active			
		Distance and Direction from Road Intersection:					
		1.5 MILES NORTH OF HUBBELL AND 0.25 MILE EAST OF GOLF COURSE ROAD					
Elevation:		Well Owner: GARY HUGHES					
Latitude: 47.188546		Well Address:		Owner Address:			
Longitude: -88.445851				RTE 1			
Method of Collection: Interpolation-Map				CALUMET, MI 49913			

Drilling Method: Cable Tool		Well Use: Household		Pump Installed: Yes		Pump Installation Only: No	
Well Depth: 150.00 ft.		Date Completed: 8/15/1980		Pump Installation Date:		HP: 0.50	
Well Type: Unknown		Height:		Manufacturer: Red Jacket		Pump Type: Submersible	
Casing Type: Unknown				Model Number: 50W09BC		Pump Capacity: 6 GPM	
Casing Joint: Welded				Drop Pipe Length: 136.00 ft.		Pump Voltage:	
Casing Fitting: Drive shoe				Drop Pipe Diameter:		Drilling Record ID:	
Diameter: 6.00 in. to 27.00 ft. depth				Draw Down Seal Used: No			
Borehole:				Pressure Tank Installed: No			
				Pressure Relief Valve Installed: No			
Static Water Level: 26.00 ft. Below Grade		Yield Test Method: Unknown		Formation Description		Thickness	Depth to Bottom
Well Yield Test:				Loam Sandy		1.00	1.00
Pumping level 140.00 ft. after 1.00 hrs. at 9 GPM				Clay & Gravel Sandy		13.00	14.00
Pumping level 115.00 ft. after 4.00 hrs. at 6 GPM				See Comments		136.00	150.00
Screen Installed: No		Intake: Bedrock Well					
Well Grouted: Yes		Grouting Method: Unknown					
Grouting Material		Bags	Additives	Geology Remarks:			
Neat cement		0.00	None	JACOBSVILLE SANDSTONE			
Depth		0.00 ft. to 25.00 ft.					
Wellhead Completion: Pitless adapter							
Nearest Source of Possible Contamination:				Drilling Machine Operator Name:			
Type	Distance	Direction		Employment: Unknown			
Animal yard/Feedlot	150 ft.	Southeast					
Abandoned Well Plugged: No				Contractor Type: Water Well Drilling Contractor		Reg No: 31-1778	
Reason Not Plugged:				Business Name: VALLEY 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		Date	

General Remarks:

Other Remarks:

WATER WELL RECORD
ACT 294 PA 1986MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL		3 OWNER OF WELL:			
County HOUGHTON	Township Name SCHOOLCRAFT	Fraction NW 1/4 SW 1/4 SW 1/4	Section Number 1	Town Number 55 N/2	Range Number 33 E/W.
Distance And Direction from Road Intersections 1 1/2 MILES NORTH OF HUBBELL AND 1/4 MILE EAST OF GOLF COURSE ROAD.		Address GARY HUGHES RTE 1 CALUMET, MI 49913			
Street address & City of Well Location Locate with "X" in section below		4 WELL DEPTH: (completed) Date of Completion 150 ft. 8/15/80			
		5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jatted <input type="checkbox"/> Bored <input type="checkbox"/>			
		6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>			
2 FORMATION		7 CASING: Threaded <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Height: Above/Below Surface 1 ft.			
		8 SCREEN: NONE Type: _____ Dia.: _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. Fittings: _____			
THICKNESS OF STRATUM		9 STATIC WATER LEVEL 26 ft. below land surface			
DEPTH TO BOTTOM OF STRATUM		10 PUMPING LEVEL below land surface 140 ft. after 1 hrs. pumping 9 g.p.m. 115 ft. after 4 hrs. pumping 6 g.p.m.			
SANDY LOAM		11 WATER QUALITY in Parts Per Million: UNKNOWN. Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____ Other _____			
SANDY CLAY AND GRAVEL		12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade			
JACOBUSVILLE SANDSTONE		13 Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Depth: From 25 ft. to SURFACE			
		14 Nearest Source of possible contamination 150 feet SE Direction CHICKEN YARD Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
		15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name RED JACKET Model Number 50W09DC HP 1/2 Volts 115 Length of Drop Pipe 136 ft. capacity 6 G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating			
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 best of my knowledge and belief. VALLEY PLUMB & HTG. INC. 31-1778 REGISTERED BUSINESS NAME REGISTRATION NO. Address POB 453, DOLLARBAY, MI 49922 Signed <i>[Signature]</i> Date 8/15/80 AUTHORIZED REPRESENTATIVE			

This document paid for with State funds



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

33
Wellogic

Import ID:

Tax No:		Permit No: W04-31-176		County: Houghton		Township: Torch Lake	
Well ID: 31000001526				Town/Range:	Section:	Well Status:	WSSN:
				55N 32W	6	Active	
Elevation:				Distance and Direction from Road Intersection:			
Latitude: 47.190545				.2 MILE SOUTHWEST OF INTERSECTION OF UPPER POINT MILLS ROAD NAD			
Longitude: -88.422981				EAST GROSSE POINT SHORE ROAD			
Method of Collection: QQQ - Centroid				Well Owner: JOHN HANKE			
Well Address:				Owner Address:			
26983 E GROSSE POIT SHORES RD				43367 BOOTJACK RD			
MI				LAKE LINDEN, MI 49945			

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 147.00 ft.	Pump Installation Date:	HP: 0.50
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number:	Pump Capacity: 10 GPM
Casing Joint: Welded	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 144.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
Borehole: 6.00 in. to 147.00 ft. depth	Manufacturer: Amtrol	
	Model Number: BN4202	Tank Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 0.00 ft. Above Grade (Flowing)	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Air	Sand	17.00	17.00
Pumping level 147.00 ft. after 1.00 hrs. at 12 GPM	Clay Sandy	54.00	71.00
	Clay	69.00	140.00
	Sand & Clay Silty	4.00	144.00
	Sand	3.00	147.00

Unrestricted Flow Rate:

Screen Installed: Yes	Filter Packed: No
Screen Diameter: 6.00 in.	Blank: 1.50 ft. Above
Screen Material Type: Stainless steel-wire wrapped	
Slot	Length
7.00	3.00 ft.
Set Between	
144.00 ft. and 147.00 ft.	
Fittings: Neoprene packer	

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags
Bentonite slurry	1.00
Additives	None
Depth	
Wellhead Completion: Pitless adapter	

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI
Type	Employment: Employee
Distance	
50 ft.	
Direction	
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
	Date

General Remarks: PUMP MODEL NUMBER: 50F211CNS9BC

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.

34
Wellogic

Import ID:

Tax No:	Permit No: W0531048	County: Houghton	Township: Schoolcraft
Well ID: 31000001674 Elevation: 610 ft. Latitude: 47.198612 Longitude: -88.398435 Method of Collection: GPS Std Positioning Svc SA Off		Town/Range: 55N 32W	Section: 5
		Well Status: Active	WSSN:
		Source ID/Well No:	
		Distance and Direction from Road Intersection: 100' EAST OF INTERSECT OF TRAPROCK VALLEY RD AND MAPLE SUGAR HILL RD	
		Well Owner: PERREAULT, PAUL S	
Well Address:		Owner Address: 172 PINE ST LAKE LINDEN, MI 49945	

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 47.50 ft.	Pump Installation Date:	HP: 0.50
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number: 50F211CN59	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 34.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 40.50 ft. depth	Draw Down Seal Used: No	
Borehole: 6.00 in. to 47.50 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
	Manufacturer: Amtrol	
	Model Number: BN4202	Tank Capacity:
	Pressure Relief Valve Installed: No	

Static Water Level: 32.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Air	Sand	8.00	8.00
Pumping level 32.00 ft. after 1.00 hrs. at 20 GPM	Sand Clayey	26.00	34.00
	Clay	5.00	39.00

Screen Installed: Yes	Filter Packed: No
Screen Diameter: 6.00 in.	Blank: 1.50 ft. Above
Screen Material Type: Stainless steel-wire wrapped	
Slot Length Set Between	
12.00 7.00 ft. 40.50 ft. and 47.50 ft.	
Fittings: Neoprene packer	

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags Additives Depth
Bentonite slurry	1.00 None

Wellhead Completion: Pitless adapter

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI
Type Distance Direction	Employment: Employee
Sewer line 65 ft. Southeast	

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:
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.

35
Wellogic

Import ID:

Tax No:	Permit No:	County: Houghton		Township: Schoolcraft	
Well ID: 31000002032		Town/Range: 55N 32W	Section: 5	Well Status: Active	WSSN:
		Source ID/Well No:			
		Distance and Direction from Road Intersection: 100 FEET NORTH OF INTERSECT OF S652 & S641			
Elevation:		Well Owner: WILLIAM MIKKO			
Latitude: 47.195619		Well Address: 53736 BOOTJACK ROAD LAKE LINDEN, MI 49945		Owner Address: RTE 1, BOX 33 LAKE LINDEN, MI 49945	
Longitude: -88.394607					
Method of Collection: GPS Std Positioning Svc SA Off					

Drilling Method: Rotary	Well Use: Household	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 60.00 ft.	Date Completed: 10/20/1990	Pump Installation Date: 10/20/1990	HP: 0.50
Well Type: New	Height: 2.00 ft. above grade	Manufacturer: F.E. Myers	Pump Type: Submersible
Casing Type: Steel - black		Model Number: S2J52	Pump Capacity: 11 GPM
Casing Joint: Welded		Drop Pipe Length: 56.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe		Drop Pipe Diameter:	Drilling Record ID:
Diameter: 5.00 in. to 56.00 ft. depth		Draw Down Seal Used: No	
Borehole:		Pressure Tank Installed: Yes	
		Pressure Tank Type: Diaphragm/bladder	
		Manufacturer: Amtrol	
		Model Number: 202	Tank Capacity: 30.0 Gallons
		Pressure Relief Valve Installed: No	

Static Water Level: 0.00 ft. Above Grade (Flowing)	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Unknown	Sand	33.00	33.00
Pumping level 60.00 ft. after 1.00 hrs. at 7 GPM	Clay	17.00	50.00
	Sand & Gravel	10.00	60.00

Unrestricted Flow Rate:			
Screen Installed: Yes	Filter Packed: No		
Screen Diameter: 6.00 in.	Blank:		
Screen Material Type: Other			
Slot	Length	Set Between	
10.00	4.00 ft.	56.00 ft. and 60.00 ft.	
Fittings: Neoprene packer			
Well Grouted: No			

Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL ZIEMNICK
Type	Employment: Employee
Distance	
Direction	
Sewer line	65 ft. West

Contractor Type: Water Well Drilling Contractor	Reg No: 31-1677
Business Name: SIIRTOLA WELL DRILLING	
Business Address: RTE 1 BOX 386C, HANCOCK, MI, 49930	

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: Screen Material: JOHNSON STAINLESS

WATER WELL AND PUMP RECORD

35 PERMIT NUMBER

1 LOCATION OF WELL		County		Township Name		Fraction		Section Number		Town Number		Range Number	
Houghton		Schoolcraft		NW 1/4 SW 1/4 NE 1/4		5		55 N/S		32		E/W	
Distance And Direction From Road Intersection 100' N of intersect of S652 & S641													
Street Address & City of Well Location													
Locate with "X" in Section Below													
Sketch Map:													
2 FORMATION DESCRIPTION				THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM		3 OWNER OF WELL:					
Sand				33		33		William Mikko					
Clay				17		50		Address RTE 1, Box 33					
Sand & Gravel				10		60		Lake Linden MI 49945					
								Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
								4 WELL DEPTH: Date Completed MO. DAY YEAR <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well					
								60 FT. 10 20 90					
								5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug					
								<input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jettied <input type="checkbox"/>					
								6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public					
								<input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump					
								<input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>					
								7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded					
								Height: Above/Below Surface 2 ft.					
								5 in. to 56 ft. depth					
								Weight 18.97 lbs./ft.					
								Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
								8 SCREEN: <input type="checkbox"/> Not installed					
								Johnson					
								Type Stainless Diameter 6"					
								Slot/Gauze .010 Length 4'					
								Set between 56 ft. and 60 ft.					
								FITTINGS: <input checked="" type="checkbox"/> X-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Brainer Check					
								<input type="checkbox"/> Blank above screen ft. Other					
								9 STATIC WATER LEVEL					
								0 ft. below land surface <input type="checkbox"/> Flow					
								10 PUMPING LEVEL: below land surface					
								60 ft. after 1 hrs. pumping at 7 G.P.M.					
								ft. after hrs. pumping at G.P.M.					
								11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade					
								<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit					
								12 WELL GROUTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes From to ft.					
								<input type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other					
								No. of bags of cement Additives					
								13 Nearest source of possible contamination					
								Type sewer line Distance 65 ft. Direction W					
								Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
								Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No					
								14 PUMP: <input type="checkbox"/> Not installed <input type="checkbox"/> Pump installation Only					
								Manufacturer's name Myers					
								Model number S2J52 HP 1/2 Volts 230					
								Length of Drop Pipe 56 ft. capacity 11 G.P.M.					
								TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet					
								PRESSURE TANK:					
								Manufacturer's name Amtrol					
								Model number 202 Capacity 30 Gallons					
16. Remarks, elevation, source of data, etc.													
17. Rig Operator's Name: Paul Ziennick													
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.													
Siirtola Well Drilling 1677													
REGISTERED BUSINESS NAME REGISTRATION NO.													
Address RTE 1, Box 386C, Hancock MI 49930													
Signed [Signature] Date 6NOV90													
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.

36
Wellogic

Import ID:

Tax No: 310012-054-003-00		Permit No: W08 31114		County: Houghton		Township: Schoolcraft	
Well ID: 31000002102		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 32W	4	Active			
		Distance and Direction from Road Intersection: 0.5 MI E OF INTERSECT OF BOOTJACK RD & GREGOIRE RD					
Elevation:		Well Owner: SHERRILL GIACOLETTO					
Latitude: 47.19422		Well Address:		Owner Address:			
Longitude: -88.38267		53598 GREGOIRE RD		53598 GREGOIRE RD			
Method of Collection: GPS Std Positioning Svc SA Off		LAKE LINDEN, MI 49945		LAKE LINDEN, MI 49945			

Drilling Method: Rotary		Well Use: Household		Pump Installed: Yes		Pump Installation Only: No	
Well Depth: 262.00 ft.		Date Completed: 9/19/2008		Pump Installation Date:		HP: 0.75	
Well Type: New		Height: 1.50 ft. above grade		Manufacturer: Red Jacket		Pump Type: Submersible	
Casing Type: Steel - black		Casing Joint: Welded		Model Number: 75C211CNS1		Pump Capacity: 10 GPM	
Casing Fitting: Drive shoe		Diameter: 6.00 in. to 87.50 ft. depth		Drop Pipe Length: 180.00 ft.		Pump Voltage:	
Borehole: 6.00 in. to 262.00 ft. depth				Drop Pipe Diameter: 1.00 in.		Drilling Record ID:	
				Draw Down Seal Used: No			
				Pressure Tank Installed: Yes			
				Pressure Tank Type: Diaphragm/bladder			
				Manufacturer: Amtrol			
				Model Number: WX202		Tank Capacity: 20.0 Gallons	
				Pressure Relief Valve Installed: Yes			
Static Water Level: 56.00 ft. Below Grade		Yield Test Method: Air		Formation Description		Thickness	Depth to Bottom
Well Yield Test: Pumping level 262.00 ft. after 1.00 hrs. at 15 GPM				Sand Clayey		51.00	51.00
				Clay		8.00	59.00
				Sand & Gravel Clayey		28.50	87.50
				Sandstone Jacobsville Ss		174.50	262.00
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 87.50 ft.			
Wellhead Completion: Pitless adapter				Geology Remarks:			
Nearest Source of Possible Contamination:				Drilling Machine Operator Name: PAUL LAHTI			
Type	Distance	Direction		Employment: Employee			
Septic tank	148 ft.	Southwest		Pump Installer: ROBERT MANTTA			
				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:

Other Remarks:

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

37
PERMIT NUMBER: W42310076

1 LOCATION OF WELL		31553201001		Tax Parcel No.																	
County HOUGHTON		Township Name SCHOOLCRAFT		Fraction NW 1/4 SW 1/4 NW 1/4	Section No. 04																
				Town No. 55 N	Range No. 32 W																
Distance And Direction From Road Intersection .4 MILE E OF INTERSECT OF S641 & GIAOLETTO RD				3 OWNER OF WELL KOLJONEN, BARRY & LINDA																	
Street Address & City of Well Location				Address 257 KIT STREET LAKE LINDEN, MI 49945																	
				Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																	
Locate With 'x' in Section Below		Sketch Map:		4 WELL DEPTH: 262.0 ft.																	
<div style="display: flex; align-items: center;"> <div style="text-align: center;"> <p>N</p> <table border="1" style="border-collapse: collapse;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table> <p>W</p> </div> <div style="margin: 0 10px;"> <p>S641</p> </div> <div style="text-align: center;"> <p>E</p> <p>1/2 mi.</p> </div> </div>						X												<p>GIAOLETTO RD</p>		Date Completed 09/15/95	
X																					
		ELEVATION 0.00 msl		<input type="checkbox"/> New Well <input type="checkbox"/> Replacement Well																	
2 FORMATION DESCRIPTION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted																	
SAND-CLAYEY	52.0	52.0	6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>																		
SAND	8.0	60.0	7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded																		
SAND & GRAVEL-CLAYEY	42.0	102.0	Diameter 6.00 in. to 113.5 ft. depth																		
GRAVEL-CLAYEY	11.5	113.5	0.00 in. to 0.0 ft. depth																		
SANDSTONE	148.5	262.0	Grouted Drill Hole Diameter 0.00 in. to 0.0 ft. depth																		
			0.00 in. to 0.0 ft. depth																		
			Height: Above Surface 1.5 ft.																		
			Weight 18.97 lbs/ft.																		
			Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																		
			8 SCREEN <input checked="" type="checkbox"/> Not Installed																		
			Type None Diameter 0.00																		
			SLOT 0.000 Length 0.0																		
			Set between 0.00 ft. and 0.00 ft.																		
			FITTINGS: <input type="checkbox"/> JK-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremner Check																		
			<input type="checkbox"/> Blank above screen 0.0 ft. Other																		
			9 STATIC WATER LEVEL: 65.00 ft. below land surface <input type="checkbox"/> Flow																		
			10 PUMPING LEVEL: below land surface																		
			162 ft. after 1.0 hrs. pumping at 10 G.P.M.																		
			262 ft. after 1.0 hrs. pumping at 20 G.P.M.																		
			11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade																		
			<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit																		
			12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From _____ to _____ ft.																		
			<input type="checkbox"/> Heat cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other _____																		
			No. of bags of cement _____ Additives _____																		
			13 Nearest source of possible contamination																		
			Type Septic Distance 100 ft. Direction NE																		
			Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																		
			Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No																		
			14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only																		
			Manufacturer's name MYERS																		
			Model number PEPJ710HP 3/4 volts 230																		
			Length of Drop Pipe 185 ft. capacity 10 G.P.M.																		
			TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet																		
			PRESSURE TANK:																		
			Manufacturer's 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.																	
Data Source: MDNR				SIIRTOLA WELL DRILLING INC 1677																	
				REGISTERED BUSINESS NAME REGISTRATION NO.																	
17 Rig Operator's Name: Paul Ziemla				Address R#1 BOX 386C HANCOCK, MI 49930																	
				Signed Date 09/18/95																	
				AUTHORIZED REPRESENTATIVE																	

AUTHORITY: Act 368 PA 1978

COMPETITION REQUIRED BY PENALTY: Conviction of a violation of any provision is a misdemeanor

DIST 3 OFFICE
EMP ESCANABA, MI
OCT - 2 1995



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

38
Wellogic

Import ID:

Tax No:	Permit No: W0131126	County: Houghton		Township: Franklin		
Well ID: 31000000667		Town/Range: 55N 33W	Section: 8	Well Status: Active	WSSN:	
		Source ID/Well No:				
		Distance and Direction from Road Intersection: BOSTON RD., 1/4 MILES NORTH OF BOSTON CORNERS, EAST SIDE				
		Well Owner: MARTY & KATIE HAMMERSTROM				
Elevation:		Well Address:		Owner Address:		
Latitude: 47.179542				1530 ANTHONY ST. APT. 9		
Longitude: -88.523569				HANCOCK, MI 49930		
Method of Collection: QQQ - Centroid						

Drilling Method: Rotary		Pump Installed: Yes		Pump Installation Only: No	
Well Depth: 160.00 ft.		Pump Installation Date:		HP: 0.50	
Well Type: New		Manufacturer: McDermott		Pump Type: Submersible	
Date Completed: 10/4/2001		Model Number: PEP2W52BAJ		Pump Capacity: 10 GPM	
Casing Type: Steel - black		Drop Pipe Length: 140.00 ft.		Pump Voltage:	
Casing Joint: Welded		Drop Pipe Diameter:		Drilling Record ID:	
Casing Fitting: Drive shoe		Draw Down Seal Used: No			
Diameter: 6.00 in. to 29.00 ft. depth		Pressure Tank Installed: Yes			
		Pressure Tank Type: Unknown			
Borehole: 9.00 in. to 29.00 ft. depth		Manufacturer: Amtrol		Tank Capacity: 19.0 Gallons	
6.00 in. to 160.00 ft. depth		Model Number: WX-202			
		Pressure Relief Valve Installed: No			
Static Water Level: 6.83 ft. Below Grade		Formation Description		Thickness	Depth to Bottom
Well Yield Test:		Sand & Silt W/Stones		3.00	3.00
Yield Test Method: Test pump		Stones		5.00	8.00
Pumping level 140.00 ft. after 1.00 hrs. at 5 GPM		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:					
Wellhead Completion: Pitless adapter, 12 inches above grade					
Nearest Source of Possible Contamination:					
Type	Distance	Direction			
Drainfield/Dry well	50 ft.	North			
Drilling Machine Operator Name: STEVEN R. LARSON					
Employment: Employee					
Contractor Type: Water Well Drilling Contractor			Reg No: 07-0315		
Business Name: ROBERT A. LARSON 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:

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.

39
Wellogic

Import ID:

Tax No:		Permit No:		County: Houghton		Township: Franklin	
Well ID: 31000000443		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 33W	8	Active			
		Distance and Direction from Road Intersection: .4 MILE NW OF INTERSECT OF US 41 AND BOSTON CORSSCUT					
Elevation:		Well Owner: ROBERT RUELLE					
Latitude: 47.1721482		Well Address:				Owner Address:	
Longitude: -88.51424957						409 HOLLAND ST HANCOCK, MI 49930	
Method of Collection: Address Matching-Nearest Intersection							

Drilling Method: Rotary		Pump Installed: No	
Well Depth: 302.00 ft.		Pressure Tank Installed: No	
Well Type: New		Pressure Relief Valve Installed: No	
Casing Type: Steel - black			
Casing Joint: Unknown			
Casing Fitting: Shale packer/trap			
Diameter: 6.00 in. to 55.00 ft. depth			
Borehole:			
Static Water Level: 12.00 ft. Below Grade			
Well Yield Test:		Formation Description	
Yield Test Method: Unknown		Thickness	
Pumping level 302.00 ft. after 1.00 hrs. at 2 GPM		Depth to Bottom	
		Sand & Gravel Clayey	
		55.00	
		55.00	
		Sandstone	
		247.00	
		302.00	
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:		Drilling Machine Operator Name: PAUL LAHTI	
Type		Employment: Employee	
Distance		Contractor Type: Water Well Drilling Contractor	
Direction		Reg No: 31-1677	
None		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:

Other Remarks:

Failure to comply is a misdemeanor.

Wellogic

Import ID:

Tax No:		Permit No:		County: Houghton			Township: Franklin		
<p>Well ID: 31000001188</p> <p>Elevation:</p> <p>Latitude: 47.177272</p> <p>Longitude: -88.500447</p> <p>Method of Collection: Interpolation-Map</p>				Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
				55N 33W	9	Active			
				Distance and Direction from Road Intersection:					
				0.3 MILE NORTHEAST OF INTERSECT OF US41 AND F18					
				Well Owner: HJALMER TORVINEN					
				Well Address:			Owner Address:		
				RTE 1 BOX 85A CALUMET, MI 49913			RTE 1 BOX 85A CALUMET, MI 49913		

Drilling Method: Rotary Well Depth: 202.00 ft. Well Type: New	Well Use: Household Date Completed: 6/23/1998	Pump Installed: Yes Pump Installation Date: Manufacturer: Red Jacket Model Number: 75CNSW1 Drop Pipe Length: 185.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No	Pump Installation Only: No HP: 0.75 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID:
Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe	Height: 1.50 ft. above grade	Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Amtrol Model Number: 202 Pressure Relief Valve Installed: No	Tank Capacity: 30.0 Gallons
Diameter: 6.00 in. to 26.50 ft. depth			
Borehole: 10.00 in. to 26.50 ft. depth			

Static Water Level: 12.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown Pumping level 202.00 ft. after 1.00 hrs. at 2 GPM	Formation Description	Thickness	Depth to Bottom
	Sand & Stones Clayey	17.00	17.00
	Sandstone	185.00	202.00

[illegible]

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

Nearest Source of Possible Contamination:			Drilling Machine Operator Name: PAUL LAHTI
Type	Distance	Direction	Employment: Unknown
Septic tank	160 ft.	North	Contractor Type: Water Well Drilling Contractor Reg No: 31-1677

	Contractor Type: water well Drilling Contractor Business Name: SIIRTOLA WELL DRILLING Business Address:	Reg No: SI-1677
--	--	------------------------

		<p align="center">Water Well Contractor's Certification</p> <p>This well was drilled under my supervision and this report is true to the best of my knowledge and belief.</p>	
		<p>Signature of Registered Contractor</p>	<p>Date</p>

General Remarks:

Other Remarks:

MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

41
PERMIT NUMBER: W9831083

1 LOCATION OF WELL		31553309001		Tax Parcel No.												
City HOUGHTON		Township Name FRANKLIN		Fraction NE 1/4 NE 1/4 SW 1/4		Section No. 09										
				Town No. 55 N		Range No. 33 W										
Distance And Direction from Road Intersection .3 MILE NE OF INTERSECT OF U. S. 41 & F18				3 OWNER OF WELL TORVINEN, HJALMER Address RTE 1, BOX 85A CALUMET, MI 49913 Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No												
Street Address & City of Well Location				4 WELL DEPTH: 202.0 ft. Date Completed 06/23/98 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well												
Locate with 'x' in Section Below <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>N</p> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table> <p>W E</p> <p>1 mi. — S</p> </div> <div> <p>Sketch Map:</p> <p>U.S. 41</p> <p>F 18</p> <p>ELEVATION 0.00 msl</p> </div> </div>													5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted			
				6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>												
2 FORMATION DESCRIPTION				THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM										
								7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Diameter 6.00 in. to 26.5 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter 10.00 in. to 26.5 ft. depth 0.00 in. to 0.0 ft. depth Height: Above Surface 1.5 ft. Weight 18.97 lbs/ft. Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
ROCK, SAND-CLAYEY				17.0		17.0										
BEDROCK				185.0		202.0										
				8 SCREEN <input checked="" type="checkbox"/> Not Installed Type None Diameter 0.00 SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft. FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremner Check <input type="checkbox"/> Blank above screen 0.0 ft. Other												
				9 STATIC WATER LEVEL: 12.00 ft. below land surface <input type="checkbox"/> Flow												
				10 PUMPING LEVEL: below land surface 202 ft. after 1.0 hrs. pumping at 2 G.P.M. 0 ft. after 0.0 hrs. pumping at 0 G.P.M.												
				11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit												
				12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 26.5 to 4.0 ft. <input type="checkbox"/> Heat cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No												
				14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name RED JACKET Model number 75CNSWIP 3/4 Volts 230 Length of Drop Pipe 185 ft. capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's name Amtrol Model number 202 Capacity Gallons 30												
15 Remarks, elevation, source of data, etc. Data Source: MDNR				16 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. SIIRTOLA WELL DRILLING INC 1677 REGISTERED BUSINESS NAME REGISTRATION NO. Address RW1 BOX 384C HANCOCK, MI 49930 Signed <i>Paul Lahti</i> Date 06/24/98 AUTHORIZED REPRESENTATIVE												
7 Rig Operator's Name: Paul Lahti																



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

44

Wellogic

Import ID:

Tax No:	Permit No:	County: Houghton	Township: Osceola
Well ID: 31000001289		Town/Range: 55N 33W	Section: 11
		Well Status: Active	WSSN:
Elevation:		Distance and Direction from Road Intersection:	
Latitude: 47.181027		0.7 MILE NORTH OF INTERSECT OF #019 AND DOVER ROAD	
Longitude: -88.456163		Well Owner: BRUCE J BEAUDDIN	
Method of Collection: Interpolation-Map		Well Address:	Owner Address:
			BOX 152 HUBBELL, MI 49934

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 322.00 ft.	Pump Installation Date:	HP: 0.75
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number: CNS12BC	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 264.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 28.50 ft. depth	Draw Down Seal Used: No	
Borehole: 8.00 in. to 28.50 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
	Manufacturer: Amtrol	
	Model Number: 202	Tank Capacity: 30.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 42.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Topsoil	1.00	1.00
Yield Test Method: Unknown	Sand & Gravel Clayey	5.00	6.00
Pumping level 240.00 ft. after 1.00 hrs. at 10 GPM	Unidentified Consolidated Fm	316.00	322.00

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 28.50 ft.

Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL ZIEMNICK
Type	Employment: Unknown
Distance	
Direction	
None	

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:
Other Remarks:

44

PERMIT NUMBER: W3131102

1 LOCATION OF WELL		31553311003		Tax Parcel No.	
County HOUGHTON		Township Name OSCEOLA		Fraction NW 1/4 SW 1/4 NE 1/4	
Section No. 11		Town No. 55 N		Range No. 33 W	
Distance And Direction From Road Intersection .7 MILE N OF INTERSECT OF #019 & DOVER RD				3 OWNER OF WELL BEAUDOIN, BRUCE J. Address BOX 152 HUBBELL, MI 49934 Address: Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Street Address & City of Well Location				4 WELL DEPTH: 322.0 ft. Date Completed 09/23/96 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well	
Locate with 'x' in Section Below N W E 1 mi. S Sketch Map: DOVER RD. #019 ELEVATION 0.00 msl				5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> No. low rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted	
2 FORMATION DESCRIPTION				6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIB Public <input type="checkbox"/>	
THICKNESS OF STRATUM				7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Diameter 6.00 in. to 28.5 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter 8.00 in. to 28.5 ft. depth 0.00 in. to 0.0 ft. depth Height: Above Surface 1.5 ft. Weight 18.97 lbs/ft. Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
TOPSOIL 1.0 1.0				8 SCREEN <input checked="" type="checkbox"/> Not Installed Type None Diameter 0.00 SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft. FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremner Check <input type="checkbox"/> Blank above screen 0.0 ft. Other	
SAND & GRAVEL-CLAYEY 5.0 6.0				9 STATIC WATER LEVEL: 42.00 ft. below land surface <input type="checkbox"/> Flow	
BEDROCK 316.0 322.0				10 PUMP G LEVEL: below land surface 24.0 ft. after 1.0 hrs. pumping at 10 G.P.M. 0 ft. after 0.0 hrs. pumping at 0 G.P.M.	
				11 WELL LEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit	
				12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 28.5 to 4.0 ft. <input checked="" type="checkbox"/> Next cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other No. of bags of cement 4 Additives	
				13 Nearest source of possible contamination Type None Distance 0 ft. Direction Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
				14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name REDJACKET Model number CNS12BCHP 3/43 volts 230 Length of Drop Pipe 264 ft. capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's name Amtrol Model number 202 Capacity 10 Gallons 30	
15 Remarks, elevation, source of data, etc. Data Source: MDNR				16 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. SITRYOL WELL DRILLING INC 1677 REGISTERED BUSINESS NAME REGISTRATION NO. Address R#1 BOX 386C HANCOCK, MI 49930 Signed [Signature] Date 09/23/96	
17 Rig Operator's Name: Paul Ziemnick					

AUTHORITY: Act 368 PA 1978 **COMPLETION:** Required **PENALTY:** Conviction of a violation of any provision is a misdemeanor

NOV - 7 1996



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

45
Wellogic

Import ID:

Tax No:	Permit No: W03-31-202	County: Houghton	Township: Osceola
Well ID: 31000000962		Town/Range: 55N 33W	Section: 11
		Well Status: Active	WSSN:
Elevation:		Distance and Direction from Road Intersection:	
Latitude: 47.1741076		.25 MILE NORTH OF INTERSECTION OF DOVER ROAD AND ONECO ROAD	
Longitude: -88.4569151		Well Owner: CHESTER AHO	
Method of Collection: Interpolation-Map		Well Address: DOVER RD MI	Owner Address: P.O. BOX 285 CHASSELL, MI 49916

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 241.00 ft.	Pump Installation Date:	HP: 0.75
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number:	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 220.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 27.50 ft. depth	Draw Down Seal Used: No	
Borehole: 10.00 in. to 27.50 ft. depth	Pressure Tank Installed: Yes	
6.00 in. to 241.00 ft. depth	Pressure Tank Type: Unknown	
	Manufacturer: Amtrol	
	Model Number: BN4202	Tank Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 9.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Sand	4.00	4.00
Yield Test Method: Unknown	Sand & Gravel Clayey	6.00	10.00
Pumping level 221.00 ft. after 1.00 hrs. at 5 GPM	See Comments	231.00	241.00

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags Additives Depth
Neat cement	10.00 None 4.00 ft. to 27.50 ft.

Wellhead Completion: Pitless adapter	Geology Remarks: 3. BEDROCK
--------------------------------------	-----------------------------

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: ROBERT MANTTA
Type Distance Direction	Employment: Employee
Septic tank 250 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	Date

General Remarks: PUMP MODEL NUMBER: 75F21112512

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.

46
Wellogic

Import ID:

Tax No:		Permit No: W04-31-034		County: Houghton		Township: Torch Lake	
Well ID: 31000000938 Elevation: 932 ft. Latitude: 47.17733829 Longitude: -88.44575886 Method of Collection: Interpolation-Map				Town/Range: 55N 33W	Section: 12	Well Status: Active	WSSN:
				Source ID/Well No:			
				Distance and Direction from Road Intersection: 1 MILE NW OF INTERSECT ON M26 AND GOLF COURSE RD			
Well Owner: MICHAEL MONETTE				Well Address: 52436 GOLF COURSE RD MI			
				Owner Address: PO BOX 157 HUBBELL, MI 49934			

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 101.00 ft.	Pump Installation Date:	HP: 0.50
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number:	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 80.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
	Draw Down Seal Used: No	
Diameter: 6.00 in. to 26.50 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
Borehole: 6.00 in. to 26.50 ft. depth	Manufacturer: Amtrol	
6.00 in. to 101.00 ft. depth	Model Number: BN4202	Tank Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 12.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Sand & Gravel	12.00	12.00
Yield Test Method: Air	Sandstone	89.00	101.00
Pumping level 101.00 ft. after 1.00 hrs. at 30 GPM			

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags Additives Depth
Bentonite slurry	10.00 None 4.00 ft. to 26.50 ft.

Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI
Type	Employment: Employee
Distance	
Direction	
Septic tank	
50 ft.	
Northwest	

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:
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.

48
Wellogic

Import ID:

Tax No:		Permit No:		County: Houghton		Township: Torch Lake	
Well ID: 31000001256 Elevation: Latitude: 47.177593 Longitude: -88.421104 Method of Collection: Interpolation-Map				Town/Range: 55N 32W	Section: 7	Well Status: Active	WSSN:
				Source ID/Well No:			
				Distance and Direction from Road Intersection: 0.5 MILE SOUTHWEST OF M-26 ON THE LAKE LINDEN TAILINGS			
Well Owner: LAKE LINDEN WATER AND SEWER AU				Well Address:			
				Owner Address: LAKE LINDEN, MI 49945			

Drilling Method: Cable Tool	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 172.00 ft.	Pump Installation Date:	HP: 1.00
Well Type: Unknown	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Unknown	Model Number: 8CC	Pump Capacity: 20 GPM
Casing Joint: Threaded & coupled	Drop Pipe Length: 105.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 5.00 in. to 169.00 ft. depth	Draw Down Seal Used: No	
Borehole:	Pressure Tank Installed: No	
	Pressure Relief Valve Installed: No	

Static Water Level: 16.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	See Comments	130.00	130.00
Yield Test Method: Unknown	Red Clay Sticky	14.00	144.00
Pumping level 57.00 ft. after 2.00 hrs. at 15 GPM	Sand Clayey	17.00	161.00

Screen Installed: Yes	Filter Packed: No	Clay Sand Gravel	5.00	166.00
Screen Diameter: 5.00 in.	Blank: *u	Clay	3.00	169.00
Screen Material Type: Stainless steel-wire wrapped		Sand Fine Water Bearing	3.00	172.00
Slot	Length	Set Between		
12.00	3.00 ft.	169.00 ft. and 172.00 ft.		
Fittings: Unknown				
Well Grouted: No				

Wellhead Completion: Pitless adapter	Geology Remarks: FINE COPPER ORE TAILINGS
--------------------------------------	--

Nearest Source of Possible Contamination:	Drilling Machine Operator Name:
Type	Employment: Unknown
Lagoon	
Distance	
60 ft.	
Direction	
East	

Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor	Reg No: 31-1722
	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
	Date

General Remarks:
Other Remarks:

WATER WELL RECORD
ACT 294 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL

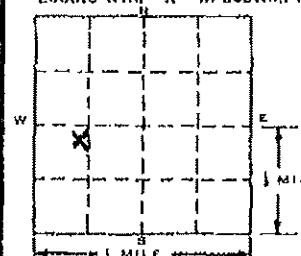
County HOUGHTON	Township Name TOROH LAKE	Fraction NE 1/4 NW 1/4 SE 1/4	Section Number 7	Town Number 55 N 1/2	Range Number 32 E/W.
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Distance And Direction from Road Intersections

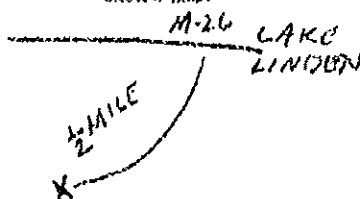
1/2 MILE SW OF M-26 ON THE LAKE LINDEN TAILINGS.

Street address & City of Well Location

Locate with "X" in section below



Sketch Map:



3 OWNER OF WELL:

**LAKE LINDEN WATER AND SEWER AUTHORITY,
LAKE LINDEN, MI 49945**

Address

4 WELL DEPTH: (completed) Date of Completion
172 ft. 7/11/795 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☐ Juted ☐ Bored6 USE: ☐ Domestic ☐ Public Supply ☐ Industry
☒ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well7 CASING: Threaded ☒ Welded ☐
Diam. **5** in. to **169** ft. Depth
Height: Above/Below Surface **4** ft.
Weight **14.8** lbs./ft.
Drive Shoe? Yes ☒ No ☐

2 FORMATION

THICKNESS
OF
STRATUMDEPTH TO
BOTTOM OF
STRATUM

FINE COPPER ORE TAILINGS.

130

130

STICKY RED CLAY.

14

144

CLAYEY SAND

17

161

CLAY SAND & GRAVEL

5

166

CLAY

3

169

FINE SAND - WATER BEARING

3

172

8 SCREEN:

Type: **STAINLESS** Dia.: **5" TELESCOPE**
Slot/Gauze **12 SLOT** **36"**
Set between **169** ft. and **172** ft.
Fittings: **BAIL BOTTOM AND LEAD PACKER**

9 STATIC WATER LEVEL

16 ft. below land surface

10 PUMPING LEVEL below land surface

57 ft. after **2** hrs. pumping **15** o.p.m.

ft. after hrs. pumping o.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) Chlorides (Cl) **UNKNOWN.**

Hardness Other

12 WELL HEAD COMPLETION: ☐ In Approved Pit☒ Pitless Adapter ☐ 12" Above Grade13 Well Grouted? ☐ Yes ☒ No☐ Neat Cement ☐ Bentonite

Depth: From ft. to ft.

14 Nearest Source of possible contamination

60 feet **EAST** Direction **LAGOON** TypeWell disinfected upon completion ☒ Yes ☐ No

15 PUMP:

☐ Not installedManufacturer's Name **RED JACKET**Model Number **8CC** HP **1** Volts **480**Length of Drop Pipe **105** ft. capacity **20** G.P.M.Type: ☒ Submersible☐ Jet☐ Reciprocating

USE A 2ND SHEET IF NEEDED

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 best of my knowledge and belief.

VALLEY PLOG & HIG., Inc. **1722-31**

REGISTERED BUSINESS NAME

REGISTRATION NO.

Address **POB 458, DOLLAR BAY, MI 49922**

Signed

E. J. Probers
AUTHORIZED REPRESENTATIVE

Date

8/8/79

AUG 27 1979



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

50
Wellogic

Import ID:

Tax No:		Permit No: W0431118		County: Houghton		Township: Schoolcraft	
Well ID: 31000001371				Town/Range:	Section:	Well Status:	WSSN:
				55N 32W	8	Active	
Elevation:				Distance and Direction from Road Intersection:			
Latitude: 47.183539				Bootjack Rd out of Lake Linden. Property on right just to Rice Lake Rd. - Lot 55027			
Longitude: -88.386017				Well Owner: Alexander J Scargall			
Method of Collection: QQQ - Centroid				Well Address:		Owner Address:	
				55027 Bootjack Rd Lake Linden, MI		6568 Rosemont Dr. Saginaw, MI 48603	

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 99.00 ft.	Pump Installation Date: 8/2/2004	HP: 0.50
Well Type: New	Manufacturer: McDermott	Pump Type: Submersible
Casing Type: Steel - black	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	
Borehole: 6.00 in. to 99.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Diaphragm/bladder	
	Manufacturer: Amtrol	
	Model Number: WX-202	Tank Capacity: 19.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 0.00 ft. Above Grade (Flowing)	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
1.00 hrs. at 30 GPM	Topsoil	2.00	2.00
Yield Test Method: Air	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	Gravel Sand Silt	32.00	74.00
Intake: Bedrock Well	Sandstone	25.00	99.00

Well Grouted: Yes	Grouting Method: Driven/dry grout	Geology Remarks:
Grouting Material	Bags Additives Depth	
Bentonite dry granular	2.00 None 0.00 ft. to 76.50 ft.	
Wellhead Completion: Pitless adapter, 12 inches above grade		

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Steve Larson
Type	Employment: Employee
Septic tank	Distance 50 ft. Direction East
	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

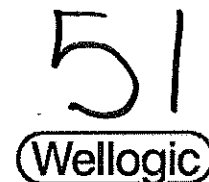
General Remarks:
Other Remarks: Map Scale: Unknown



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:

Tax No:	Permit No: W0831095	County: Houghton		Township: Schoolcraft	
Well ID: 31000002029 Elevation: 719 ft. Latitude: 47.17687 Longitude: -88.38177 Method of Collection: GPS Std Positioning Svc SA Off		Town/Range: 55N 32W	Section: 9	Well Status: Active	WSSN:
		Source ID/Well No:			
		Distance and Direction from Road Intersection: 29030 rheault rd.			
		Well Owner: Kathleen Belkowski			
		Well Address: 29030 Rheault rd. Lake Linden, MI 49945		Owner Address: 29030 Rheault rd. Lake Linden, MI 49945	

Drilling Method: Rotary Well Depth: 200.00 ft. Well Type: Replacement Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe, Centralizer Diameter: 6.00 in. to 39.00 ft. depth Borehole: 10.00 in. to 39.00 ft. depth 6.00 in. to 200.00 ft. depth	Well Use: Household Date Completed: 8/6/2008 Height: 1.00 ft. above grade Pump Installed: Yes Pump Installation Date: 8/12/2008 Manufacturer: McDermott Model Number: pep2w72ba- Drop Pipe Length: 161.00 ft. Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Amtrol Model Number: wx-203 Pressure Relief Valve Installed: Yes	Pump Installation Only: No HP: 0.50 Pump Type: Submersible Pump Capacity: 12 GPM Pump Voltage: Drilling Record ID: Tank Capacity: 32.0 Gallons
---	---	---

Static Water Level: 82.00 ft. Below Grade Well Yield Test: Pumping level 17.50 ft. after 1.00 hrs. at 14 GPM	Yield Test Method: Test pump	Formation Description	Thickness	Depth to Bottom
Screen Installed: No Intake: Bedrock Well		Silt & Sand	4.00	4.00
		Clay & Silt	6.00	10.00
		Silt Sand Gravel	5.00	15.00
		Clay Gravel Sand	11.00	26.00
		Sandstone	174.00	200.00

Well Grouted: Yes Grouting Method: Grout pipe outside casing Grouting Material: Neat cement Bags: 11.00 Additives: None Depth: 3.00 ft. to 39.00 ft.	Geology Remarks:
Wellhead Completion: Pitless adapter, 12 inches above grade	

Nearest Source of Possible Contamination: Type: Septic tank Distance: 150 ft. Direction: West	Drilling Machine Operator Name: Steven Larson Employment: Subcontractor
Abandoned Well Plugged: Yes Casing Diameter: 6 in. Plugging Material: Neat cement No. of Bags: 30.00 Casing Removed: No Well Depth: 180 ft.	Contractor Type: Water Well Drilling Contractor Business Name: Larson Well Drilling LLC Reg No: 07-1779 Business Address: 18034 second sand beach rd, 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 _____

General Remarks:
Other Remarks:

GEOLOGICAL SURVEY SAMPLE No.

WATER WELL RECORD
ACT 294 PA 1966MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

52

9

LOCATION OF WELL		TOWNSHIP NAME		FRACTION	SECTION NUMBER	TOWN NUMBER	RANGE NUMBER
Houghton		SCHOOLCRAFT		SE 1/4	9	55 N/S.	324 E/W.
Distance and Direction from Road Intersections		ABOUT 3 MILES EAST FROM LAKE LINDEN ON THE RICE LAKE ROAD					
Sketch Map:		LAKE LINDEN HIGH					
Locate with "X" in section below							
3 OWNER OF WELL:		THOMAS CODERE					
Address		ROUTE 1, BOX 52 LAKE LINDEN, MICH. 49945					
4 WELL DEPTH: (completed)		80 ft.					
Date of Completion		AUG 10, 1976					
5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug							
<input type="checkbox"/> Hollow rod <input type="checkbox"/> Jotted <input type="checkbox"/> Bored							
6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry							
<input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial							
<input type="checkbox"/> Test Well							
7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/>		Height: Above/Below Surface 2 ft.					
Diam. 6 in. to 26 ft. Depth		Weight 18.45 lbs./ft.					
in. to ft. Depth		Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
8 SCREEN:							
Type: _____ Dia.: _____							
Slot/Gauze _____ Length _____							
Set between _____ ft. and _____ ft.							
Fittings: _____							
9 STATIC WATER LEVEL		10 ft. below land surface					
10 PUMPING LEVEL below land surface		40 ft. after 1 hrs. pumping 16 g.p.m.					
		30 ft. after 1 hrs. pumping 10 g.p.m.					
11 WATER QUALITY in Parts Per Million:							
Iron (Fe) _____ Chlorides (Cl) _____							
Hardness _____ Other _____							
12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit							
<input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade							
13 Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
<input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> _____							
Depth: From 5 ft. to 26 ft.							
14 Nearest Source of possible contamination		60 feet EAST Direction SEPTIC Type					
Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
15 PUMP:		<input type="checkbox"/> Not installed					
Manufacturer's Name		MYERS					
Model Number		SC52-5A HP 5 Volts 230					
Length of Drop Pipe		42 ft. capacity _____ G.P.M.					
Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Recirculating							
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 best of my knowledge and belief.					
		SIBTOLA WELL DRILLING 0156					
		REGISTERED BUSINESS NAME REGISTRATION NO.					
		Address ROUTE 1, HANCOCK MICH.					
		Signed Edward Sibtol Date July 14, 1976					
		AUTHORIZED REPRESENTATIVE					

D67d

100M (Rev. 12-68)

AUG 16 1976

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.

53
Wellogic

Import ID:

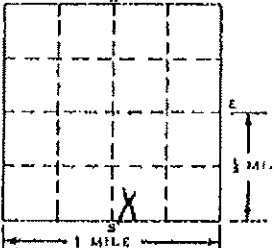
Tax No:	Permit No:	County: Houghton	Township: Schoolcraft				
Well ID: 31000001262 Elevation: Latitude: 47.171985 Longitude: -88.350213 Method of Collection: Interpolation-Map		Town/Range: 55N 32W	Section: 10	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 2 MILES EAST ON RICE LAKE ROAD FROM BOOTJACK ROAD INTERSECTION					
		Well Owner: BERTHA OUKART					
		Well Address:			Owner Address: RICE LAKE ROAD LAKE LINDEN, MI 49945		

Drilling Method: Rotary		Pump Installed: Yes		Pump Installation Only: No	
Well Depth: 182.00 ft.		Pump Installation Date:		HP: 0.75	
Well Type: Unknown		Manufacturer: F.E. Myers		Pump Type: Submersible	
Casing Type: Unknown		Model Number: SX72-78		Pump Capacity:	
Casing Joint: Welded		Drop Pipe Length: 173.00 ft.		Pump Voltage:	
Casing Fitting: Drive shoe		Drop Pipe Diameter:		Drilling Record ID:	
Diameter: 6.00 in. to 25.00 ft. depth		Draw Down Seal Used: No			
Borehole:		Pressure Tank Installed: No			
		Pressure Relief Valve Installed: No			
Static Water Level: 57.00 ft. Below Grade		Formation Description		Thickness	Depth to Bottom
Well Yield Test:		Yield Test Method: Unknown			
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
		Sandstone		166.00	182.00
Screen Installed: No		Intake: Bedrock Well			
Well Grouted: Yes		Grouting Method: Unknown			
Grouting Material		Bags	Additives	Depth	
Neat cement		0.00	None	4.00 ft. to 25.00 ft.	
Wellhead Completion: Pitless adapter					
Nearest Source of Possible Contamination:		Drilling Machine Operator Name:			
Type	Distance	Direction	Employment: Unknown		
Septic tank	50 ft.	North			
Abandoned Well Plugged: No		Contractor Type: Water Well Drilling Contractor		Reg No: 31-0154	
Reason Not Plugged:		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:

Other Remarks:

WATER WELL RECORD
ACT 294 PA 1985MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL					
County HOUGHTON	Township Name SCHOOL CRAFT	Fraction 5W 5W 5E	Section Number 10	Town Number 55 N/S.	Range Number 32 46/W.
Distance And Direction from Road Intersections 1 MILES EAST ON RICE LAKE ROAD FROM BOOT JACK ROAD INTERSEC			3 OWNER OF WELL: BERTHA DUKART Address RICE LAKE RD. LAKE LINDEW, MI 49445		
Street address & City of Well Location LAKE LINDEW MI			4 WELL DEPTH: (Completed) Date of Completion 182 ft. 8/7/1980		
Locate with "X" in section below 			5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dig <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/>		
			6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>		
2 FORMATION			7 CASING: Threaded <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Height: Above/Below Diam. 6 in. to 25 ft. Depth 182 ft. Surface 195 lbs./ft. Weight 195 lbs./ft. Drive Shou? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
			8 SCREEN: Type: _____ Dia.: _____ Slot/Grain _____ Length _____ Set between _____ ft. and _____ ft. Fittings: _____		
THICKNESS OF STRATUM			9 STATIC WATER LEVEL 57 ft. below land surface		
DEPTH TO BOTTOM OF STRATUM			10 PUMPING LEVEL below land surface 180 ft. after 1 hrs. pumping 10 g.p.m. 160 ft. after 1 hrs. pumping 4 g.p.m.		
SAND			11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____ Other _____		
CLAY			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adaptor <input type="checkbox"/> 12" Above Grade		
SANDSTONE			13 Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Depth: From 4 ft. to 25 ft.		
			14 Nearest Source of possible contamination 50 feet N Direction SEPTIC Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
			15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name MVERS Model Number EX72-78 HP 3 Volts 230 Length of Drop Pipe 173 ft. capacity _____ G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating		
USE A 2ND SHEET IF NEEDED					
16 Remarks, elevation, source of data, etc. 100 ft. above			17 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. SHILOH WELL DRILLING 015K REGISTERED BUSINESS NAME REGISTRATION NO. Address HANCOCK MI Signed Edward Lintola Date 8/8/80 AUTHORIZED REPRESENTATIVE		

This document paid for with State funds

AUG 25 1980



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

54
Wellogic

Import ID:

Tax No:	Permit No:	County: Houghton	Township: Schoolcraft				
Well ID: 31000001261 Elevation: Latitude: 47.171337 Longitude: -88.350066 Method of Collection: Interpolation-Map		Town/Range: 55N 32W	Section: 10	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 0.4 MILE WEST OF INTERSECT OF POST ROAD AND RICE LAKE ROAD					
		Well Owner: ROBERT MAKOLIN Well Address: Owner Address: P.O. BOX 986 LAKE LINDEN, MI 49945					

Drilling Method: Rotary Well Depth: 202.00 ft. Well Type: New	Well Use: Household Date Completed: 11/1/1990	Pump Installed: Yes Pump Installation Date: Manufacturer: F.E. Myers Model Number: S2J72 Drop Pipe Length: 187.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No	Pump Installation Only: No HP: 0.75 Pump Type: Submersible Pump Capacity: 11 GPM Pump Voltage: Drilling Record ID:												
Casing Type: Steel - unknown Casing Joint: Unknown Casing Fitting: Drive shoe Diameter: 6.00 in. to 26.00 ft. depth Borehole: 8.00 in. to 26.00 ft. depth	Height:	Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Amtrol Model Number: 202 Pressure Relief Valve Installed: No	Tank Capacity: 30.0 Gallons												
Static Water Level: 46.00 ft. Below Grade Well Yield Test: Pumping level 202.00 ft. after 1.00 hrs. at 8 GPM	Yield Test Method: Unknown	<table border="1"><thead><tr><th>Formation Description</th><th>Thickness</th><th>Depth to Bottom</th></tr></thead><tbody><tr><td>Sand</td><td>5.00</td><td>5.00</td></tr><tr><td>Sand Clayey</td><td>6.00</td><td>11.00</td></tr><tr><td>Sandstone</td><td>191.00</td><td>202.00</td></tr></tbody></table>		Formation Description	Thickness	Depth to Bottom	Sand	5.00	5.00	Sand Clayey	6.00	11.00	Sandstone	191.00	202.00
Formation Description	Thickness	Depth to Bottom													
Sand	5.00	5.00													
Sand Clayey	6.00	11.00													
Sandstone	191.00	202.00													
Screen Installed: No Intake: Bedrock Well	Geology Remarks:														
Well Grouted: Yes Grouting Material: Neat cement Grouting Method: Unknown Bags: 4.00 Additives: None Depth: 4.00 ft. to 26.00 ft.															
Wellhead Completion: Pitless adapter															
Nearest Source of Possible Contamination: Type: Septic tank Distance: 180 ft. Direction: Southwest															
General Remarks:		Drilling Machine Operator Name: PAUL ZIEMNICK Employment: Unknown													
Other Remarks:		Contractor Type: Water Well Drilling Contractor 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													

WATER WELL AND PUMP RECORD

PERMIT NUMBER

1 LOCATION OF WELL		3 OWNER OF WELL:													
County Houghton	Township Name Schoolcraft	Fraction SW 1/4 Sec 1/4	Section Number 10												
Distance And Direction From Road Intersection .4 mile W of intersect of Post Rd. and Rice Lake Rd.		Town Number 55	Range Number 32 E/W												
Street Address & City of Well Location		Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No													
Locate with "X" in Section Below 		Date Completed MO. 11 DAY 01 YEAR 90 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well													
2 FORMATION DESCRIPTION <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>FORMATION DESCRIPTION</th> <th>THICKNESS OF STRATUM</th> <th>DEPTH TO BOTTOM OF STRATUM</th> </tr> </thead> <tbody> <tr> <td>Sand</td> <td>5</td> <td>5</td> </tr> <tr> <td>Sand, Clayey</td> <td>6</td> <td>11</td> </tr> <tr> <td>Sandstone</td> <td>191</td> <td>202</td> </tr> </tbody> </table>		FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	Sand	5	5	Sand, Clayey	6	11	Sandstone	191	202	4 WELL DEPTH: 202 FT. 5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted	
		FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM											
		Sand	5	5											
		Sand, Clayey	6	11											
Sandstone	191	202													
6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public															
7 CASING: Diameter <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input type="checkbox"/> Welded Height: Above G.M.S. 1 ft Surface 1 ft Weight 18.97 lbs./ft. 6 in. to 26 ft. depth 8 in. to 26 ft. depth 10 in. to 26 ft. depth Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No															
8 SCREEN <input checked="" type="checkbox"/> Not Installed Type _____ Diameter _____ Slot/Gauze _____ Length _____ Set between _____ ft and _____ ft. FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank above screen _____ ft Other _____															
9 STATIC WATER LEVEL. 46 ft. below land surface <input type="checkbox"/> Flow															
10 PUMPING LEVEL. below land surface 202 ft. after 1 hrs. pumping at 8.5 G.P.M. _____ ft. after _____ hrs. pumping at _____ G.P.M.															
11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adaptor <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit															
12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 26 to 4 ft <input checked="" type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement 4 Additives Hi-Early															
13 Nearest source of possible contamination Type septic Distance 180 ft Direction SW Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No															
14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name Myers Model number S2J72 HP 3/4 Volts 230 Length of Drop Pipe 189 ft. capacity 11 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's name Amtrol Model number 202 Capacity 30 Gallons															
15. Remarks, elevation, source of data, etc. 17. Rig Operator's Name: Paul Ziemnick		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. Siirtola Well Drilling Inc. 1677 REGISTERED BUSINESS NAME REGISTRATION NO. Address Rte. 1, Box 386C, Hancock MI 49930 Signed <i>Chris Siirtola</i> Date 6NOV90 AUTHORIZED REPRESENTATIVE													

USE A 2ND SHEET IF NEEDED

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

Failure to comply is a misdemeanor.

Import ID:

Tax No: 31-006-017-001-35	Permit No: W12-31-030	County: Houghton			Township: Franklin	
Well ID: 31000002312		Town/Range: 55N 33W	Section: 17	Well Status: Active	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection: 0.5 mile southwest of Airport Park Road (F35) on Johanna Lane on southeast side				
		Well Owner: Travis Ek				
		Well Address: Johanna Lane Franklin Twp., MI			Owner Address: 18381 Waasa Road Hancock, MI 49930	
Elevation:						
Latitude: 47.15841						
Longitude: -88.51765						
Method of Collection: GPS Std Positioning Svc SA Off						

Drilling Method: Cable Tool Well Depth: 197.00 ft. Well Type: New	Well Use: Household Date Completed: 5/22/2012	Pump Installed: Yes Pump Installation Date: 9/7/2012 Manufacturer: F.E. Myers Model Number: 2NFL72-12-P4-01 Drop Pipe Length: 181.00 ft. Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No	Pump Installation Only: No HP: 0.75 Pump Type: Submersible Pump Capacity: 12 GPM Pump Voltage: 230 Drilling Record ID:
Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe	Height: 2.00 ft. above grade	Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Champion Model Number: CH4202	Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: Yes
Diameter: 6.00 in. to 36.00 ft. depth			
Borehole: 6.00 in. to 197.00 ft. depth			

Static Water Level: 17.00 ft. Below Grade Well Yield Test: Yield Test Method: Bailer Pumping level 180.00 ft. after 1.00 hrs. at 4 GPM	Formation Description	Thickness	Depth to Bottom
	Topsoil	1.00	1.00
	Sand & Stones Silty	19.00	20.00
	Clay & Gravel Sandy	9.00	29.00
	Gravel Clayey	5.00	34.00
Screen Installed: No Intake: Bedrock Well	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				

Nearest Source of Possible Contamination: <table border="1"> <thead> <tr> <th>Type</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Septic tank</td> <td>75 ft.</td> <td>Southeast</td> </tr> <tr> <td>Drainfield/Dry well</td> <td>100 ft.</td> <td>East</td> </tr> </tbody> </table>			Type	Distance	Direction	Septic tank	75 ft.	Southeast	Drainfield/Dry well	100 ft.	East	Drilling Machine Operator Name: James Eskola Employment: Employee	
Type	Distance	Direction											
Septic tank	75 ft.	Southeast											
Drainfield/Dry well	100 ft.	East											
			Contractor Type: Water Well Drilling Contractor Reg No: 31-2413 Business Name: Keranen and Eskola Well Drilling, Inc. Business Address: 30330 Lincoln School Road, Calumet, MI, 49913										
			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 _____ Date _____										

General Remarks:	
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.

56
Wellogic

Import ID:

Tax No: 31-006-017-001-30JC	Permit No: W04-31-050	County: Houghton		Township: Franklin		
Well ID: 31000001505		Town/Range: 55N 33W	Section: 17	Well Status: Active	WSSN:	
		Source ID/Well No:				
		Distance and Direction from Road Intersection: 0.75 MILE NORTHEAST OF INTERSECTION OF FORSMAN ROAD AND JOHANNA LANE				
		Well Owner: FRANCIS AND MARY JANE CARNE				
Elevation:		Well Address: 51228 JOHANNA LANE		Owner Address: P.O. BOX 529 DOLLAR BAY, MI 49922		
Latitude: 47.163158						
Longitude: -88.51607						
Method of Collection: Interpolation-Map						

Drilling Method: Rotary	Well Use: Household	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 181.00 ft.	Date Completed: 6/22/2004	Pump Installation Date:	HP: 0.75
Well Type: New	Height: 1.50 ft. above grade	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - unknown		Model Number: 75F21112S1	Pump Capacity: 10 GPM
Casing Joint: Welded		Drop Pipe Length: 169.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe		Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 30.00 ft. depth		Draw Down Seal Used: No	
Borehole: 6.00 in. to 181.00 ft. depth		Pressure Tank Installed: Yes	
		Pressure Tank Type: Unknown	
		Manufacturer: Amtrol	
		Model Number: BN4202	Tank Capacity: 20.0 Gallons
		Pressure Relief Valve Installed: No	
Static Water Level: 15.00 ft. Below Grade	Yield Test Method: Air	Formation Description	Thickness
Well Yield Test:			Depth to Bottom
Pumping level 181.00 ft. after 1.00 hrs. at 3 GPM		Sand & Gravel	21.00
		Sand & Gravel Clayey	9.00
		Unidentified Consolidated Fm	151.00
Screen Installed: No	Intake: Bedrock Well		
Well Grouted: Yes	Grouting Method: Unknown	Geology Remarks:	
Grouting Material: Bentonite slurry	Bags: 0.00 Additives: None Depth:		
Wellhead Completion: Pitless adapter			
Nearest Source of Possible Contamination:		Drilling Machine Operator Name: PAUL LAHTI	
Type: Septic tank	Distance: 65 ft. Direction: North	Employment: Employee	
		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:

Other Remarks:

57

MAY 11 1999

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

TAX NO: _____

PERMIT NO: W 9931003

1. LOCATION OF WELL
County HOUGHTON Township Name OSCEOLA Fraction NW 1/4 NE 1/4 NE 1/4 Section No. 15 Town No. T 55 N Range No. 33 W

Distance and Direction from Road Intersection
500 FEET SOUTH OF S. ONECO ROAD
FIRE #5

Street Address & City of Well Location
Locate with 'x' in Section Below

Sketch Map

2. FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
<u>CLAY + ROCKS</u>	<u>4'</u>	<u>4'</u>
<u>HARD SANDY CLAY</u>	<u>3'</u>	<u>7'</u>
<u>SOFT HARD ROCK</u>	<u>1'</u>	<u>8'</u>
<u>HARD ROCK</u>	<u>82'</u>	<u>90'</u>

3. OWNER OF WELL
Address TAISTU LAHTI
R 2 BOX 1140
CALUMET, MICH
Address Same as Well Location ☒ Yes ☐ No

4. WELL DEPTH: 90 ft. Date Completed 12-4-98 ☒ New Well ☐ Replacement Well

5. ☒ Cable Tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow Rod ☐ Auger/Bored ☐ Jatted ☐

6. USE: ☒ Household ☐ Type I Public ☐ Type III Public
☐ Irrigation ☐ Type IIa Public ☐ Heat Pump
☐ Test Well ☐ Type IIb Public ☐

7. CASING: ☒ Steel ☐ Threaded ☐ Plastic ☒ Welded ☐ Other _____
Height: Above/Below Surface: 2 ft.
Diameter: 6 in. to 25 ft. depth
Weight: 18.97 lbs./ft.
BORE HOLE: ☒ Drive Shoe ☐ Shale Packer
Diameter: 9 in. to 25 ft. depth
6 in. to 90 ft. depth

8. SCREEN: ☒ Not Installed ☐ Gravel-Packed
Type _____ Diameter _____
Slot/Gauze _____ Length: _____
Set Between _____ ft. and _____ ft.
FITTINGS: ☐ K-Packer ☐ Bremer Check
☐ Blank Above Screen _____ ft. Other _____

9. STATIC WATER LEVEL: 8 ft. Below Land Surface ☐ Flowing

10. PUMPING LEVEL: Below Land Surface
80 ft. After 1 hrs. Pumping at 12 G.P.M.
☐ Plunger ☐ Bailer ☐ Air ☒ Test Pump

11. WELL HEAD COMPLETION:
☒ Pitless Adapter ☐ 12" Above Grade
☐ Basement Offset ☐ Well House

12. WELL GROUTED? ☐ No ☒ Yes From 0 to 25 ft.
☒ Neat Cement ☐ Bentonite ☐ Other _____
No. of Bags 5 Additives _____

13. NEAREST SOURCE OF POSSIBLE CONTAMINATION:
Type SEPTIC Distance 53 ft. Direction WORTH
Type SEPTIC Distance 50 ft. Direction WEST

14. PUMP: ☐ Not Installed ☐ Pump Installation Only
Manufacturer's Name STA. RILEY
Model Number 10P4C025-02 HP 4 Volts 230
Length of Drop Pipe 80 ft. Capacity 10 G.P.M.
TYPE: ☒ Submersible ☐ Jet ☐ Other _____
PRESSURE TANK:
Manufacturer's Name A.O. SMITH
Model Number V-80 Capacity 8 Gallons 26

15. 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.
KERANEN WELL & PUMP 31-1722
REGISTERED BUSINESS NAME REGISTRATION NO.
Address RTE. 1 BOX 238 CALUMET, MICH.
Signed George Keranen Date 12-4-98
AUTHORIZED REPRESENTATIVE

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

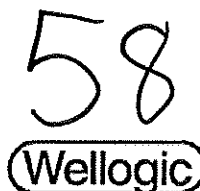
16. REMARKS: (Elevation, Source of Data, etc.)

17. DRILLING MACHINE OPERATOR:
☒ Employee ☐ Subcontractor
Name JEFFER KSKOLA + JOE MOORE

GW-2-228 9/93

GEOLOGICAL SURVEY COPY

Authority: Act 355 PA 1978
Completion: Required
Penalty: Conviction of a violation of any provision is a misdemeanor.

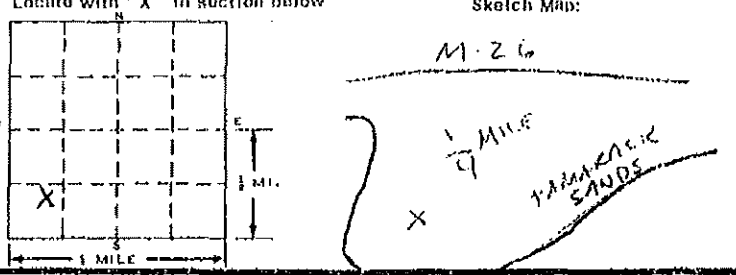


Failure to comply is a misdemeanor.

Tax No:	Permit No: W0931088	County: Houghton			Township: Osceola	
Well ID: 31000002177		Town/Range: 55N 33W	Section: 14	Well Status: Active	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection: 0.3 mile southeast of South Oneco Road/Dover Road intersection on Oneco Road on southwest side				
		Well Owner: Craig Bekkala				
		Well Address: 25784 Oneco Road Osceola Twp., MI			Owner Address: 23862 Oneco Road Calumet, MI 49913	
Elevation:						
Latitude: 47.16684						
Longitude: -88.45302						
Method of Collection: GPS Std Positioning Svc SA Off						

Drilling Method: Cable Tool Well Depth: 136.00 ft. Well Type: New				Well Use: Household Date Completed: 9/29/2009				Pump Installed: No Pressure Tank Installed: No Pressure Relief Valve Installed: No			
Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe				Height: 2.00 ft. above grade							
Diameter: 6.00 in. to 25.00 ft. depth											
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 Well Yield Test:								Yield Test Method: Bailer			
Pumping level 110.00 ft. after 1.00 hrs. at 9 GPM											
Screen Installed: No				Intake: Bedrock Well							
Well Grouted: Yes Grouting Material: Neat cement								Grouting Method: Displacement plug Bags: 4.00 Additives: None Depth: 3.00 ft. to 25.00 ft.			
Wellhead Completion: 12 inches above grade											
Nearest Source of Possible Contamination:								Drilling Machine Operator Name: James Eskola Employment: Employee			
Type		Distance		Direction							
Septic tank		65 ft.		Southeast							
Drainfield/Dry well		75 ft.		Southeast							
								Contractor Type: Water Well Drilling Contractor Business Name: Keranen & Eskola Well Drilling Business Address: 30330 Lincoln School Road, Calumet, MI, 49913			
								Reg No: 31-2413			
								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:											

WATER WELL RECORD
ACT 294 PA 1985MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL		2		FORMATION		THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM	
County Houghton		Township Name OSCEOLA		Fraction NE 1/4 SW 1/4 SW 1/4		Section Number 13		Town Number 55 N/6	
Range Number 33 E/W		Distance And Direction from Road Intersections 1/4 MILE SW OF M-26 ON THE TAMARACK TAILINGS.		Street address & City of Well Location LAKE LINDEN, MI 49945		Sketch Map: 		3 OWNER OF WELL: LAKE LINDEN WATER/SEWAGE AUTHORITY	
Locate with "X" in section below		4 WELL DEPTH: (Completed) Data of Completion 208 ft. 6/29/79		5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dig <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/>		6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input checked="" type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well		7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below Diam. _____ Surface 4 ft. Weight 14.8 lbs./ft. Drive Shod? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
8 SCREEN:		Type: STAINLESS Dia. 5" TELESCOPE Slot/Gauze 12 SLOT Length 36" Set between 208 ft. and 205 ft. Fittings: BAIL BOTTOM, LEAD PACKER		9 STATIC WATER LEVEL 15 ft. below land surface		10 PUMPING LEVEL below land surface 55 ft. after 2 hrs. pumping 15 g.p.m. _____ ft. after _____ hrs. pumping _____ g.p.m.		11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) UNKNOWN Hardness _____ Other _____	
12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade		13 Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Depth: From _____ ft. to _____ ft.		14 Nearest Source of possible contamination 60 feet EAST Direction LAGOON Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name RED JACKET Model Number 8CC HP 1 Volts 480 Length of Drop Pipe 84 ft. capacity 20 G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating		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 best of my knowledge and belief. VALLEY PLOG & HTO., INC. 1722-31 REGISTERED BUSINESS NAME REGISTRATION NO. Address POB 458, DOLLAR BAY, MI 49922 Signed Earl E. Jorgensen Date 7/6/79 AUTHORIZED REPRESENTATIVE		USE A 2ND SHEET IF NEEDED							

AUG 27 1979

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:

Tax No:	Permit No: W0231113	County: Houghton		Township: Franklin		
Well ID: 31000000734		Town/Range: 55N 33W	Section: 13	Well Status: Active	WSSN:	
		Source ID/Well No:				
		Distance and Direction from Road Intersection: ACROSS FROM BOSTON ROAD ON US41				
		Well Owner: Eric Walli				
Elevation:		Well Address:		Owner Address:		
Latitude: 47.15792				51386 Pontiac Rd.		
Longitude: -88.427955				Hancock, MI 49930		
Method of Collection: QQQ - Centroid						

Drilling Method: Rotary	Well Use: Type III public	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 280.00 ft.	Date Completed: 8/28/2002	Pump Installation Date:	HP: 1.00
Well Type: New	Height: 2.00 ft. above grade	Manufacturer: McDermott	Pump Type: Submersible
Casing Type: Steel - black		Model Number:	Pump Capacity: 15 GPM
Casing Joint: Welded		Drop Pipe Length: 260.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe		Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 27.00 ft. depth		Draw Down Seal Used: No	
		Pressure Tank Installed: Yes	
		Pressure Tank Type: Unknown	
Borehole: 9.00 in. to 27.00 ft. depth		Manufacturer: Amtrol	
6.00 in. to 280.00 ft. depth		Model Number: WX202	Tank Capacity: 19.0 Gallons
		Pressure Relief Valve Installed: No	

Static Water Level: 8.50 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Test pump	Sand & Silt W/Stones	10.00	10.00
Pumping level 260.00 ft. after 1.00 hrs. at 4 GPM	Unidentified Consolidated Fm Hard	270.00	280.00

Screen Installed: No	Intake: Bedrock Well			

Well Grouted: Yes	Grouting Method: Unknown	
Grouting Material	Bags	Additives
Neat cement	5.00	None
		Depth
		6.00 ft. to 27.00 ft.

Wellhead Completion: Pitless adapter, 12 inches above grade	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Steven Larson
Type	Employment: Employee
Distance	
Direction	
None	

Contractor Type: Water Well Drilling Contractor	Reg No: 07-1779
Business Name: Larson Well Drilling & Pump Co	
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:



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:

Tax No:	Permit No:	County: Houghton	Township: Torch Lake				
Well ID: 31000001253 Elevation: Latitude: 47.156547 Longitude: -88.405495 Method of Collection: Interpolation-Map		Town/Range: 55N 32W	Section: 18	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 0.3 MILE NORTH OF INTERSECT OF MUD LAKE ROAD AND BOOTJACK ROAD; THEN 0.5 MILE WEST					
		Well Owner: JOEL KUNNARI					
		Well Address:			Owner Address: RTE 1, BOX 352 HANCOCK, MI 49930		

Drilling Method: Rotary Well Depth: 182.00 ft. Well Type: New Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe Diameter: 6.00 in. to 136.00 ft. depth Borehole:	Well Use: Household Date Completed: 7/22/1996 Height: 2.00 ft. above grade Pump Installed: Yes Pump Installation Date: Manufacturer: Red Jacket Model Number: CN59BC Drop Pipe Length: 169.00 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	Pump Installation Only: No HP: 0.50 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID: Tank Capacity: 30.0 Gallons
--	---	--

Static Water Level: Above Grade (Flowing) Well Yield Test: Yield Test Method: Unknown Pumping level 182.00 ft. after 1.00 hrs. at 5 GPM	<table border="1"><thead><tr><th>Formation Description</th><th>Thickness</th><th>Depth to Bottom</th></tr></thead><tbody><tr><td>Sand</td><td>10.00</td><td>10.00</td></tr><tr><td>Sand Clayey</td><td>120.00</td><td>130.00</td></tr><tr><td>Sand & Gravel Clayey</td><td>6.00</td><td>136.00</td></tr><tr><td>Sandstone</td><td>46.00</td><td>182.00</td></tr></tbody></table>	Formation Description	Thickness	Depth to Bottom	Sand	10.00	10.00	Sand Clayey	120.00	130.00	Sand & Gravel Clayey	6.00	136.00	Sandstone	46.00	182.00
Formation Description	Thickness	Depth to Bottom														
Sand	10.00	10.00														
Sand Clayey	120.00	130.00														
Sand & Gravel Clayey	6.00	136.00														
Sandstone	46.00	182.00														

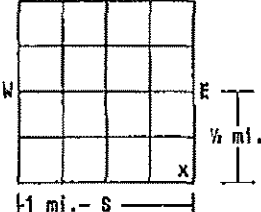


Unrestricted Flow Rate:											
Screen Installed: No	Intake: Bedrock Well										
<table border="1"><tr><td>Well Grouted: Yes</td><td>Grouting Method: Unknown</td></tr><tr><td>Grouting Material</td><td>Bags</td><td>Additives</td><td>Depth</td></tr><tr><td>Bentonite slurry</td><td>0.00</td><td>None</td><td></td></tr></table>		Well Grouted: Yes	Grouting Method: Unknown	Grouting Material	Bags	Additives	Depth	Bentonite slurry	0.00	None	
Well Grouted: Yes	Grouting Method: Unknown										
Grouting Material	Bags	Additives	Depth								
Bentonite slurry	0.00	None									
Wellhead Completion: Pitless adapter											

Geology Remarks:	
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Nearest Source of Possible Contamination: Type: Septic tank Distance: 60 ft. Direction: Northwest	Drilling Machine Operator Name: PAUL ZIEMNICK Employment: Unknown Contractor Type: Water Well Drilling Contractor 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
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**MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD**

PERMIT NUMBER: **W3131009**

1 LOCATION OF WELL		31553218002		Tax Parcel No.	
County HOUGHTON		Township Name TORCH LAKE		Fraction SE 1/4 SE 1/4 SE 1/4	Section No. 18
				Town No. 55 N	Range No. 32 W
Distance And Direction From Road Intersection .3 MILE N OF INTERSECT OF MUD LAKE RD & BOX JACK RD, THEN .5 MILE W, Street Address & City of Well Location				3 OWNER OF WELL KUNNARI, JOEL Address RTE 1, BOX 352 HANCOCK, MI 49930 Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Locate with 'x' in Section Below N 				Sketch Map: 	
				4 WELL DEPTH: 182.0 ft. Date Completed 07/22/96 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well	
				5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted	
				6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>	
				7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Diameter 6.00 in. to 136.0 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter 0.00 in. to 0.0 ft. depth 0.00 in. to 0.0 ft. depth Height: Above Surface 2.0 ft. Weight 18.97 lbs/ft. Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2 FORMATION DESCRIPTION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	8 SCREEN <input checked="" type="checkbox"/> Not Installed Type None Diameter 0.00 SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft. FITTINGS: <input type="checkbox"/> X-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremner Check <input type="checkbox"/> Blank above screen 0.0 ft. Other	
SAND		10.0	10.0		
SAND-CLAYEY		120.0	130.0		
SAND & GRAVEL-CLAYEY		6.0	136.0		
SANDSTONE		46.0	182.0		
				9 STATIC WATER LEVEL: 0.00 ft. below land surface <input checked="" type="checkbox"/> Flow	
				10 PUMPING 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 HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit	
				12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Neat cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement _____ Additives _____	
				13 Nearest source of possible contamination Type Septic Distance 60 ft. Direction NW Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
				14 PUMP: <input type="checkbox"/> Not installed <input type="checkbox"/> Pump Installation Only Manufacturer's name RED JACKET Model number CN59BC HP 1/2 Volts 230 Length of Drop Pipe 169 ft. capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's 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.	
Data Source: MDNR				SILTRON, WELL DRILLING INC 1677 REGISTERED BUSINESS NAME REGISTRATION NO.	
17 Rig Operator's Name: Paul Ziemnick				Address R#1 BOX 386C HANCOCK, MI 49930 Signed  Date 07/22/96 AUTHORIZED REPRESENTATIVE	

AUTHORITY: Act 368 PA 1978 COMPLETION: Required PENALTY: Conviction of a violation of any provision is a misdemeanor

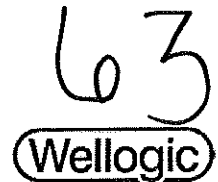
OCT 18 1996



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:

Tax No:	Permit No: 2704	County: Houghton	Township: Torch Lake				
Well ID: 31000001271 Elevation: Latitude: 47.156654 Longitude: -88.405164 Method of Collection: Interpolation-Map		Town/Range: 55N 32W	Section: 18	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 3.5 MILES SOUTH OF LAKE LINDEN ON BOOTJACK ROAD; 0.6 MILE WEST ON BONNHI ROAD AND 0.1 MILE NORTH					
		Well Owner: PETER TOROLA					
		Well Address:			Owner Address: 312 FIFTH STREET CALUMET, MI 49913		

Drilling Method: Cable Tool Well Depth: 150.00 ft. Well Type: New	Well Use: Household Date Completed: 10/17/1994	Pump Installed: Yes Pump Installation Date: Manufacturer: Sta-Rite Model Number: 10P4S02T-0 Drop Pipe Length: 60.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No	Pump Installation Only: No HP: 0.50 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID:																																										
Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe	Height: 2.00 ft. above grade	Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Amtrol Model Number: 203 Pressure Relief Valve Installed: No	Tank Capacity: 12.0 Gallons																																										
Diameter: 6.00 in. to 138.00 ft. depth Borehole: 6.00 in. to 150.00 ft. depth																																													
Static Water Level: Above Grade (Flowing) Well Yield Test: Pumping level 47.00 ft. after 1.00 hrs. at 15 GPM	Yield Test Method: Test pump	<table border="1"><thead><tr><th>Formation Description</th><th>Thickness</th><th>Depth to Bottom</th></tr></thead><tbody><tr><td>Sand</td><td>10.00</td><td>10.00</td></tr><tr><td>Clay & Gravel Sandy</td><td>30.00</td><td>40.00</td></tr><tr><td>Clay & Sand</td><td>9.00</td><td>49.00</td></tr><tr><td>Clay Sandy</td><td>23.00</td><td>72.00</td></tr><tr><td>Clay & Gravel Sandy</td><td>21.00</td><td>93.00</td></tr><tr><td>Clay Sand Gravel</td><td>7.00</td><td>100.00</td></tr><tr><td>Clay Sandy</td><td>10.00</td><td>110.00</td></tr><tr><td>Clay & Gravel Sandy</td><td>27.00</td><td>137.00</td></tr><tr><td>Sandstone Soft</td><td>1.00</td><td>138.00</td></tr><tr><td>See Comments</td><td>12.00</td><td>150.00</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></tbody></table>		Formation Description	Thickness	Depth to Bottom	Sand	10.00	10.00	Clay & Gravel Sandy	30.00	40.00	Clay & Sand	9.00	49.00	Clay Sandy	23.00	72.00	Clay & Gravel Sandy	21.00	93.00	Clay Sand Gravel	7.00	100.00	Clay Sandy	10.00	110.00	Clay & Gravel Sandy	27.00	137.00	Sandstone Soft	1.00	138.00	See Comments	12.00	150.00									
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Clay & Gravel Sandy	27.00	137.00																																											
Sandstone Soft	1.00	138.00																																											
See Comments	12.00	150.00																																											
Unrestricted Flow Rate: Screen Installed: No Intake: Bedrock Well		Geology Remarks: JACOBSVILLE SANDSTONE																																											
Well Grouted: Yes Grouting Material: Bentonite dry granular Bags: 4.00 Additives: None Depth:	Grouting Method: Unknown	Drilling Machine Operator Name: GEORGE KERANEN Employment: Unknown																																											
Wellhead Completion: Pitless adapter		Contractor Type: Water Well Drilling Contractor Business Name: KERANEN WELL & PUMP Business Address:																																											
Nearest Source of Possible Contamination: Type: Septic tank Distance: 64 ft. Direction: East		Reg No: 31-1722 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:

63

TAX NO:		MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD			PERMIT NO: 2704	
1. LOCATION OF WELL		Township Name		Fraction	Section No.	Range No.
County HOUGHTON		TORCH LAKE		SE 1/4 SE 1/4 SE 1/4	18	55N 32W
Distance and Direction from Road Intersection 3 1/2 MILES SOUTH OF LAKE LINDEN ON BOAT JACK ROAD, 6 TENTHS MILE WEST ON BONNIE ROAD AND 1 TENTH MILE NORTH						
Street Address & City of Well Location						
Locate with 'X' in Section Below		TORCH LAKE		Sketch Map		
2. FORMATION DESCRIPTION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM			
SAND		10'	10'			
SANDY CLAY + GRAVEL		30'	40'			
CLAY SAND		9'	49'			
SANDY CLAY		23'	72'			
SANDY CLAY + GRAVEL		21'	93'			
CLAY SAND + GRAVEL		7'	100'			
SANDY CLAY		10'	110'			
SANDY CLAY + GRAVEL		27'	137'			
SOFT SANDSTONE		1'	138'			
JACOBVILLE SANDSTONE		12'	150'			
USE A 2ND SHEET IF NEEDED						
15. ABANDONED WELL PLUGGED?		<input type="checkbox"/> Yes <input type="checkbox"/> No Casing Diameter _____ in. Depth _____ ft. PLUGGING MATERIAL: <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite Slurry <input type="checkbox"/> Cement/Bentonite Slurry <input type="checkbox"/> Concrete Grout <input type="checkbox"/> Bentonite Chips No. of Bags _____ Casing Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No				
16. REMARKS: (Elevation, Source of Data, etc.)						
17. DRILLING MACHINE OPERATOR:		DIST. 3 OFFICE This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. KEPANEK WELL & PUMP REGISTERED BUSINESS NAME Address RT. 1 BOX 238 CALLUMET, MICH. 49913 Signed George Kepanek Date 11-21-94 AUTHORIZED REPRESENTATIVE				
<input type="checkbox"/> Employee <input type="checkbox"/> Subcontractor		13. NEAREST SOURCE OF POSSIBLE CONTAMINATION: Type SEPTIC Distance 65 ft. Direction EAST Type _____ Distance _____ ft. Direction _____				
Name GEORGE KEPANEK		14. PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's Name STA-RITE Model Number 10P4502T-02 HP 1/2 Volts 230 Length of Drop Pipe 60 ft. Capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Other _____ PRESSURE TANK: Manufacturer's Name AMTRUL Model Number 203 Capacity 12 Gallons 36				

GW-2-226 9/93

GEOLOGICAL SURVEY COPY

Authority: Act 368 PA 1978
Completion: Required
Penalty: 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.

65
Wellogic

Import ID:

Tax No: 31-014-317-001-10		Permit No: W0431130		County: Houghton		Township: Torch Lake	
Well ID: 31000001466 Elevation: Latitude: 47.16686 Longitude: -88.39797 Method of Collection: GPS Std Positioning Svc SA Off				Town/Range:	Section:	Well Status:	WSSN:
				55N 32W	17	Active	
				Source ID/Well No:			
				Distance and Direction from Road Intersection: 0.5 mile south of Rice Lake Road (S23) on Bootjack Road (T641) on west (lake) side			
				Well Owner: Raymond & Cheryl Lasanen			
Well Address:				Owner Address:			
51703 Bootjack Road Lake Linden, MI 49945				56366 Liberty Street Calumet, MI 49913			

Drilling Method: Cable Tool	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 38.00 ft.	Pump Installation Date: 9/3/2004	HP: 0.50
Well Type: New	Manufacturer: Sta-Rite	Pump Type: Submersible
Casing Type: Steel - black	Model Number: 10P4C02J04	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 27.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.	Drilling Record ID:
Diameter: 6.00 in. to 34.00 ft. depth	Draw Down Seal Used: No	
Borehole: 6.00 in. to 38.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Diaphragm/bladder	
	Manufacturer: Other	
	Model Number: BN4202	Tank Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 1.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Test pump	Topsoil	1.00	1.00
Pumping level 30.00 ft. after 1.50 hrs. at 7 GPM	Sand & Stones Silty	9.00	10.00
	Clay & Gravel Sandy	5.00	15.00

Screen Installed: Yes	Filter Packed: No	
Screen Diameter: 5.00 in.	Blank: 1.00 ft. Above	
Screen Material Type: Stainless steel-wire wrapped		
Slot Length Set Between		
10.00 4.00 ft. 34.00 ft. and 38.00 ft.		
Fittings: Neoprene packer, Bottom plug		

Well Grouted: Yes	Grouting Method: Driven/dry grout
Grouting Material	Bags Additives Depth
Bentonite dry granular	2.00 None

Wellhead Completion: Pitless adapter, 12 inches above grade

Nearest Source of Possible Contamination:		
Type	Distance	Direction
Drainfield/Dry well	55 ft.	East-Northeast
Drainfield/Dry well	70 ft.	West-Southwest

Drilling Machine Operator Name: Ted Keranen	
Employment: Employee	
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 of my knowledge and belief.	
Signature of Registered Contractor	Date

General Remarks:
Other Remarks: Tank Manufacturer:Baron

TAX NO:

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD

PERMIT NO:

W 983108

1. LOCATION OF WELL

County

HOUGHTON

Township Name

TORCH LAKE

Fraction

SE 1/4 SW 1/4 NW 1/4

Section No.

16

Town No.

55

Range No.

32

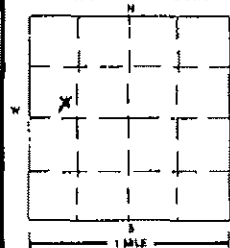
Distance and Direction from Road Intersection

3/4 MILE EAST OF BUTTACK ROAD ON
RICE LAKE ROAD AND 1/2 MILE SOUTH

Street Address & City of Well Location

Locate with 'x' in Section Below

Sketch Map



RICE LAKE ROAD

2. FORMATION DESCRIPTION

THICKNESS
OF
STRATUMDEPTH TO
BOTTOM OF
STRATUM

TOP SOIL

2'

2'

SANDY CLAY & GRAVEL

20'

22'

RED CLAY & GRAVEL

6'

28'

JACOBVILLE SANDSTONE

88'

116'

3. OWNER OF WELL

Address TOM + MARIAN LEMINGTON
BOX 56

LAKE LINDEN, MICH. 49445

Address Same as Well Location. ☒ Yes ☐ No

4. WELL DEPTH:

116 ft.

Date Completed

7/15/98

☒ New Well☐ Replacement Well5. ☒ Cable Tool☐ Rotary☐ Driven☐ Dug☐ Hollow Rod☐ Auger/Bored☐ Jetted☐

6. USE:

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

7. CASING:

☒ Steel☐ Threaded☐ Plastic☒ Welded☐ Other

Height: Above/Below

Surface: 2 ft.

Diameter: 6 in. to 28 ft. depth

Weight: 1897 lbs./ft.

in. to ft. depth

BORE HOLE:

Diameter: 6 in. to 116 ft. depth

☒ Drive Shoe☐ Shale Packer

in. to ft. depth

8. SCREEN:

☒ Not Installed☐ Gravel-Packed

Type

Diameter

Sieve/Gauze

Length:

Set Between

ft. and ft.

FITTINGS:

☐ K-Packer☐ Bremer Check☐ Blank Above Screen

ft. Other

9. STATIC WATER LEVEL:

29 ft. Below Land Surface

☐ Flowing

10. PUMPING LEVEL: Below Land Surface

110 ft. After

1 hrs. Pumping at

10 G.P.M.

☐ Plunger☐ Bailor☐ Air☒ Test Pump

11. WELL HEAD COMPLETION:

☒ Pileless Adapter☐ 12" Above Grade☐ Basement Offset☐ Well House

12. WELL GROUTED?

☐ No☒ Yes

From to ft.

☐ Neat Cement☒ Bentonite☐ Other

No. of Bags 3

Additives

13. NEAREST SOURCE OF POSSIBLE CONTAMINATION:

Type SEPTIC

Distance 100 ft.

Direction EAST

Type

Distance ft.

Direction

14. PUMP:

☐ Not Installed☐ Pump Installation Only

Manufacturer's Name GOULD

Model Number 109805-4124 HP 1/2 Volts 230

Length of Drop Pipe 100 ft. Capacity 10 G.P.M.

TYPE: ☒ Submersible☐ Jet☐ Other

PRESSURE TANK:

Manufacturer's Name AMTRON

Model Number 202 Capacity 6 Gallons 20

15. ABANDONED WELL PLUGGED?

☐ Yes ☐ No

Casing Diameter in.

Depth ft.

PLUGGING MATERIAL:

☐ Neat Cement☐ Bentonite Slurry☐ Cement/Bentonite Slurry☐ Concrete Grout☐ Bentonite Chips

No. of Bags

Casing Removed?

☐ Yes ☐ No

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

17. DRILLING MACHINE OPERATOR:

☒ Employee ☐ Subcontractor

Name JEFF ESKOLA

15. 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.

KERANEN WELL & PUMP

31-1722

REGISTERED BUSINESS NAME

REGISTRATION NO.

Address RTE 1 BOX 235 CALUMET, MICH. 49413

Signed

George Keranen

Date

9-4-98

AUTHORIZED REPRESENTATIVE

GW-2-228 9-93

GEOLOGICAL SURVEY COPY

Authority: Act 388 PA 1976

Completion: Required

Penalty: 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.

67
Wellogic

Import ID:

Tax No:	Permit No: W9831028A	County: Houghton	Township: Torch Lake
Well ID: 31000001195		Town/Range: 55N 32W	Section: 16
Elevation:		Well Status: Active	WSSN:
Latitude: 47.170405		Source ID/Well No:	
Longitude: -88.368155		Distance and Direction from Road Intersection: 1.25 MILES EAST OF BOOTJACK ROAD ON RICE LAKE ROAD AND 150 FEET SOUTH	
Method of Collection: Interpolation-Map		Well Owner: MICHAEL COLOMBE	
		Well Address: RTE 1, BOX 52B RICE LAKE ROAD LAKE LINDEN, MI 49945	Owner Address: RTE 1, BOX 52B RICE LAKE ROAD LAKE LINDEN, MI 49945

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 80.00 ft.	Pump Installation Date:	HP: 0.50
Well Type: New	Manufacturer: Sta-Rite	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number: 10P4C02J02	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 68.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 25.00 ft. depth	Draw Down Seal Used: No	
Borehole: 8.00 in. to 25.00 ft. depth 6.00 in. to 80.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
	Manufacturer: A.O. Smith	
	Model Number: V-60	Tank Capacity: 6.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 7.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Topsoil	2.00	2.00
Yield Test Method: Test pump	Red Clay Sandy	10.00	12.00
Pumping level 75.00 ft. after 1.00 hrs. at 5 GPM	Sandstone	68.00	80.00

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags Additives Depth
Neat cement	4.00 None 0.00 ft. to 25.00 ft.

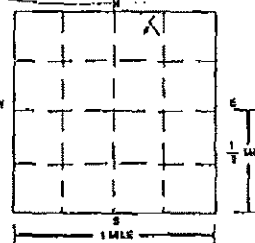
Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: JEFF ESKOLA
Type	Employment: Employee
Septic tank	
Distance	
55 ft.	
Direction	
Northeast	

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	Date

General Remarks:
Other Remarks:

TAX NO:		MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD				PERMIT NO: W 9831028A 67	
1. LOCATION OF WELL		County	Township Name	Fraction	Section No.	Town No.	Range No.
HOUGHTON		TOUCH LAKE	NE 1/4 NW 1/4	16	55N	32W	
Distance and Direction from Road Intersection 1 1/4 MILES EAST UP BOOTJACK ROAD ON RICE LAKE ROAD AND 150 FEET SOUTH.		3. OWNER OF WELL Address MICHAEL COLOMBE RTE. 1 BOX 52 B RICE LAKE ROAD RICE LAKE, MICH. Address Same as Well Location <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Street Address & City of Well Location		4. WELL DEPTH: 80 ft. Date Completed 12-5-97 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well					
Locate with 'x' in Section Below		5. <input checked="" type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow Rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted <input type="checkbox"/>					
Sketch Map 		6. USE: <input checked="" type="checkbox"/> Household <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>					
2. FORMATION DESCRIPTION		7. CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Other Diameter: 6 in. to 25 ft. depth Weight: 18.92 lbs./ft. BORE HOLE: ? <input checked="" type="checkbox"/> Drive Shoe <input type="checkbox"/> Shale Packer Diameter: 8 in. to 25 ft. depth 6 in. to 80 ft. depth					
		8. SCREEN: <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Gravel-Packed Type _____ Diameter _____ Slot/Gauze _____ Length: _____ Set Between _____ ft. and _____ ft. FITTINGS: <input type="checkbox"/> X-Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank Above Screen <input type="checkbox"/> ft. Other _____					
		9. STATIC WATER LEVEL: 7 ft. Below Land Surface <input type="checkbox"/> Flowing					
		10. PUMPING LEVEL: Below Land Surface 75 ft. After 1 hrs. Pumping at 5 G.P.M. <input type="checkbox"/> Plunger <input type="checkbox"/> Bailer <input type="checkbox"/> Air <input checked="" type="checkbox"/> Test Pump					
		11. WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade <input type="checkbox"/> Basement Offset <input type="checkbox"/> Well House					
		12. WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 0 to 25 ft. <input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of Bags 4 Additives _____					
		13. NEAREST SOURCE OF POSSIBLE CONTAMINATION: Type SEPTIC Distance 55 ft. Direction NE Type _____ Distance _____ ft. Direction _____					
USE A 2ND SHEET IF NEEDED		14. PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's Name STARRITE Model Number 10P4C02J02 HP 1/2 Volts 230 Length of Drop Pipe 68 ft. Capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Other _____ PRESSURE TANK: Manufacturer's Name A.O. SMITH Model Number V-60 Capacity 6 Gallons 20					
15. ABANDONED WELL PLUGGED? <input type="checkbox"/> Yes <input type="checkbox"/> No Casing Diameter _____ in. Depth _____ ft. PLUGGING MATERIAL: <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite Slurry <input type="checkbox"/> Cement/Bentonite Slurry <input type="checkbox"/> Concrete Grout <input type="checkbox"/> Bentonite Chips No. of Bags _____ Casing Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No		16. REMARKS: (Elevation, Source of Data, etc.)					
17. DRILLING MACHINE OPERATOR: <input checked="" type="checkbox"/> Employee <input type="checkbox"/> Subcontractor Name JEFF KSKOLM		15. 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. KERANEN WELL & PUMP 31-1722 REGISTERED BUSINESS NAME REGISTRATION NO. Address RTE. 1 BOX 238 CALUMET, MICH. Signed George Keranen Date 12-5-97 AUTHORIZED REPRESENTATIVE					

GW-2-228 9/93

GEOLOGICAL SURVEY COPY

 Authority: Act 369 PA 1978
 Completion: Required
 Penalty: Conviction of 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.

68
Wellogic

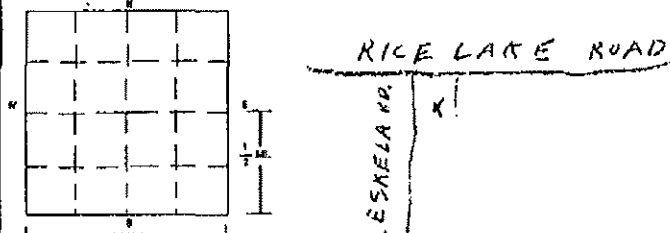
Import ID:

Tax No:	Permit No: W9831039	County: Houghton	Township: Torch Lake			
Well ID: 31000001197		Town/Range: 55N 32W	Section: 15	Well Status: Active	WSSN:	Source ID/Well No:
Elevation:		Distance and Direction from Road Intersection: ON RICE LAKE ROAD EAST OF LESKELA ROAD AND 75 FEET SOUTH				
Latitude: 47.169124		Well Owner: JIM KRUSE				
Longitude: -88.359357		Well Address: RTE 1, BOX 49 LAKE LINDEN, MI 49945		Owner Address: RTE 1, BOX 49 LAKE LINDEN, MI 49945		
Method of Collection: QQQ - Centroid						

Drilling Method: Cable Tool	Pump Installed: No		
Well Depth: 175.00 ft.	Pressure Tank Installed: No		
Well Type: New	Pressure Relief Valve Installed: No		
Casing Type: Steel - unknown			
Casing Joint: Welded			
Casing Fitting: Drive shoe			
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 Grade			
Well Yield Test:			
Yield Test Method: Test pump			
Pumping level: 160.00 ft. after 1.00 hrs. at 6 GPM			
Screen Installed: No	Intake: Bedrock Well		
Well Grouted: Yes	Grouting Method: Unknown		
Grouting Material: Neat cement	Bags: 7.00	Additives: None	Depth: 0.00 ft. to 39.00 ft.
Wellhead Completion: Pitless adapter			
Nearest Source of Possible Contamination:			
Type: Septic tank	Distance: 100 ft.	Direction: Southeast	
Drilling Machine Operator Name: G KERANEN			
Employment: Unknown			
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			
Date			

General Remarks:

Other Remarks:

TAX NO:		MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD				PERMIT NO: W 9831039 68	
1. LOCATION OF WELL		Township Name	Fraction	Section No.	Town No.	Range No.	
County HOUGHTON		TORCH LAKE	NW 1/4 NW 1/4	15	55	32	
Distance and Direction from Road Intersection ON RICE LAKE ROAD EAST OF LESKELA ROAD 75 FEET SOUTH		3. OWNER OF WELL JIM KRUSE - AS MACHINE Address RTE. 1 BOX 49 LAKE LINDEN, MICH. 49945 Address Same as Well Location <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Street Address & City of Well Location		4. WELL DEPTH: 175 ft. Date Completed 1/23/98 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well					
Locate with 'x' in Section Below		5. <input checked="" type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow Rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted <input type="checkbox"/>					
Sketch Map 		6. USE: <input checked="" type="checkbox"/> Household <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>					
2. FORMATION DESCRIPTION		THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM		7. CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Other	
		TOP SOIL		2'		Height: Above/Below Surface: 2 ft.	
		RED CLAY		5'		Diameter: 6 in. to 39 ft. depth	
		JACOBSVILLE SANDSTONE		168		Weight: 18.97 lbs/ft.	
						BORE HOLE: <input checked="" type="checkbox"/> Drive Shoe <input type="checkbox"/> Shale Packer	
						Diameter: 9 in. to 39 ft. depth	
						6 in. to 175 ft. depth	
						8. SCREEN: <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Gravel-Packed	
						Type _____ Diameter _____	
						Slot/Gauze _____ Length: _____	
						Set Between _____ ft. and _____ ft.	
						FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Bremer Check	
						<input type="checkbox"/> Blank Above Screen _____ ft. Other _____	
						9. STATIC WATER LEVEL: 9 ft. Below Land Surface <input type="checkbox"/> Flowing	
						10. PUMPING LEVEL: Below Land Surface 160 ft. After 1 hrs. Pumping at 6 G.P.M.	
						<input type="checkbox"/> Plunger <input type="checkbox"/> Bailor <input type="checkbox"/> Air <input checked="" type="checkbox"/> Test Pump	
						11. WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade	
						<input type="checkbox"/> Basement Offset <input type="checkbox"/> Well House	
						12. WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 0 to 39 ft.	
						<input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____	
						No. of Bags 7 Additives _____	
						13. NEAREST SOURCE OF POSSIBLE CONTAMINATION: Type SEPTIC Distance 160 ft. Direction SE	
						Type _____ Distance _____ ft. Direction _____	
						14. PUMP: <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only	
						Manufacturer's Name _____	
						Model Number _____ HP _____ Volts _____	
						Length of Drop Pipe _____ ft. Capacity _____ G.P.M.	
						TYPE: <input type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Other _____	
						PRESSURE TANK:	
						Manufacturer's Name _____	
						Model Number _____ Capacity _____ Gallons _____	
15. ABANDONED WELL PLUGGED? <input type="checkbox"/> Yes <input type="checkbox"/> No		15. WATER WELL CONTRACTOR'S CERTIFICATION:					
Casing Diameter _____ in. Depth _____ ft.		This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.					
PLUGGING MATERIAL: <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite Slurry		KERANEN WELL & PUMP 31-1722					
<input type="checkbox"/> Cement/Bentonite Slurry <input type="checkbox"/> Concrete Grout <input type="checkbox"/> Bentonite Chips		REGISTERED BUSINESS NAME _____ REGISTRATION NO. _____					
No. of Bags _____ Casing Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No		Address RTE. 1 BOX 238 CALUMET, MICH. 49913					
18. REMARKS: (Elevation, Source of Data, etc.)		Signed George Keranen Date 3-12-98					
17. DRILLING MACHINE OPERATOR:		AUTHORIZED REPRESENTATIVE					
<input type="checkbox"/> Employee <input type="checkbox"/> Subcontractor		Penalty: Conviction of violation of any provision is a misdemeanor.					
Name G. KERANEN		Authority: Act 368 PA 1976 Completion: Required					



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

69
Wellogic

Import ID:

Tax No:	Permit No: W0231033	County: Houghton		Township: Torch Lake	
Well ID: 31000000709 Elevation: Latitude: 47.169146 Longitude: -88.348763 Method of Collection: QQQ - Centroid		Town/Range: 55N 32W	Section: 15	Well Status: Active	WSSN:
		Source ID/Well No:			
		Distance and Direction from Road Intersection: .6 MILE E OF INTERSECTION OF RICE LAKE RD AND SAW MILL RD			
		Well Owner: VERN DUKART			
		Well Address:		Owner Address: 1123 11TH ST LAKE LINDEN, MI 49945	

Drilling Method: Rotary Well Depth: 182.00 ft. Well Type: New Casing Type: Steel - black Casing Joint: Welded Casing Fitting: None Diameter: 6.00 in. to 26.00 ft. depth 10.00 in. to 26.00 ft. depth Borehole: 6.00 in. to 182.00 ft. depth	Well Use: Household Date Completed: 5/10/2002 Height: 1.50 ft. above grade	Pump Installed: No Pressure Tank Installed: No Pressure Relief Valve Installed: No		
Static Water Level: 18.00 ft. Below Grade Well Yield Test: Pumping level 182.00 ft. after 1.00 hrs. at 20 GPM		Formation Description	Thickness	Depth to Bottom
Screen Installed: No Intake: Unknown		Clay	10.00	10.00
		Sandstone	172.00	182.00
Well Grouted: Yes Grouting Material: Bentonite slurry Bags: 10.00 Additives: None Grouting Method: Unknown Depth: 0.00 ft. to 26.00 ft.		Geology Remarks:		
Wellhead Completion: 12 inches above grade				
Nearest Source of Possible Contamination: Type: None Distance: Direction:		Drilling Machine Operator Name: PAUL LAHTI Employment: Employee		
		Contractor Type: Water Well Drilling Contractor Business Name: SIIRTOLA WELL DRLG INC Reg No: 31-1677 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:

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

Failure to comply is a misdemeanor.

Import ID:

Tax No: 31-006-020-005-00		Permit No: W0731086		County: Houghton		Township: Franklin	
<div style="font-size: 2em; font-weight: bold; margin-bottom: 10px;">Well ID: 31000001959</div> Elevation: Latitude: 47.1497 Longitude: -88.52174 Method of Collection: GPS Std Positioning Svc SA Off				Town/Range: 55N 33W	Section: 20	Well Status: Active	WSSN:
				Source ID/Well No:			
				Distance and Direction from Road Intersection: 0.9 mile east of Sunshine Road on Forsman Road (F20) on north side			
				Well Owner: Grant Simula			
				Well Address: Forsman Road Franklin Twp., MI		Owner Address: 22010 Coal Dock Road Hancock, MI 49930	

Drilling Method: Cable Tool Well Depth: 200.00 ft. Well Type: New	Well Use: Household Date Completed: 7/11/2007	Pump Installed: Yes Pump Installation Date: 8/14/2007 Manufacturer: Red Jacket Model Number: 75C21112G1 Drop Pipe Length: 186.00 ft. Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No	Pump Installation Only: No HP: 0.75 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID:
Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe	Height: 2.00 ft. above grade	Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Model Number: V80	Tank Capacity: 26.0 Gallons Pressure Relief Valve Installed: Yes
Diameter: 6.00 in. to 25.00 ft. depth Borehole: 9.00 in. to 25.00 ft. depth 6.00 in. to 200.00 ft. depth			

Static Water Level: 5.00 ft. Below Grade Well Yield Test: Yield Test Method: Bailer Pumping level 192.00 ft. after 1.00 hrs. at 3 GPM	Formation Description	Thickness	Depth to Bottom
	Topsoil Gravelly	1.00	1.00
	Sand & Gravel Clayey	5.50	6.50
	Basalt	193.50	200.00

[illegible]

Well Grouted: Yes	Grouting Method: Displacement plug					
Grouting Material	Bags	Additives	Depth			
Neat cement	6.00	None	3.00 ft. to 25.00 ft.	Geology Remarks:		

Wellhead Completion:	Pitless adapter, 12 inches above grade
----------------------	--

Nearest Source of Possible Contamination:			Drilling Machine Operator Name: Kevin Keranen	
Type	Distance	Direction	Employment: Employee	
Septic tank	130 ft.	Southeast	Pump Installer: Ted Keranen	
Drainfield/Dry well	220 ft.	South-Southeast	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
--	--

	<p align="center">Water Well Contractor's Certification</p> <p>This well was drilled under my supervision and this report is true to the best of my knowledge and belief.</p>
	<p>Signature of Registered Contractor _____</p>
	<p>Date _____</p>

General Remarks:

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.



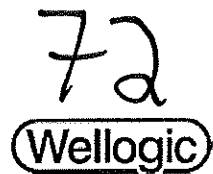
Import ID:

Tax No: 31553320003	Permit No: W0031024	County: Houghton		Township: Franklin		
Well ID: 31000000437		Town/Range: 55N 33W	Section: 20	Well Status: Active	WSSN:	
		Source ID/Well No:				
		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 HANCOCK, MI 49930		ROUTE 1 BOX 333 HANCOCK, MI 49930		
Method of Collection: Address Matching-Nearest Intersection						

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No	
Well Depth: 362.00 ft.	Pump Installation Date:	HP: 1.00	
Well Type: New	Manufacturer: F.E. Myers	Pump Type: Submersible	
Casing Type: Steel - black	Model Number: 2ST1028	Pump Capacity: 8 GPM	
Casing Joint: Welded	Drop Pipe Length: 340.00 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		
Borehole: 10.00 in. to 26.00 ft. depth	Pressure Tank Installed: Yes		
	Pressure Tank Type: Unknown		
	Manufacturer: Other		
	Model Number: (2) 202's	Tank Capacity: 8.0 Gallons	
	Pressure Relief Valve Installed: No		
Static Water Level: 51.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Gravel Clayey	4.00	4.00
Yield Test Method: Unknown	See Comments	358.00	362.00
Pumping level 362.00 ft. after 1.00 hrs. at 0 GPM			
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.
Wellhead Completion: Pitless adapter	Geology Remarks: S.NO. 2: BEDROCK		
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI		
Type	Employment: Unknown		
Distance			
Direction			
Septic tank	75 ft. 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		Date

General Remarks:

Other Remarks: Tank Manufacturer: AMTROL



WATER WELL AND PUMP RECORD

PART 127 ACT 368, P.A. 1978

PERMIT NUMBER

1 LOCATION OF WELL		Fraction		Section Number	Town Number	Range Number
County Houghton	Township Name Franklin	S 1/4 S 1/4 NW 1/4		21	5 N 1/2 S	33 E W
Distance And Direction From Road Intersection .4 MILES EAST OF INTERSECT OF ARCADIAN ROAD + MASON CROSS CUT						
Street Address & City of Well Location ATE 1, HANCOCK						
Locate with "X" in Section Below Sketch Map:						
2 FORMATION DESCRIPTION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM			
SAND, CHALKY		14	(14)			
SANDSTONE		286	300			
3 OWNER OF WELL: MICHAEL BROTHERTON Address ATE 1, BOX 336A HANCOCK, MICHIGAN Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
4 WELL DEPTH (completed) 300 " Date of Completion 2 AUG 83						
6 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>						
8 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>						
7 CASING Diameter <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Welded <input type="checkbox"/> Plastic <input type="checkbox"/> Height Above Below 6 in to 25 ft depth Surface 9 ft. 8 in to 25 ft. depth Weight 18.8 lbs./ft Grouted Drill Hole Diameter Drive Slion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
9 SCREEN <input checked="" type="checkbox"/> Not Installed Type _____ Diameter _____ Size/Gauge _____ Length _____ Set between _____ ft. and _____ ft. FILLINGS <input type="checkbox"/> K-Packer <input type="checkbox"/> Load Packer <input type="checkbox"/> Bromor Check <input type="checkbox"/> Blank above screen _____ ft. Other _____						
9 STATIC WATER LEVEL 180 ft. below land surface <input type="checkbox"/> Flow						
10 PUMPING LEVEL below land surface 300 ft. after 1 hrs. pumping at 3 GPM _____ ft. after _____ hrs. pumping at _____ GPM						
11 WELL HEAD COMPLETION <input checked="" type="checkbox"/> Adress adaptor <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit						
12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 25 to 3 ft. <input checked="" type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement 3 Additives 1-1-EARLY						
13 Nearest source of possible contamination Type SEPTIC Distance 50 ft. Direction N Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
14 PUMP <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name MYERS Model number SD25711 HP 3/4 Volts 230 Length of Drop Pipe 252 ft. capacity 11 G.P.M. TYPE <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's name WELL-X-TRAC Model number #202 Capacity 42 Gallons						
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 SIRTOLA WELL DRILLING 0154 REGISTERED BUSINESS NAME REGISTRATION NO. Address ATE 1, HANCOCK, MICH. Signed Carl Sirtola Date 4 AUG 83 AUTHORIZED REPRESENTATIVE						

SEP 9 1983



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

73
Wellogic

Import ID:

Tax No:	Permit No:	County: Houghton	Township: Franklin				
Well ID: 31000001299 Elevation: Latitude: 47.14547 Longitude: -88.495633 Method of Collection: Interpolation-Map		Town/Range: 55N 33W	Section: 21	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: 1.25 MILES WEST OF MASON ON MASON-CONCORD ROAD					
		Well Owner: EDWARD MAKI Well Address: Owner Address: BOSTON LOCATION HANCOCK, MI 49930					

Drilling Method: Rotary Well Depth: 315.00 ft. Well Type: Unknown Casing Type: Unknown Casing Joint: Threaded & coupled Casing Fitting: Drive shoe Diameter: 6.00 in. to 33.00 ft. depth Borehole:	Well Use: Household Date Completed: 6/10/1976 Height: Pump Installed: Yes Pump Installation Date: Manufacturer: F.E. Myers Model Number: SG102-10B Drop Pipe Length: 294.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: No Pressure Relief Valve Installed: No	Pump Installation Only: No HP: 1.00 Pump Type: Submersible Pump Capacity: 5 GPM Pump Voltage: Drilling Record ID:
Static Water Level: 223.00 ft. Below Grade Well Yield Test: Pumping level 265.00 ft. after 1.00 hrs. at 10 GPM	Yield Test Method: Unknown	
Screen Installed: No Intake: Bedrock Well		
Well Grouted: Yes Grouting Material: Neat cement Grouting Method: Unknown Bags: 0.00 Additives: None Depth: 12.00 ft. to 32.00 ft.		
Wellhead Completion: Pileless adapter		
Nearest Source of Possible Contamination: Type: None Distance: Direction:		
Abandoned Well Plugged: No Reason Not Plugged:		
General Remarks: Other Remarks:		Drilling Machine Operator Name: Employment: Unknown Contractor Type: Water Well Drilling Contractor Business Name: KOYKKA 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

WATER WELL RECORD
ACT 204 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL

County

Township Name

Fraction

Section Number

Town Number

Range Number

Houghton

Franklin

21

21

T55N/R.

1233 E.W.

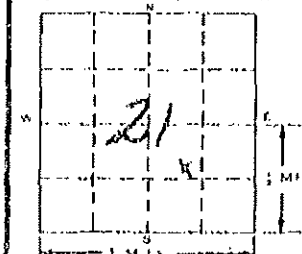
Distance And Direction from Road Intersections

1 1/4 mile West of Mason on
Mason-Concord Road

Street address & City of Well Location

Locate with "X" in section below

Sketch Map:



3 OWNER OF WELL:

Address EDWARD MAKI
BOSTON LOCATION
HANEUCK, MICH 49930

4 WELL DEPTH: (completed) Date of Completion

315 ft. 6/10/76

☐ Cable tool ☒ Rotary ☐ Driven ☐ Dig
☐ Hollow rod ☐ Jolted ☐ Bored

 6 USE: ☒ Domestic ☐ Public Supply ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well
7 CASING: Threaded ☒ Welded ☐

Height: Above/Below

Diam. 6 in. to 33 in. Depth 22 lbs./ft.

ft. Depth Drive Stem? Yes ☒ No ☐

8 SCREEN:

NONE

Type: Dia:

Slot/Gauze Length

Set between ft. and ft.

Fittings:

9 STATIC WATER LEVEL

223 ft. below land surface

10 PUMPING LEVEL below land surface

265 ft. after 1 hrs. pumping 10 a.m.

ft. after hrs. pumping a.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) Chlorides (Cl)

Hardness Other

12 WELL HEAD COMPLETION:

☐ In Approved Pit☒ Pitless Adapter ☒ 12" Above Grade13 Well Grouted? ☒ Yes ☐ No☒ Quat Cement ☐ Bentonite

Depth: From 32 ft. to 12 ft.

14 Nearest Source of possible contamination

1200 ft. Direction Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP:

☐ Not installed

Manufacturer's Name 1970 RS

Model Number 56102-100 HP 1 Volts 230

Length of Drop Pipe 294 ft. capacity 5 G.P.M.

Type: ☒ Submersible ☐ Jet ☐ Reciprocating

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:

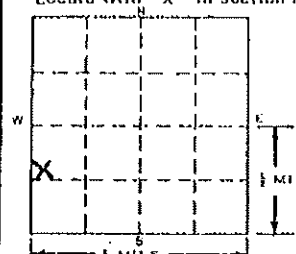
This well was drilled under my supervision and this report is true to the best of my knowledge and belief.

KORRKA WELL DRILLING CO. INC. REGISTRATION NO.

Address 27 #1 BARAGA, MICH 49908

Signed Robert J. Korbak Date 9/22/77

WATER WELL RECORD
ACT 294 PA 1985MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL		Fraction		Suction Number		Town Number		Range Number	
County Houghton	Township Name Osgoda	SW 1/4 NW 1/4 SW 1/4		22		55 N.W.		33 W.	
Distance And Direction from Road Intersections 1 1/2 MILES WEST OF M-26 AT MASON, 500' NORTH OF CO. RD. F20		3 OWNER OF WELL: Address MR. DAN JANKE ROUTE 1, MASON HANCOCK, MI 49930							
Street address & City of Well Location Locate with "X" in section below		Sketch Map: M-26		4 WELL DEPTH: (Completed) Date of Completion 95 ft. 6/12/78					
				5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jettied <input type="checkbox"/> Bored <input type="checkbox"/>					
				6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>					
				7 CASING: Threaded <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Height: Above/Below Surface 2 ft. Diam. 5 in. to 25 ft. Depth 14 1/8 lbs./ft. Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
				8 SCREEN: NONE Type: _____ Dia.: _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. Fittings: _____					
				9 STATIC WATER LEVEL 9 ft. below land surface					
				10 PUMPING LEVEL below land surface 51 ft. after 2 hrs. pumping 12 g.p.m. _____ ft. after _____ hrs. pumping _____ g.p.m.					
				11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____ Other _____					
				12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade					
				13 Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Depth: From 25 ft. to 3 ft.					
				14 Nearest Source of possible contamination 90 feet SE Direction SEPTIC Type Well disinfected upon completion <input checked="" type="checkbox"/> yes <input type="checkbox"/> No					
				15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name BURKS Model Number 6SN6B HP 1 1/3 Its 115 Length of Drop Pipe 63 ft. capacity 8 G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating					
				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 best of my knowledge and belief. VALLEY PLOG & HIG., INC. 1684 REGISTERED BUSINESS NAME REGISTRATION NO. Address POB 458, DOLLAR BAY, MI 49922 Signed E. J. S. [Signature] Date 6/26/78 AUTHORIZED REPRESENTATIVE					

WATER WELL AND PUMP RECORD

PERMIT NUMBER

1960

1 LOCATION OF WELL		Township Name		Fraction	Section Number	Town Number	Range Number
County		Houghton		SW 1/4 NW 1/4 SE 1/4	22	55 N/S	33 E/W
Distance And Direction From Road Intersection							
.75 Mile NW of intersect of 020 & M-26							
Street Address & City of Well Location							
Locate with "X" in Section Below							
Sketch Map:							
2 FORMATION DESCRIPTION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	3 OWNER OF WELL:			
Sand		7	7	Ernie Butler			
Sandstone		213	220	Address Rte 1, Box 342			
				Hancock MI 49930			
				Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
				4 WELL DEPTH: Date Completed			
				220 FT. 106 05 92			
				<input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>			
				6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type II Public			
				<input type="checkbox"/> Irrigation <input type="checkbox"/> Type III Public <input type="checkbox"/> Heat pump			
				<input type="checkbox"/> Test Well <input type="checkbox"/> Type IV Public <input type="checkbox"/>			
				7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded			
				Diameter <input type="checkbox"/> Plastic <input type="checkbox"/> Height Above/Below			
				6 in. to 25 ft. depth Surface 2 ft			
				Grouted Drill Hole Diameter Weight 12.97 lbs./ft			
				8 in. to 25 ft. depth Drive Shoe <input checked="" type="checkbox"/> Yes			
				in. to ft. depth <input type="checkbox"/> No			
				8 SCREEN: <input checked="" type="checkbox"/> Not Installed			
				Type _____ Diameter _____			
				Slot/Gauze _____ Length _____			
				Set between _____ ft and _____ ft.			
				FITTINGS: <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Gramer Check			
				<input type="checkbox"/> Blank above screen _____ ft Other _____			
				9 STATIC WATER LEVEL: _____ 73 ft. below land surface <input type="checkbox"/> Flow			
				10 PUMPING LEVEL: below land surface			
				220 ft. after 1 hrs pumping at 30 G.P.M.			
				ft. after _____ hrs. pumping at _____ G.P.M.			
				11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade			
				<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit			
				12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 25 to 4 ft.			
				<input checked="" type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____			
				No. of bags of cement 4 Additives HI-Early			
				13 Nearest source of possible contamination			
				Type septic Distance 60 ft. Direction N			
				Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
				Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No			
				14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only			
				Manufacturer's name Myers			
				Model number S2J72 HP 3/4 Volts 230			
				Length of Drop Pipe 189 ft. capacity _____ G.P.M.			
				TYPE <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet _____			
				PRESSURE TANK:			
				Manufacturer's name Amtrol			
				Model number #202 Capacity 30 Gallons			
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.			
				Siirtola Well Drilling, Inc. 1677			
				REGISTERED BUSINESS NAME REGISTRATION NO.			
				Address Rte. 1, Box 386C, Hancock MI 49930			
17. Rig Operator's Name:				Signed _____ Date 15 June 92			
Raul Ziemnick				AUTHORIZED REPRESENTATIVE			

D87d 2/80

SEP 4 1992

GEOLOGICAL SURVEY COPY

 Authority:
 Completion:
 Penalty:

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

WATER WELL RECORD
ACT 294 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL

County WOUGH TON Twp. TORCH LAKE Fraction NW 1/4 NW 1/4 Section No. 23 Town 55N N/S. 33W E/W.

Distance And Direction from Road Intersections

3 MI. WEST ON BOUTJACK ROAD FROM UPPER ROAD INTERSECTION
Street address & City of Well Location LAKE LINDEN MICH RURAL LAKE LINDEN MICH

3 OWNER OF WELL:

Address LAWRENCE ST. JOHN

2 FORMATION

THICKNESS
OF
STRATUMDEPTH TO
BOTTOM OF
STRATUMSAND - CLAYEY5656SAND - WATER BEARING460

4 WELL DEPTH: (completed)

Date of Completion

60 ft. JULY 4 1969

5 ☒ Cable tool ☐ Rotary ☒ Driven ☐ Dug
☐ Hollow rod ☐ Jetted ☐ Bored ☐

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

7 CASING: Threaded ☒ Welded ☐
Diam. 5 in. to 56 ft. Depth 2 ft.
Weight 44.6 lbs./ft.
Drive Shoe? Yes ☒ No ☐

8 SCREEN: STAINLESSType: JOHNSON Dia.: 5"Slot/Gauze 12 SLOT Length 4 FT.Set between 56 ft. and 60 ft.Fillings: STANDARD

9 STATIC WATER LEVEL

3 ft. below land surface

10 PUMPING LEVEL below land surface

40 ft. after 1 hrs. pumping 10 g.p.m.
ft. after _____ hrs. pumping _____ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) _____ Chlorides (Cl) _____

Hardness _____

12 WELL HEAD COMPLETION: ☐ In Approved Pit☒ Pitless Adapter ☐ 12" Above Grade

13 GROUTING:

Well Grouted? ☐ Yes ☒ NoMaterial: ☐ Neat Cement ☐

Depth: From _____ ft. to _____ ft.

14 SANITARY:

Nearest Source of possible contamination

75 feet NORTH Direction SEPTIC TypeWell disinfected upon completion ☒ Yes ☐ No

15 PUMP:

Manufacturer's Name MYERSModel Number SD5A21 HP 1/2Length of Drop Pipe 53 ft. capacity _____ G.P.M.Type: ☒ Submersible ☐ ☐ Jet ☐ Reciprocating

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 best of my knowledge and belief.

EDWARD SHUTKA
REGISTERED BUSINESS NAME

0154
REGISTRATION NO.

Address ROUTE 1, HANCOCK MICH

Signed Edward Shutka Date 7/28/69
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.

77
Wellogic

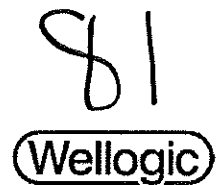
Import ID:

Tax No:		Permit No: W9931045		County: Houghton		Township: Torch Lake	
Well ID: 31000000450		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 33W	23	Active			
		Distance and Direction from Road Intersection: .75 MILE NW OF INTERSECT OF BAULMAN RD. & NIGHTINGALE DRIVE					
Elevation:		Well Owner: NORMAN MACKIE					
Latitude: 47.1421343		Well Address:					
Longitude: -88.44738772		Owner Address:					
Method of Collection: Interpolation-Map		1100 CENTURY WAY HOUGHTON, MI 49931					

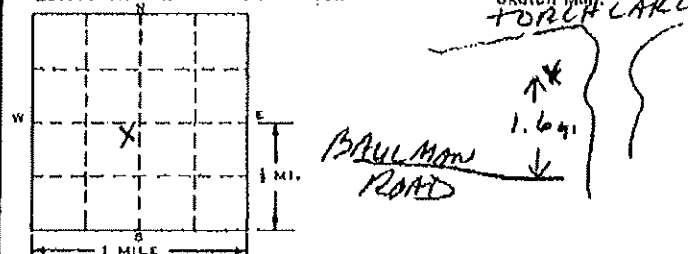
Drilling Method: Rotary		Well Use: Household		Pump Installed: Yes		Pump Installation Only: No	
Well Depth: 162.00 ft.		Date Completed: 8/26/1999		Pump Installation Date:		HP: 0.50	
Well Type: New		Height: 1.50 ft. above grade		Manufacturer: Red Jacket		Pump Type: Submersible	
Casing Type: Steel - black		Casing Joint: Welded		Model Number: 50CNSW1		Pump Capacity: 10 GPM	
Casing Fitting: Drive shoe		Diameter: 6.00 in. to 26.00 ft. depth		Drop Pipe Length: 148.00 ft.		Pump Voltage:	
Borehole: 10.00 in. to 26.00 ft. depth				Drop Pipe Diameter: 8.00 in.		Drilling Record ID:	
				Draw Down Seal Used: No			
				Pressure Tank Installed: Yes			
				Pressure Tank Type: Unknown			
				Manufacturer: Other			
				Model Number: 202		Tank Capacity: 20.0 Gallons	
				Pressure Relief Valve Installed: No			
Static Water Level: 18.00 ft. Below Grade		Yield Test Method: Unknown		Formation Description		Thickness	Depth to Bottom
Well Yield Test:		Pumping level 162.00 ft. after 1.00 hrs. at 15 GPM		Clay Sandy		8.00	8.00
Pumping level 100.00 ft. after 1.00 hrs. at 10 GPM				Clay		8.00	16.00
				Sandstone		146.00	162.00
Screen Installed: No		Intake: Bedrock Well					
Well Grouted: Yes		Grouting Method: Unknown					
Grouting Material		Bags	Additives	Geology Remarks:			
Bentonite slurry		10.00	None				
		Depth					
		0.00 ft. to 26.00 ft.					
Wellhead Completion: Pitless adapter							
Nearest Source of Possible Contamination:				Drilling Machine Operator Name: PAUL LAHTI			
Type		Distance	Direction	Employment: Unknown			
Septic tank		76 ft.	Southwest				
				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: Tank Manufacturer: AMTROL



WATER WELL RECORD
ACT 204 PA 1985MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL					
County	Township Name	Fraction	Section Number	Town Number	Range Number
HOUGHTON	SCHOOLCRAFT	NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$	19	55 N/6	32 E/W.
Distance And Direction from Road Intersections 1 6/10 MILES NORTH OF THE BAULMAN RD. AT TORCH LAKE.			3 OWNER OF WELL: Mr. DOUGLAS SHERMAN Address 1463 MACGREGOR LANE ANN ARBOR, MI 48105		
Street address & City of Well Location Locate with "X" in section below			4 WELL DEPTH: (completed) 150 ft. Date of Completion 9/24/81		
<div style="display: flex; align-items: center;"><div style="flex: 1;"></div><div style="flex: 1; text-align: center;"><p>Sketch Map:</p><p>TORCH LAKE</p><p>1.6 mi</p><p>BAULMAN ROAD</p></div></div>			5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Juted <input type="checkbox"/> Bored <input type="checkbox"/>		
			6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>		
2 FORMATION			7 CASING: Threaded <input type="checkbox"/> Welded <input checked="" type="checkbox"/> Height: Above/Below Surface 4 ft.		
			6 in. to 61 ft. Depth Weight 18.97 lbs./ft. Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
FINE SAND			8 SCREEN: NONE.		
SANDY CLAY AND GRAVEL (SOFT)			Type: _____ Dia.: _____		
SANDY CLAY & GRAVEL (HARD)			Slot/Gauze _____ Length _____		
JACOBSVILLE SANDSTONE			Set between _____ ft. and _____ ft.		
			Fittings: _____		
			9 STATIC WATER LEVEL 4 ft. below land surface		
			10 PUMPING LEVEL below land surface 110 ft. after 2 hrs. pumping 15 G.P.M.		
			_____ ft. after _____ hrs. pumping _____ G.P.M.		
			11 WATER QUALITY in Parts Per Million: UNKNOWN.		
			Iron (Fe) _____ Chlorides (Cl) _____		
			Hardness _____ Other _____		
			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input type="checkbox"/> Pile Adapter <input checked="" type="checkbox"/> 12" Above Grade		
			13 Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/>		
			Depth: From _____ ft. to _____ ft.		
			14 Nearest Source of possible contamination 100 feet S Direction PRIVVY Type _____		
			Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
			15 PUMP: <input checked="" type="checkbox"/> Not installed		
			Manufacturer's Name _____		
			Model Number _____ HP _____ Volts _____		
			Length of Drop Pipe _____ ft. capacity _____ G.P.M.		
			Type: <input type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating		
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 best of my knowledge and belief. VALLEY WELL & PUMP 31-12778 REGISTERED BUSINESS NAME REGISTRATION NO. Address RTE 1, Box 212, CALUMET, MI 49913 Signed <i>Joe Foster</i> Date 9/24/81 AUTHORIZED REPRESENTATIVE		

USE A 2ND SHEET IF NEEDED

OCT 1 1981

WATER WELL RECORD
ACT 294 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

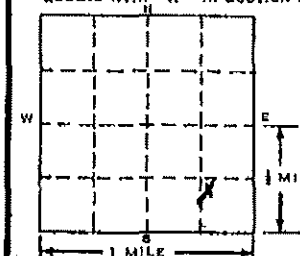
1 LOCATION OF WELL

County HOUGHTON Township Name TORCH LAKE Fraction NW 1/4 SE 1/4 Section Number 20 Town Number 55 N/S. Range Number 32 E/W.

Distance And Direction from Road Intersections
2 MILES SOUTH OF RICE LAKE ROAD
& 800 Feet East of Bootjack Road

Street address & City of Well Location

Locate with "X" in section below



Sketch Map:

RICE LAKE RD
800' X
Bootjack Road

3 OWNER OF WELL:

Wesley Moilanen
Address ROUTE 1 Bootjack
LAKE LINDEN MICH 49945

4 WELL DEPTH: (completed) Date of Completion

50 ft. 8-13-84

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dig
☐ Hollow rod ☐ Jetted ☐ Bored

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

7 CASING: Threaded ☐ Welded ☒ Height: Above/Below

Diam. 6 in. to 27 ft. Depth 2 ft.
Weight 18.22 lbs./ft.

Drive Shoe? Yes ☒ No ☐

8 SCREEN:

Type: _____ Dia.: _____
Slot/Gauze _____ Length _____
Set between _____ ft. and _____ ft.
Fittings: _____

9 STATIC WATER LEVEL

3 ft. below land surface

10 PUMPING LEVEL below land surface

3 ft. after 24 hrs. pumping 15 g.p.m.

_____ ft. after _____ hrs. pumping _____ g.p.m.

11 WATER QUALITY in Parts Per Million: UNKNOWN

Iron (Fe) _____ Chlorides (Cl) _____

Hardness _____ Other _____

12 WELL HEAD COMPLETION: ☐ in Approved Pit
☒ Pitless Adapter ☐ 12" Above Grade13 Well Grouted? ☒ Yes ☐ No

☒ Neat Cement ☐ Bentonite

Depth: From 3 ft. to 25 ft.

14 Nearest Source of possible contamination

100 feet EAST Direction SEPTIC Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP:

☒ Not installed

Manufacturer's Name _____

Model Number _____ HP _____ Volts _____

Length of Drop Pipe _____ ft. capacity _____ G.P.M.

Type: ☐ Submersible
☐ Jet ☐ Reciprocating

USE A 2ND SHEET IF NEEDED

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 best of my knowledge and belief.

VALLEY WELL PUMP 31-1878
REGISTERED BUSINESS NAME REGISTRATION NO.

Address Route 1 Box 212 Calumet

Signed Herald Byrnes Date 10-Sept-84
AUTHORIZED REPRESENTATIVE

WATER WELL AND PUMP RECORD

PART 127 ACT 368, P.A. 1978

PERMIT NUMBER

1. LOCATION OF WELL		3. OWNER OF WELL:	
County HOUGHTON	Township Name TORCH LAKE	Fraction SE 1/4 SE 1/4	Section Number 20
Distance And Direction From Road Intersection .5 MILE EAST OF INTERSECT OF BOATJACK ROAD & MUD LAKE ROAD		Town Number 5570	Range Number 32
Street Address & City of Well Location BOATJACK LAKE LINDEN		Address Same As Well Location? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Locate with "X" in Section Below		4. WELL DEPTH: (completed) 142	
Sketch Map		Date of Completion 20 SEP 83	
		<input type="checkbox"/> Cabin tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>	
2. FORMATION DESCRIPTION		6. USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public	
THICKNESS OF STRATUM		<input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump	
DEPTH TO BOTTOM OF STRATUM		<input type="checkbox"/> Test Well <input type="checkbox"/> Type IIIb Public <input type="checkbox"/>	
SAND, CLAY 12 112 SANDSTONE 130 142		7. CASING Diameter <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Welded <input type="checkbox"/> Plastic <input type="checkbox"/>	
		Height Above/Below Surface 1 ft	
		Weight 18.97 lbs./ft	
		Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		8. SCREEN <input checked="" type="checkbox"/> Not Installed	
		Type _____ Diameter _____	
		Slot/Gauze _____ Length _____	
		Set between _____ ft and _____ ft	
		FITTINGS <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremor Check	
		<input type="checkbox"/> Blank above screen _____ ft Other _____	
		9. STATIC WATER LEVEL: 12 ft below land surface <input type="checkbox"/> Flow	
		10. PUMPING LEVEL: below land surface	
		140 ft. after 1 hrs. pumping at 6 G.P.M.	
		_____ ft. after _____ hrs. pumping at _____ G.P.M.	
		11. WELL HEAD COMPLETION <input checked="" type="checkbox"/> Dress adaptor <input type="checkbox"/> 12" above grade	
		<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit	
		12. WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 2.5 to 3 ft.	
		<input checked="" type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____	
		No. of bags of cement 2.5 401 EARLY	
		13. Nearest source of possible contamination	
		Type SEPTIC Distance 60 ft Direction W	
		Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		14. PUMP <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only	
		Manufacturer's name MYER	
		Model number ST215H HP 1/2 Volts 230	
		Length of Drop Pipe 120 ft. capacity 11 G.P.M.	
		TYPE <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet	
		PRESSURE TANK	
		Manufacturer's name WELL-X-TROL	
		Model number #202 Capacity 42 Gallons	
15. Remarks, elevation, source of data, etc.		16. WATER WELL CONTRACTOR'S CERTIFICATION:	
8801 T - VON NOV 10 1983		This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. SHIRTOLA WELL DRILLING 0154 REGISTERED BUSINESS NAME REGISTRATION NO. Address RT 1, BOX 386C, HANCOCK Signed David L. L... Date 22 SEP 83 AUTHORIZED REPRESENTATIVE	

NOV 10 1983

84



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

Wellogic

Import ID:

Tax No:		Permit No: W0131158		County: Houghton		Township: Torch Lake	
Well ID: 31000000658		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 32W	21	Active			
		Distance and Direction from Road Intersection:					
		0.3 MILES EAST OF INTERSECTION OF SCHOOL FOREST RD. AND DEERFIELD RD.					
Elevation:		Well Owner: MCCABE, STEWART & PATRICK					
Latitude: 47.143763		Well Address:					
Longitude: -88.375412		29364 FOREST RD.					
Method of Collection: QQQ - Centroid		Owner Address:					
		48989 BOOTJACK RD. LAKE LINDEN, MI 49945					

Drilling Method: Rotary		Well Use: Other		Pump Installed: Yes		Pump Installation Only: No	
Well Depth: 202.00 ft.		Date Completed: 10/22/2001		Pump Installation Date:		HP: 0.75	
Well Type: New		Height:		Manufacturer: Red Jacket		Pump Type: Submersible	
Casing Type: Steel - black				Model Number: 7SF211		Pump Capacity: 10 GPM	
Casing Joint: Welded				Drop Pipe Length: 180.00 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			
Borehole: 10.00 in. to 26.00 ft. depth				Pressure Tank Installed: Yes			
6.00 in. to 202.00 ft. depth				Pressure Tank Type: Unknown			
				Manufacturer: Amtrol			
				Model Number: 202		Tank Capacity: 20.0 Gallons	
				Pressure Relief Valve Installed: No			
Static Water Level: 19.00 ft. Below Grade				Formation Description		Thickness	Depth to Bottom
Well Yield Test: Yield Test Method: Air				Sand Clayey		13.00	13.00
Pumping level 202.00 ft. after 1.00 hrs. at 3 GPM				Sandstone		189.00	202.00
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.			
Wellhead Completion: Pitless adapter				Geology Remarks:			
Nearest Source of Possible Contamination:				Drilling Machine Operator Name: PAUL LAHTI			
Type	Distance	Direction	Employment: Employee				
Unknown			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: Well Use: NON-POTABLE

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import ID:
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Tax No: 31-014-321-002-00		Permit No: W12-31-086		County: Houghton		Township: Torch Lake		
<p>Well ID: 31000002321</p> <p>Elevation:</p> <p>Latitude: 47.15208</p> <p>Longitude: -88.36716</p> <p>Method of Collection: GPS Std Positioning Svc SA Off</p>				Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:
				55N 32W	21	Active		
				Distance and Direction from Road Intersection:				
				0.8 mile east of Deerfield Road on Whitetail Drive on south side				
				Well Owner: Keith Pepin				
				Well Address:		Owner Address:		
				29771 Whitetail Drive Lake Linden, MI 49945		29771 Whitetail Drive Lake Linden, MI 49945		

Drilling Method: Cable Tool Well Depth: 51.00 ft. Well Type: Replacement Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe Diameter: 6.00 in. to 25.00 ft. depth Borehole: 6.00 in. to 51.00 ft. depth	Well Use: Household Date Completed: 8/15/2012 Height: 2.00 ft. above grade	Pump Installed: Yes Pump Installation Date: 8/20/2012 Manufacturer: F.E. Myers Model Number: 3ST72-12-P4-01 Drop Pipe Length: 40.00 ft. Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Model Number: V60 Pressure Relief Valve Installed: Yes	Pump Installation Only: No HP: 0.75 Pump Type: Submersible Pump Capacity: 12 GPM Pump Voltage: 230 Drilling Record ID: Tank Capacity: 20.0 Gallons
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Static Water Level: 8.00 ft. Below Grade Well Yield Test: Yield Test Method: Test pump Pumping level 38.00 ft. after 2.00 hrs. at 15 GPM	Formation Description	Thickness	Depth to Bottom
	Topsoil	1.00	1.00
	Sand Silty	8.00	9.00
	Clay & Gravel Sandy	7.00	16.00
Screen Installed: No Intake: Bedrock Well	Boulders	3.00	19.00
	Clay & Gravel Sandy	5.00	24.00
	Sandstone Soft	1.00	25.00
	Sandstone Jacobsville Ss	26.00	51.00
Well Grouted: Yes Grouting Method: Driven/dry grout Grouting Material: Bags: Additives: Depth:			

<table border="1"> <tr> <td>Grouting Material</td> <td>Age</td> <td>Remarks</td> <td>Depth</td> </tr> <tr> <td>Bentonite dry granular</td> <td>7.00</td> <td>None</td> <td>0.00 ft. to 25.00 ft.</td> </tr> <tr> <td colspan="4">Wellhead Completion: Pitless adapter, 12 inches above grade</td> </tr> </table>	Grouting Material	Age	Remarks	Depth	Bentonite dry granular	7.00	None	0.00 ft. to 25.00 ft.	Wellhead Completion: Pitless adapter, 12 inches above grade				Geology Remarks:
Grouting Material	Age	Remarks	Depth										
Bentonite dry granular	7.00	None	0.00 ft. to 25.00 ft.										
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	80 ft.	North-Northeast	Pump Installer: Jeff Eskola	
Septic tank	150 ft.	North-Northeast	Contractor Type: Water Well Drilling Contractor	Reg No: 31-2413
Abandoned Well Plugged: No			Business Name: Keranen and Eskola Well Drilling, Inc.	
Reason Not Plugged: Will return to plug well at a later date			Business Address: 30330 Lincoln School Road, Calumet, MI, 49913	

	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.
	<div style="display: flex; justify-content: space-between;"> <div data-bbox="742 1715 1166 1722">Signature of Registered Contractor</div> <div data-bbox="1166 1715 1378 1722">Date</div> </div>

General Remarks:

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.



Import ID:

Tax No:	Permit No: W00-31078	County: Houghton	Township: Franklin			
Well ID: 31000000376 Elevation: 1015 ft. Latitude: 47.13829298 Longitude: -88.52329716 Method of Collection: Address Matching-House Number		Town/Range: 55N 33W	Section: 29	Well Status: Active	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection: .25 MILES S OF INTERSECTION OF UNION COAL DOCK & BLESSENT RD				
		Well Owner: JAMES PETERSON				
		Well Address:		Owner Address: 424 QUINCY ST HANCOCK, MI 49930		

Drilling Method: Rotary Well Depth: 462.00 ft. Well Type: New Casing Type: Unknown Casing Joint: Welded Casing Fitting: Drive shoe Diameter: 6.00 in. to 27.00 ft. depth Borehole: 10.00 in. to 27.00 ft. depth	Well Use: Household Date Completed: 6/15/2000 Height: 1.50 ft. above grade	Pump Installed: Yes Pump Installation Date: 5/25/2001 Manufacturer: Red Jacket Model Number: 100F211 Drop Pipe Length: 300.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No	Pump Installation Only: No HP: 1.00 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID:
Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Other Model Number: 202 Pressure Relief Valve Installed: No		Tank Capacity: 20.0 Gallons	

Static Water Level: Below Grade Well Yield Test: Pumping level 300.00 ft. after 1.00 hrs. at 1 GPM	Yield Test Method: Air	
Formation Description	Thickness	Depth to Bottom
Sand & Stones	8.00	8.00
Basalt	454.00	462.00

Screen Installed: No Intake: Bedrock Well			

Well Grouted: Yes Grouting Material: Neat cement Bags: 10.00 Additives: None Grouting Method: Unknown Depth: 0.00 ft. to 27.00 ft.	Wellhead Completion: Pileless adapter	Geology Remarks:
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Nearest Source of Possible Contamination: Type: Septic tank Distance: 70 ft. Direction: Northwest	Drilling Machine Operator Name: PAUL LAHT Employment: Employee
	Contractor Type: Water Well Drilling Contractor 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: Tank Manufacturer:AMTROL



3/2/2006 10:44 PM



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:

Tax No:	Permit No: W0431132	County: Houghton		Township: Osceola	
Well ID: 31000001516		Town/Range: 55N 33W	Section: 28	Well Status: Active	WSSN:
		Source ID/Well No:			
		Distance and Direction from Road Intersection: 1.1 MILES NORTH OF INTERSECT OF M-26 AND AIRPORT PARK ROAD.			
Elevation:		Well Owner: ROSENLUND, JAY R.			
Latitude: 47.136302		Well Address:			
Longitude: -88.507828		79780 AIRPORT PARK ROAD HANCOCK, MI 49930		Owner Address: 79780 AIRPORT PARK ROAD HANCOCK, MI 49930	
Method of Collection: QQQ - Centroid					

Drilling Method: Rotary		Pump Installed: No	
Well Depth: 321.00 ft.		Pressure Tank Installed: No	
Well Type: New		Pressure Relief Valve Installed: No	
Well Use: Household			
Date Completed: 8/16/2004			
Casing Type: Steel - unknown	Height: 1.50 ft. above grade		
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			
Static Water Level: 194.50 ft. Below Grade		Formation Description	Thickness
Well Yield Test:			Depth to Bottom
Yield Test Method: Air		Sand	18.00
Pumping level 321.00 ft. after 1.00 hrs. at 25 GPM		Clay	8.50
		Sandstone	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:		Drilling Machine Operator Name: PAUL LAHTI	
Type	Distance	Employment: Employee	
Septic tank	200 ft.		
	Direction	Contractor Type: Water Well Drilling Contractor	
	East	Reg No: 31-1677	
		Business Name: SIRRTOLE 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:

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.

89
Wellogic

Import ID:

Tax No: 009-020-001-00	Permit No: W0731129	County: Houghton	Township: Osceola				
Well ID: 31000002003 Elevation: Latitude: 47.13714 Longitude: -88.49824 Method of Collection: GPS Std Positioning Svc SA Off		Town/Range: 55N 33W	Section: 28	Well Status: Active	WSSN:	Source ID/Well No:	
		Distance and Direction from Road Intersection: .5 MILE EAST OF INTERSECTION OF AIRPORT PARK RD & CAMBRIDGE LANE					
		Well Owner: MARK ROSENLUND					
		Well Address: 23564 CAMBRIDGE LANE HANCOCK, MI 49930			Owner Address: 23564 CAMBRIDGE LANE HANCOCK, MI 49930		

Drilling Method: Rotary Well Depth: 282.00 ft. Well Type: New Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe Diameter: 6.00 in. to 26.00 ft. depth Borehole: 10.00 in. to 26.00 ft. depth 6.00 in. to 282.00 ft. depth	Well Use: Household Date Completed: 8/20/2007 Height: 1.50 ft. above grade	Pump Installed: No Pressure Tank Installed: No Pressure Relief Valve Installed: No												
Static Water Level: 149.00 ft. Below Grade Well Yield Test: Pumping level 282.00 ft. after 1.00 hrs. at 30 GPM	Yield Test Method: Air	<table border="1"><thead><tr><th>Formation Description</th><th>Thickness</th><th>Depth to Bottom</th></tr></thead><tbody><tr><td>Sand</td><td>5.00</td><td>5.00</td></tr><tr><td>Sand Clayey</td><td>5.00</td><td>10.00</td></tr><tr><td>Sandstone Jacobsville Ss</td><td>272.00</td><td>282.00</td></tr></tbody></table>	Formation Description	Thickness	Depth to Bottom	Sand	5.00	5.00	Sand Clayey	5.00	10.00	Sandstone Jacobsville Ss	272.00	282.00
Formation Description	Thickness	Depth to Bottom												
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 Grouting Material: Neat cement Grouting Method: Unknown Bags: 9.00 Additives: None Depth: 4.00 ft. to 26.00 ft.														
Wellhead Completion: 12 inches above grade														
Nearest Source of Possible Contamination: Type: None Distance: Direction:	Drilling Machine Operator Name: NATHAN SIIRTOLA Employment: Employee Pump Installer: ROBERT MANTTA Contractor Type: Water Well Drilling Contractor Business Name: SIIRTOLA WELL DRILLING Business Address:	Reg No: 31-1677												
	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													

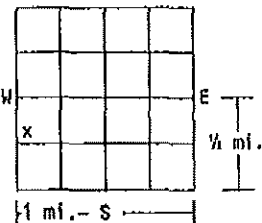
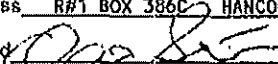
General Remarks:

Other Remarks:

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

PERMIT NUMBER:

90

1 LOCATION OF WELL 31553327001		Tax Parcel No.	
County HOUGHTON	Township Name OSCEOLA	Fraction SW 1/4 NW 1/4 SW 1/4	Section No. 27
		Town No. 55 N	Range No. 33 W
Distance And Direction From Road Intersection NORTH OF INTERSECT OF M-26 AND WOODSIDE RD		3 OWNER OF WELL PEET, GREGORY A. Address P.O. BOX 353 DOLLAR BAY, MI 49922 Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Street Address & City of Well Location			
Locate with 'x' in Section Below N  W E 1/4 mi. 1 mi. - S		4 WELL DEPTH: 80.0 ft. Date Completed 10/02/96 <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well	
Sketch Map: WOODSIDE RD M-26 ELEVATION 0.00 msl		5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted	
		6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIB Public <input type="checkbox"/>	
		7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Diameter 6.00 in. to 25.0 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter 8.00 in. to 25.0 ft. depth 0.00 in. to 0.0 ft. depth Height: Above Surface 1.5 ft. Weight 18.97 lbs/ft. Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	8 SCREEN <input checked="" type="checkbox"/> Not installed Type None Diameter 0.00 SLOT 0.000 Length 0.0 Set between 0.00 ft. and 0.00 ft. FITTINGS: <input type="checkbox"/> JK-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Bremner Check <input type="checkbox"/> Blank above screen 0.0 ft. Other
SAND	8.0	8.0	
BEDROCK	72.0	80.0	
			9 STATIC WATER LEVEL: 0.00 ft. below land surface <input checked="" type="checkbox"/> Flow
			10 PUMPING LEVEL: below land surface 80 ft. after 1.0 hrs. pumping at 12 G.P.M. 0 ft. after 0.0 hrs. pumping at 0 G.P.M.
			11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit
			12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From 25.0 to 0.0 ft. <input checked="" type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other No. of bags of cement 4 Additives
			13 Nearest source of possible contamination Type Septic Distance 70 ft. Direction SW Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No
			14 PUMP: <input type="checkbox"/> Not installed <input type="checkbox"/> Pump installation Only Manufacturer's name RED JACKET Model number CNSW1 HP 1/2 Volts 230 Length of Drop Pipe 64 ft. capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturers name Amtrol Model number 202 Capacity 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. SIIRTOLA WELL DRILLING INC 1677 REGISTERED BUSINESS NAME REGISTRATION NO. Address R#1 BOX 386C HANCOCK, MI 49930 Signed  Date 10/02/96 AUTHORIZED REPRESENTATIVE	
Data Source: MDNR			
17 Rig Operator's Name: Paul Ziemnick			

AUTHORITY: Act 368 PA 1978 COMPLETION: Required PENALTY: Conviction of a violation of any provision is a misdemeanor

NOV - 7 1996

Wellogic



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:

Tax No:	Permit No: W0031060	County: Houghton		Township: Torch Lake	
Well ID: 31000000583 Elevation: Latitude: 47.13777519 Longitude: -88.44983294 Method of Collection: Interpolation-Map	Town/Range: 55N 33W	Section: 26	Well Status: Active	WSSN:	Source ID/Well No:
	Distance and Direction from Road Intersection: LOT 2 ON NIGHTINGALE RD				
	Well Owner: MARTIN TERVO				
	Well Address: NIGHTINGALE ROAD MI		Owner Address: RR2 BOX 1330 CALUMET, MI		

Drilling Method: Cable Tool Well Depth: 110.00 ft. Well Type: New Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe Diameter: 6.00 in. to 25.00 ft. depth Borehole: 9.00 in. to 25.00 ft. depth 6.00 in. to 110.00 ft. depth	Well Use: Household Date Completed: 9/10/2000 Height: 2.00 ft. above grade Pump Installed: Yes Pump Installation Date: Manufacturer: Sta-Rite Model Number: 10P4C02J-0 Drop Pipe Length: 95.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Other Model Number: WF60 Pressure Relief Valve Installed: No	Pump Installation Only: No HP: 0.50 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID: Tank Capacity: 20.0 Gallons
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Static Water Level: 1.00 ft. Below Grade Well Yield Test: Yield Test Method: Test pump Pumping level 100.00 ft. after 1.00 hrs. at 12 GPM	Formation Description	Thickness	Depth to Bottom
	Topsoil	1.00	1.00
	Sandstone	109.00	110.00

Screen Installed: No Intake: Bedrock Well			

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

Wellhead Completion: Pitless adapter	Drilling Machine Operator Name: JOE MOORE Employment: Employee

Nearest Source of Possible Contamination: Type: Septic tank Distance: 55 ft. Direction: Northwest	Contractor Type: Water Well Drilling Contractor Business Name: KERANEN WELL AND PUMP Reg No: 31-1722
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	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: Tank Manufacturer: WELL FLO



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

93
Wellogic

Import ID:

Tax No:	Permit No: W9931116	County: Houghton	Township: Torch Lake
Well ID: 31000000426 Elevation: Latitude: 47.128891 Longitude: -88.449103 Method of Collection: QQQ - Centroid		Town/Range: 55N 33W	Section: 26
		Well Status: Active	WSSN:
		Source ID/Well No:	
Distance and Direction from Road Intersection: .6 mile northwest of intersect of Baulman Rd. and Nightingale Dr.			
Well Owner: C.J. Grognet			
Well Address:		Owner Address: P.O. Box 371 Houghton, MI 49931	

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 142.00 ft.	Pump Installation Date:	HP: 0.50
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - black	Model Number: 50CNSW1	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 120.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 27.50 ft. depth	Draw Down Seal Used: No	
Borehole: 10.00 in. to 27.50 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
	Manufacturer: Other	
	Model Number: 202	Tank Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: Above Grade (Flowing)	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Sand	2.00	2.00
Yield Test Method: Unknown	Sandstone	140.00	142.00
Pumping level 142.00 ft. after 1.00 hrs. at 20 GPM			

Unrestricted Flow Rate:			
Screen Installed: No	Intake: Bedrock Well		

Well Grouted: Yes	Grouting Method: Unknown	Geology Remarks:
Grouting Material	Bags Additives Depth	
Neat cement	10.00 None 0.00 ft. to 27.50 ft.	
Wellhead Completion: Pileless adapter		

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Paul Lahti
Type	Employment: Unknown
Septic tank	Distance 60 ft. Direction Southeast
	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:
Other Remarks: Tank Manufacturer: amtrol

import ID:

Tax No:	Permit No: W01-31-198	County: Houghton			Township: Osceola	
Well ID: 31000000722 Elevation: Latitude: 47.128911 Longitude: -88.433226 Method of Collection: QQQ - Centroid		Town/Range: 55N 33W	Section: 25	Well Status: Active	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection: 2ND DRIVE WAY OF AXFORD PROPERTY; ON LEFT SIDE OF BAULMAN RD				
		Well Owner: TERRI STARKS				
		Well Address: MI		Owner Address: 405 SHELLEN AVENUE HOUGHTON, MI 49931		

Drilling Method: Cable Tool Well Depth: 125.00 ft. Well Type: New	Well Use: Household Date Completed: 12/11/2001	Pump Installed: Yes Pump Installation Date: Manufacturer: Goulds Model Number: Drop Pipe Length: 80.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No	Pump Installation Only: No HP: 0.50 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID:
Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe	Height: 2.00 ft. above grade	Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Goulds Model Number: V-60 Pressure Relief Valve Installed: No	Tank Capacity: 20.0 Gallons
Diameter: 6.00 in. to 34.00 ft. depth			
Borehole: 6.00 in. to 125.00 ft. depth			

Static Water Level: 15.00 ft. Below Grade Well Yield Test: Yield Test Method: Test pump Pumping level 70.00 ft. after 1.00 hrs. at 13 GPM				Formation Description		Thickness	Depth to Bottom
Screen Installed: No Intake: Bedrock Well				Sand		12.00	12.00
				Clay & Sand		6.00	18.00
				Clay & Gravel Sandy		7.00	25.00
				Red Clay Sandy		5.00	30.00
				Sandstone Soft		4.00	34.00
				Sandstone		91.00	125.00
Well Grouted: Yes Grouting Method: Unknown Grouting Material: Bars: Additives: Depth:							

Drilling Material	Depth	Remarks
Bentonite dry granular	4.00	None
Wellhead Completion: Pitless adapter		

Nearest Source of Possible Contamination:			Drilling Machine Operator Name: TED KERANEN
Type	Distance	Direction	Employment: Employee
Septic tank	50 ft.	South	
			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
			Date

General Remarks:

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.



Import ID:

Tax No:	Permit No: W00-31042	County: Houghton		Township: Torch Lake	
Well ID: 31000000380 Elevation: 778 ft. Latitude: 47.12766439 Longitude: -88.43847039 Method of Collection: Address Matching-House Number		Town/Range: 55N 33W	Section: 25	Well Status: Active	WSSN:
		Source ID/Well No:			
		Distance and Direction from Road Intersection: 1.25 MILES NE OF INTERSECT OF SENTER RD & BACKMAN RD			
		Well Owner: GEORGE ESTE			
		Well Address:		Owner Address: 231 N. GROSSE PT RD DOLLAR BAY, MI 49922	

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 102.00 ft.	Pump Installation Date: 5/25/2001	HP: 0.50
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - black	Model Number: 50F211	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 80.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 44.00 ft. depth	Draw Down Seal Used: No	
Borehole: 6.00 in. to 44.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
	Manufacturer: Other	
	Model Number: 202	Tank Capacity: 22.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 24.00 ft. Below Grade Well Yield Test: Yield Test Method: Air Pumping level 102.00 ft. after 1.00 hrs. at 15 GPM	Formation Description		Thickness	Depth to Bottom
	Loam Sandy		10.00	10.00
	Clay		34.00	44.00
	Sandstone		58.00	102.00

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags Additives Depth
Bentonite slurry	24.00 None
Wellhead Completion: Pitless adapter	
Geology Remarks:	

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI
Type	Employment: Employee
Distance	
Direction	
Septic tank	76 ft. North
	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



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

97
Wellogic

Import ID:

Tax No:		Permit No:		County: Houghton		Township: Torch Lake	
Well ID: 31000001276		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 32W	30	Active			
		Distance and Direction from Road Intersection: 0.7 MILES NORTH OF INTERSECTION OF DAUMAN ROAD AND LAKE SHORE ROAD					
Elevation:		Well Owner: DONALD VAN UUM					
Latitude: 47.13099		Well Address:					
Longitude: -88.410681		Owner Address:					
Method of Collection: Interpolation-Map		2072 HARDWOOD CIRCLE DAVISON, MI 48423					

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 160.00 ft.	Pump Installation Date:	HP: 0.50
Well Type: Unknown	Manufacturer: F.E. Myers	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number: SJ52-J511P	Pump Capacity: 11 GPM
Casing Joint: Welded	Drop Pipe Length: 63.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 6.00 in. to 156.00 ft. depth	Draw Down Seal Used: No	
Borehole:	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
	Manufacturer: Amtrol	
	Model Number: 250	Tank Capacity: 8.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 9.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Unknown	Sand	8.00	8.00
Pumping level 160.00 ft. after 1.00 hrs. at 40 GPM	Sand Clayey	142.00	150.00
Pumping level 40.00 ft. after 1.00 hrs. at 15 GPM	Sand	10.00	160.00

Screen Installed: Yes	Filter Packed: No
Screen Diameter: 6.00 in.	Blank: *u
Screen Material Type: Stainless steel-wire wrapped	
Slot Length Set Between	
0.01 4.00 ft. 156.00 ft. and 160.00 ft.	
Fittings: Neoprene packer	
Well Grouted: No	

Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name:
Type Distance Direction	Employment: Unknown
Septic tank 60 ft. East	

Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor	Reg No: 31-1677
Reason Not Plugged:	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:
Other Remarks:

067d 2/84

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

Wellogic

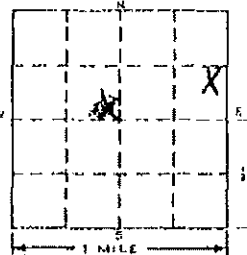
TAX NO:		MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD				PERMIT NO: W9831130 98	
1. LOCATION OF WELL		County HOUGHTON		Township Name TORCH LAKE		Fraction SW 1/4 SW 1/4	
		Section No. 29		Town No. 55		Range No. 32	
Distance and Direction from Road Intersection 1/2 MILE SOUTH OF FIRE STATION ON BOOTJACK ROAD AND 250 FEET WEST		3. OWNER OF WELL ROBERT POSEY Address RT. 1 BOX 246 CALUMET, MICH. 49913 Address Same as Well Location <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Street Address & City of Well Location		4. WELL DEPTH: 35 ft.		Date Completed 8-24-98		<input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well	
Locate with 'X' in Section Below PORTAGE LAKE Sketch Map		5. <input checked="" type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow Rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted <input type="checkbox"/>		6. USE: <input checked="" type="checkbox"/> Household <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>			
		7. CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Other		Height: Above/Below Surface: 2 ft.			
		Diameter: 6 in. to 32.5 ft. depth		Weight: 18.97 lbs./ft.			
2. FORMATION DESCRIPTION		THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM		BORE HOLE: Diameter: 6 in. to 35 ft. depth	
SAND		5'		5'		<input checked="" type="checkbox"/> Drive Shoe <input type="checkbox"/> Shale Packer	
CLAY SAND		3'		8'			
CLAY GRAVEL & ROCKS		14'		22'			
SANDY CLAY + GRAVEL		8'		30'			
SAND + GRAVEL		5'		35'			
						8. SCREEN: <input type="checkbox"/> Not Installed <input type="checkbox"/> Gravel-Packed Type STAINLESS Diameter 6 Slot/Gauze 12 Length 3' Set Between _____ ft. and 35 ft.	
						FITTINGS: <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Bremer Check <input type="checkbox"/> Blank Above Screen _____ ft. Other _____	
						9. STATIC WATER LEVEL: 1.5 ft. Below Land Surface <input type="checkbox"/> Flowing	
						10. PUMPING LEVEL: Below Land Surface 25 ft. After 2 hrs. Pumping at 20 G.P.M. <input type="checkbox"/> Plunger <input type="checkbox"/> Bailer <input type="checkbox"/> Air <input checked="" type="checkbox"/> Test Pump	
						11. WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade <input type="checkbox"/> Basement Offset <input type="checkbox"/> Well House	
						12. WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Neat Cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of Bags 3 Additives _____	
						13. NEAREST SOURCE OF POSSIBLE CONTAMINATION: Type SEPTIC Distance 90 ft. Direction NORTH Type _____ Distance _____ ft. Direction _____	
USE A 2ND SHEET IF NEEDED						14. PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's Name STA-RITE Model Number 10SP4015-02 HP 1/2 Volts 115 Length of Drop Pipe 25 ft. Capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Other _____ PRESSURE TANK: WELL RITE Manufacturer's Name _____ Model Number WR-60 Capacity 6 Gallons 20	
15. ABANDONED WELL PLUGGED? <input type="checkbox"/> Yes <input type="checkbox"/> No Casing Diameter _____ in. Depth _____ ft. PLUGGING MATERIAL: <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite Slurry <input type="checkbox"/> Cement/Bentonite Slurry <input type="checkbox"/> Concrete Grout <input type="checkbox"/> Bentonite Chips No. of Bags _____ Casing Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No		16. REMARKS: (Elevation, Source of Data, etc.)					
17. DRILLING MACHINE OPERATOR: <input checked="" type="checkbox"/> Employee <input type="checkbox"/> Subcontractor Name JEFF ESKOLA		15. 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. KERANEN WELL & PUMP 31-1722 REGISTERED BUSINESS NAME REGISTRATION NO Address RT. 1 BOX 238 CALUMET, MICH. Signed George Keranen Date 8-25-98 AUTHORIZED REPRESENTATIVE					

GW-2-228 9/93

WATER WELL RECORD

ACT 294 PA 1985

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL			3 OWNER OF WELL		
County	Township Name	Fraction	Section Number	Town Number	Range Number
Houghton	Torch Lake	N 1/2 Sec. 29	29	55 Ns.	32 Ws.
Distance And Direction from Road Intersections About 2 miles along Boot Jack Road from Lake Linden then 1 mile East in Mud Lake Road			Address RTE 1, BX 69 LAKE LINDEN, MI 49945		
Sketch Map: 			4 WELL DEPTH: (completed) 100 ft. Date of Completion 8/25/77		
2 FORMATION			6 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug		
			<input type="checkbox"/> Hollow rod <input type="checkbox"/> Jolted <input type="checkbox"/> Bored <input type="checkbox"/> _____		
			8 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry		
			<input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial		
			7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below Surface 3 ft.		
			6 in. to 32 ft. Depth Weight 18 lbs./ft.		
			in. to _____ ft. Depth Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
			8 SCREEN:		
			Type: _____ Dia.: _____		
			Slot/Gauze _____ Length _____		
			Set between _____ ft. and _____ ft.		
			Fittings: _____		
			9 STATIC WATER LEVEL		
			10 ft. below land surface		
			10 PUMPING LEVEL below land surface		
			80 ft. after 1 hrs. pumping 4 g.p.m.		
			_____ ft. after _____ hrs. pumping _____ g.p.m.		
			11 WATER QUALITY in Parts Per Million:		
			Iron (Fe) _____ Chlorides (Cl) _____		
			Hardness _____ Other _____		
			12 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> In Approved Pit		
			<input type="checkbox"/> Pitless Adaptor <input type="checkbox"/> 12" Above Grade		
			13 Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
			<input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> _____		
			Depth: From _____ ft. to _____ ft.		
			14 Nearest Source of possible contamination		
			55 feet NW Direction SEPTIC Type		
			Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
			15 PUMP: <input type="checkbox"/> Not installed		
			Manufacturer's Name _____		
			Model Number _____ HP _____ Volts _____		
			Length of Drop Pipe _____ ft. capacity _____ G.P.M.		
			Type: <input type="checkbox"/> Submersible <input checked="" type="checkbox"/> _____		
			<input checked="" type="checkbox"/> Jet <input type="checkbox"/> Reciprocating		
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 best of my knowledge and belief.		
			SHIRTOLA WELL DRILLING INC. 0154		
			REGISTERED BUSINESS NAME REGISTRATION NO.		
			Address ROUTE 1, HANSUCK MICH		
			Signed <i>Edward Shirtola</i> Date 8/30/77		
			AUTHORIZED REPRESENTATIVE		

OCT 11 1977

WATER WELL RECORD
ACT 294 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

406

1 LOCATION OF WELL			Fraction		Section No.	Town	Range
County	Twp.		NW 1/4 SW 1/4 NE 1/4		28	T55 N.4	R32 E.W.
Distance And Direction from Road Intersections 3 miles North of Dreamland on Bootjack road, then 1 mile East, then 1/2 mile South.			OWNER No. _____ 3 OWNER OF WELL: ROLAND LACASSE Address LINWOOD ST HUBBELL, MICH. 49934				
Street address & City of Well Location BOOTJACK			4 WELL DEPTH: (completed) Date of Completion 225 ft. 9/20/91				
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/> _____				
SANDY-CLAY	19	19	6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/> _____				
SANDSTONE	206	225	7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Diam. 6 in. to 2 1/2 ft. Depth _____ _____ in. to _____ ft. Depth _____ Height Above/Below surface _____ ft. Weight _____ lbs./ft. Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
			8 SCREEN: none Type: _____ Dia.: _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. Fittings: _____				
			9 STATIC WATER LEVEL 52 ft. below land surface				
			10 PUMPING LEVEL below land surface 185 ft. after 1 hrs. pumping 6 1/2 g.p.m. _____ ft. after _____ hrs. pumping _____ g.p.m.				
			11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____				
			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adapter 12" Above Grade				
			13 GROUTING: Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Material: <input type="checkbox"/> Neat Cement <input checked="" type="checkbox"/> DRILL MUD Depth: From 0 ft. to 20 ft.				
			14 SANITARY: NO SEPTIC Nearest Source of possible contamination _____ _____ feet _____ Direction _____ Type _____ Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
			15 PUMP: Manufacturer's Name MYERS Model Number 54-78-70 HP 1/2 Length of Drop Pipe 215 ft. capacity 2 G.P.M. Type <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> _____ <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating				
16 Remarks, elevation, source of data, etc. ~ 150' East of end of dead end road			17 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. MOYKKA WELL DRILLING 0081 REGISTERED BUSINESS NAME REGISTRATION NO. Address RT #1 BARAGA, MICH 49908 Signed Thos. V. L... Roy... Date 10-13-71 AUTHORIZED REPRESENTATIVE				

WATER WELL RECORD
ACT 294 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

LOCATION OF WELL		Township Name		Fraction		Section Number		Town Number		Range Number	
Houghton		Franklin		SE 1/4		32		55 N.		33 W.	
Distance And Direction from Road Intersections 1 MI. NORTH ON AIRPORT ROAD FROM HWY M26 AT DOLLAR BAY MILE											
Sketch Map: 											
3 OWNER OF WELL: PETER TAMPAS Address: RTE. 1 HANCOCK, MICH. 49930											
4 WELL DEPTH: (completed) 152 ft. Date of Completion: NOV 11, 1974											
5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jotted <input type="checkbox"/> Bored <input type="checkbox"/>											
6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>											
7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below Surface 3 ft. 6 in. to 147 ft. Depth Weight 14.5 lbs./ft. in. to ft. Depth Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
8 SCREEN: JOHNSON Type: STAINLESS Dia.: 6" Slot/Gauze .020 Length 5' Set between 147 ft. and 152 ft. Fittings: STANDARD											
9 STATIC WATER LEVEL 112 ft. below land surface											
10 PUMPING LEVEL below land surface 130 ft. after 1 hrs. pumping 7.2 g.p.m. ft. after hrs. pumping g.p.m.											
11 WATER QUALITY in Parts Per Million: Iron (Fe) Chlorides (Cl) Hardness Other											
12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adaptor <input type="checkbox"/> 12" Above Grade											
13 Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite Depth from ft. to ft.											
14 Nearest Source of possible contamination 100 feet SOUTH Direction SEPTIC Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name MYERS Model Number SG 72-7B HP 3/4 Volts 230 Length of Drop Pipe 142 ft. capacity G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating											
17 WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. EDW. SIIRYOLA 0154 REGISTERED BUSINESS NAME REGISTRATION NO. Address RTE 1, HANCOCK MICH Signed Edward Siiryla Date 12/7/74 AUTHORIZED REPRESENTATIVE											

JAN 8 1975



Water Well And Pump Record

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

Failure to comply is a misdemeanor.

103
Wellogic

Import ID:

Tax No:		Permit No: 1929		County: Houghton		Township: Osceola	
Well ID: 31000001871 Elevation: 607 ft. Latitude: 47.115175 Longitude: -88.49342 Method of Collection: Interpolation-Map				Town/Range:	Section:	Well Status:	WSSN:
				55N 33W	33	Active	
				Source ID/Well No:			
Distance and Direction from Road Intersection: .3 MI SE OF INTER OF UPPER PT MILLS & LOWER PT MILLS RD							
Well Owner: RUSS DODGE							
Well Address:				Owner Address:			
LOWER PT MILLS RD MI				PO BOX 471 DOLLAR BAY, MI 49922			

Drilling Method: Rotary	Pump Installed: No
Well Depth: 38.00 ft.	Pressure Tank Installed: No
Well Type: New	Pressure Relief Valve Installed: No
Casing Type: Steel - unknown	
Casing Joint: Welded	
Casing Fitting: Drive shoe	
Diameter: 6.00 in. to 38.00 ft. depth	
Borehole:	

Static Water Level: 9.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Sand Clayey	32.00	32.00
Yield Test Method: Unknown	Sand	6.00	38.00
Pumping level 38.00 ft. after 1.00 hrs. at 75 GPM			

Screen Installed: Yes	Filter Packed: No
Screen Diameter: 6.00 in.	Blank: 2.00 ft. Above
Screen Material Type: Unknown	
Slot	Length
12.00	3.00 ft.
Set Between	
35.00 ft. and 38.00 ft.	
Fittings: Neoprene packer	
Well Grouted: No	

Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL ZIEMNICK
Type	Employment: Unknown
Distance	
Direction	
Septic tank	
85 ft.	
Northeast	

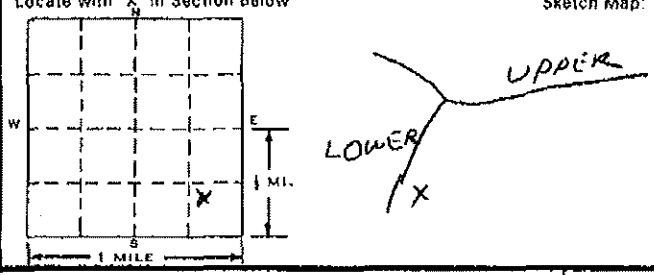

Contractor Type: Water Well Drilling Contractor	Reg No: 31-1677
Business Name: SIIRTOLA WELL DRLG	
Business Address:	

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:

MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

103 1929
PERMIT NUMBER

1 LOCATION OF WELL		FRACTION		SECTION NUMBER	TOWN NUMBER	RANGE NUMBER
County	Township Name	NW 1/4 SE 1/4 SE 1/4		33	55	N/S 33 E/W
Houghton Osceola						
Distance And Direction From Road Intersection		3				
.3 mile SE of intersect of Upper Pt. Mills road & Lower Pt. Mills road		OWNER OF WELL:				
Street Address & City of Well Location Lower Pt. Mills road		Russ Dodge Address PO Box 471 Dollar Bay, Mi. 49922				
Locate with "X" in Section Below		Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Sketch Map:		4 WELL DEPTH: Date Completed MO. DAY YEAR <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well				
		38 FT. 03/26/92				
		5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug				
		<input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted				
		6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public				
		<input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump				
		<input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public				
		7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Height Above/Below				
		<input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Surface 1.5 ft.				
		6 in. to 38 ft. depth Weight 18.97 lbs./ft.				
		Grouted Drill Hole Diameter				
		in. to ft. depth				
		in. to ft. depth				
		Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
2 FORMATION DESCRIPTION		8 SCREEN: Johnson <input type="checkbox"/> Not installed				
	THICKNESS OF STRATUM	Type telescope Diameter 6				
sand-clayey	32	Slot/Gauze .012 Length 3				
sand	06	Set between 35 ft. and 38 ft.				
		FITTINGS <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Blower Check				
		<input checked="" type="checkbox"/> Blank above screen 2 ft Other				
		9 STATIC WATER LEVEL				
		9 ft. below land surface <input type="checkbox"/> Flow				
		10 PUMPING LEVEL: below land surface				
		38 ft. after 1 hrs. pumping at 75 G.P.M.				
		ft. after hrs. pumping at G.P.M.				
		11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pileless adapter <input type="checkbox"/> 12" above grade				
		<input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit				
		12 WELL GROUTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes From to ft				
		<input type="checkbox"/> Near cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other				
		No. of bags of cement Additives				
		13 Nearest source of possible contamination				
		Type septic Distance 85 ft. Direction NE				
		Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
		Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No				
		14 PUMP: <input checked="" type="checkbox"/> Not installed <input type="checkbox"/> Pump installation Only				
		Manufacturer's name				
		Model number HP Volts				
		Length of Drop Pipe ft capacity G.P.M.				
		TYPE: <input type="checkbox"/> Submersible <input type="checkbox"/> Jet				
		PRESSURE TANK:				
		Manufacturer's name				
		Model number Capacity Gallons				
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.				
		Siirtola Well Drilling 1677				
		REGISTERED BUSINESS NAME REGISTRATION NO.				
		Address Rte 1, Box 386C, Hancock, Mi				
		Signed  Date 03/27/92				
		AUTHORIZED REPRESENTATIVE				

USE A 2ND SHEET IF NEEDED

17. Rig Operator's Name:

Paul Ziemnick

D67d 2/89

SEP 4 1992

GEOLOGICAL SURVEY COPY

Authority: Act 368 PA 1978
 Completion: Required
 Penalty: 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.

104

Wellogic

Import ID:

Tax No: 31-009-0330048		Permit No: W08-31-00-3		County: Houghton		Township: Osceola	
Well ID: 31000002008				Town/Range:	Section:	Well Status:	WSSN:
				55N 33W	33	Active	
Elevation:				Distance and Direction from Road Intersection:			
Latitude: 47.11974				200' N OF UPPER POINT MILLS RD & LOWER POINT MILLS RD			
Longitude: -88.49051				Well Owner: WILLIAM TOURTILLOTT			
Method of Collection: GPS Std Positioning Svc SA Off				Well Address:		Owner Address:	
				23950 UPPER POINT MILLS RD		PO BOX 52	
				DOLLAR BAY, MI 49922		DOLLAR BAY, MI 49922	

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 102.00 ft.	Pump Installation Date:	HP: 0.50
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - black	Model Number: 50C211CNS9	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 60.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.	Drilling Record ID:
Diameter: 6.00 in. to 53.00 ft. depth	Draw Down Seal Used: No	
Borehole: 6.00 in. to 102.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Diaphragm/bladder	
	Manufacturer: Clayton Mark	
	Model Number: CM4202	Tank Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: Yes	

Static Water Level: 4.50 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Air	Sand	35.00	35.00
Pumping level 102.00 ft. after 1.00 hrs. at 25 GPM	Sand Clayey	18.00	53.00
	Sandstone	49.00	102.00

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags
Bentonite dry granular	3.00
Additives	None
Depth	4.00 ft. to 53.00 ft.

Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: NATHAN SIIRTOLA
Type	Employment: Employee
Distance	Pump Installer: ROBERT MANTTA
Direction	Contractor Type: Water Well Drilling Contractor
Septic tank	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:
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.

105

Wellogic

Import ID:

Tax No:		Permit No:		County: Houghton		Township: Osceola	
Well ID: 31000001302		Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:	
		55N 33W	34	Active			
		Distance and Direction from Road Intersection: ABOUT 0.5 MILE EAST OF DOLLAR BAY SOUTH OF GOOSE NECK CREEK					
Elevation:		Well Owner: SAM FRONTERA					
Latitude: 47.120187		Well Address:					
Longitude: -88.488651		Owner Address:					
Method of Collection: Interpolation-Map		27490 TAFT ROAD NOVI, MI 48050					

Drilling Method: Cable Tool	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 125.00 ft.	Pump Installation Date:	HP: 0.50
Well Type: Unknown	Manufacturer: F.E. Myers	Pump Type: Submersible
Casing Type: Unknown	Model Number: SC52-5A	Pump Capacity:
Casing Joint: Threaded & coupled	Drop Pipe Length: 63.00 ft.	Pump Voltage:
Casing Fitting: Unknown	Drop Pipe Diameter:	Drilling Record ID:
Diameter: 4.00 in. to 30.00 ft. depth	Draw Down Seal Used: No	
Borehole:	Pressure Tank Installed: No	
	Pressure Relief Valve Installed: No	

Static Water Level: 15.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Sand	14.00	14.00
Yield Test Method: Unknown	Sandstone	111.00	125.00
Pumping level 70.00 ft. after 1.00 hrs. at 12 GPM			

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Unknown
Grouting Material	Bags Additives Depth
Neat cement	0.00 None 6.00 ft. to 30.00 ft.

Wellhead Completion: Pitless adapter	Geology Remarks:

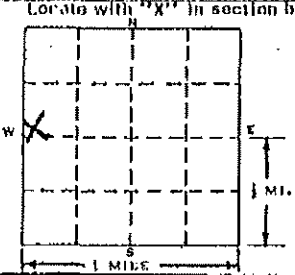
Nearest Source of Possible Contamination:	Drilling Machine Operator Name:
Type	Employment: Unknown
Distance	
Direction	
Septic tank	60 ft. West

Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor	Reg No: 31-0154
	Business Name: SIIRTOLA WELL DRILLING	
	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
	Date

General Remarks:
Other Remarks:

WATER WELL RECORD
ACT 294 PA 1965MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL			3 OWNER OF WELL		
County Houghton	Township Name OCEOLA	Fraction SW 1/4 SW 1/4 NW 1/4	Section Number 34	Town Number 55 N.W.S.	Range Number 339 E.W.
Distance and Direction from Road Intersections ABOUT 1 MILE EAST OF DOLLAR BAY SOUTH OF GOOSE NECK CREEK			Address 27490 TART RD. NOVI, MICH. 48050		
Street address & City of Well Location DOLLAR BAY MICH			4 WELL DEPTH: (completed) Date of Completion 125 ft. 8/25/76		
Correlate with "X" in section below 			5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jailed <input type="checkbox"/> Bored <input type="checkbox"/>		
Sketch Map			6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>		
2 FORMATION			7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below Diam. Surface 2 ft. Wright 16 lbs./ft. Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
THICKNESS OF STRATUM			8 SCREEN:		
DEPTH TO BOTTOM OF STRATUM			Type: _____ Dia.: _____		
SAND			Slot/Gauze _____ Length _____		
SANDSTONE			Set between _____ ft. and _____ ft.		
			Fittings: _____		
			9 STATIC WATER LEVEL 15 ft. below land surface		
			10 PUMPING LEVEL below land surface 70 ft. after 1 hrs. pumping 12 g.p.m.		
			_____ ft. after _____ hrs. pumping _____ g.p.m.		
			11 WATER QUALITY in Parts Per Million:		
			Iron (Fe) _____ Chlorides (Cl) _____		
			Hardness _____ Other _____		
			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade		
			13 Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> _____ Depth: From 6 ft. to 30 ft.		
			14 Nearest Source of possible contamination 60 feet WEST Direction SEPTIC Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
			15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name MYERS Model Number SCS2-5A HP 1 Volts 230 Length of Drop Pipe 63 ft. capacity _____ G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating		
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 best of my knowledge and belief. SILBERTA WELL DRILLING 0154 REGISTERED BUSINESS NAME REGISTRATION NO. Address ROUTE 1, HANCOCK MICH Signed <i>Edward Silberta</i> Date _____ AUTHORIZED REPRESENTATIVE		

SEP 20 1976

WATER WELL RECORD

ACT 204 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

107 183

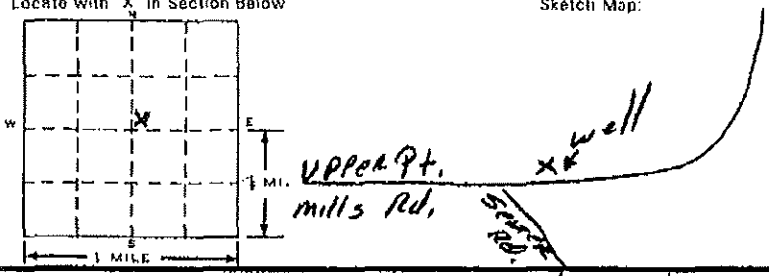
1 LOCATION OF WELL		TOWNSHIP NAME		Fraction	Section Number	Town Number	Range Number
County HOUGHTON		OCEOLA		SE 1/4 SE 1/4 NW 1/4	35	55N N/S.	33W E/W.
Distance And Direction from Road Intersections 2 MI. FROM HWY M26 AT DOLLAR BAY ON NORTH POINT MILES ROAD							
Street Address & City of Well Location DOLLAR BAY MICH							
Sketch Map: 							
2 FORMATION				THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM		
SAND - CLAYEY				3	3		
RED - SANDSTONE				87	90		
3 OWNER OF WELL: MATT NORTH							
Address DOLLAR BAY MICH							
4 WELL DEPTH: (completed) Date of Completion 90 ft. MAY 2 1970							
5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/>							
6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry <input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial <input type="checkbox"/> Test Well <input type="checkbox"/>							
7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below Diam. 5 in. to 28 ft. Depth 2 ft. Weight 14.62 lbs./ft. Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
8 SCREEN: Type: _____ Dia.: _____ Slot/Gauze _____ Length _____ Set between _____ ft. and _____ ft. Fittings: _____							
9 STATIC WATER LEVEL 40 ft. below land surface							
10 PUMPING LEVEL below land surface 68 ft. after 1 hrs. pumping 8 g.p.m. _____ ft. after _____ hrs. pumping _____ g.p.m.							
11 WATER QUALITY in Parts Per Million: Iron (Fe) _____ Chlorides (Cl) _____ Hardness _____ Other _____							
12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit <input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade							
13 Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Neat Cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Depth: From 28 ft. to 3 ft.							
14 Nearest Source of possible contamination 60 feet SOUTH Direction SEPTIC Type Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
15 PUMP: <input type="checkbox"/> Not installed Manufacturer's Name MYERS Model Number SD5A21 HP 2 Volts 230 Length of Drop Pipe 66 ft. capacity _____ G.P.M. Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating							
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 best of my knowledge and belief. EDW. SIRTOLA 0154 REGISTERED BUSINESS NAME REGISTRATION NO. Address RTE 1 HANCOCK MICH Signed Edward Sirtola Date 4/2/70 AUTHORIZED REPRESENTATIVE			

067d

FORM 10-61 (12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO. MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD108
2733
PERMIT NUMBER

1 LOCATION OF WELL		County <u>Houghton</u> Township Name <u>Torch</u> Fraction <u>SW 1/4 SW 1/4 NE 1/4</u> Section Number <u>35</u> Town Number <u>55</u> N/S <u>N/S</u> Range Number <u>33</u> E/W <u>E/W</u>	
Distance And Direction From Road Intersection <u>ON UPPER POINT MILLS ROAD</u> <u>JUST EAST OF WATER ROAD ON</u> <u>NORTH SIDE</u> Street Address & City of Well Location		3 OWNER OF WELL <u>NEIS ERICKSON</u> Address <u>R#1 Box 103B</u> <u>HANCOCK MICH, 49930</u> Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Locate with "X" in Section Below 		4 WELL DEPTH: <u>165</u> FT. Date Completed MO. <u>6</u> DAY <u>12</u> YEAR <u>93</u> <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Replacement Well	
		5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jetted <input type="checkbox"/>	
		6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIA Public <input type="checkbox"/> Heat pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIB Public <input type="checkbox"/>	
		7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Plastic <input type="checkbox"/> Height Above/Below Surface <u>1</u> ft. <u>6</u> in to <u>22.5</u> ft. depth Weight <u>18.97</u> lbs / ft <u>8</u> in to <u>27</u> ft. depth Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u> </u> in to <u> </u> ft. depth	
2 FORMATION DESCRIPTION		8 SCREEN. <input checked="" type="checkbox"/> Not installed Type _____ Diameter _____ Slot/Gauge _____ Length _____ Set between _____ ft. and _____ ft. FITTINGS <input type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Brammer Check <input type="checkbox"/> Blank above screen _____ ft. Other _____	
THICKNESS OF STRATUM DEPTH TO BOTTOM OF STRATUM		9 STATIC WATER LEVEL: <u>28</u> ft. below land surface <input type="checkbox"/> Flow	
<u>SAND</u> <u>4</u> <u>4</u>		10 PUMPING LEVEL: below land surface <u>160</u> ft. after <u>2</u> hrs. pumping at <u>20+</u> G.P.M. _____ ft. after _____ hrs. pumping at _____ G.P.M.	
<u>CLAY, SAND</u> <u>6</u> <u>10</u>		11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Piloss adapter <input checked="" type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit	
<u>SANDSTONE</u> <u>155</u> <u>165</u>		12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From <u>27</u> to <u>4</u> ft. <input checked="" type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement <u>4</u> Additives _____	
		13 Nearest source of possible contamination Type <u>SEPTIC</u> Distance <u>100</u> ft. Direction <u>WEST</u> Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No	
		14 PUMP: <input type="checkbox"/> Not installed <input type="checkbox"/> Pump installation Only Manufacturer's name <u>AEROMOTOR</u> Model number <u>A 12 50</u> HP <u>1/2</u> Volts <u>230</u> Length of Drop Pipe <u>105</u> ft. capacity <u>8</u> G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: <u>WELL-X-TROL</u> Manufacturer's name _____ Model number <u>WX-202</u> Capacity <u>42.8</u> Gallons	
USE A 2ND SHEET IF NEEDED		16. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief <u>Robert A. Larson W.D.</u> <u>07-1774</u> REGISTERED BUSINESS NAME REGISTRATION NO. Address <u>R#1 Box 18P</u> <u>LANSEY, MICH,</u> Signed <u>Steve Larson</u> Date <u>9/22/93</u> AUTHORIZED REPRESENTATIVE	
15. Remarks, elevation, source of data, etc. <u>DISK DRIVE OFFICE</u>		17. Rig Operator's Name: <u>Steve Larson</u>	

D87d 2/89

OCT 5 1993

GEOLOGICAL SURVEY COPY

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

109



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:

Tax No: 31-014-386-008-60		Permit No: W0631047		County: Houghton		Township: Torch Lake	
Well ID: 31000001812				Town/Range:	Section:	Well Status:	WSSN:
				55N 33W	36	Active	
				Source ID/Well No:			
Elevation:				Distance and Direction from Road Intersection:			
Latitude: 47.12651				300 feet south of Nightingale Drive on Baulman Road on east side			
Longitude: -88.44534				Well Owner: Dane Lipka			
Method of Collection: GPS Std Positioning Svc SA Off				Well Address:		Owner Address:	
				Baulman Road		P. O. Box 545	
				Torch Lake Twp., MI		Dollar Bay, MI 49922	

Drilling Method: Cable Tool		Well Use: Household		Pump Installed: Yes		Pump Installation Only: No	
Well Depth: 70.00 ft.		Date Completed: 5/12/2006		Pump Installation Date: 5/15/2006		HP: 0.50	
Well Type: New		Height: 2.00 ft. above grade		Manufacturer: Goulds		Pump Type: Submersible	
Casing Type: Steel - black		Casing Joint: Welded		Model Number: 10SB05422		Pump Capacity: 10 GPM	
Casing Fitting: Drive shoe		Diameter: 6.00 in. to 49.50 ft. depth		Drop Pipe Length: 61.00 ft.		Pump Voltage:	
		Borehole: 6.00 in. to 70.00 ft. depth		Drop Pipe Diameter: 1.00 in.		Drilling Record ID:	
				Draw Down Seal Used: No			
				Pressure Tank Installed: Yes			
				Pressure Tank Type: Diaphragm/bladder			
				Manufacturer: Goulds			
				Model Number: V-60		Tank Capacity: 20.0 Gallons	
				Pressure Relief Valve Installed: Yes			
Static Water Level: 37.00 ft. Below Grade		Well Yield Test:		Yield Test Method: Bailer			
Pumping level 50.00 ft. after 0.50 hrs. at 25 GPM							
Screen Installed: No		Intake: Bedrock Well		Formation Description		Thickness	Depth to Bottom
				Sand		4.00	4.00
				Sand Clayey		10.00	14.00
				Sand		8.00	22.00
				Sand Clayey		3.00	25.00
				Sand		11.00	36.00
				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		Geology Remarks:			
Grouting Material		Bags	Additives				
Bentonite dry granular		4.00	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			
Septic tank	80 ft.	South		Pump Installer: Jeff Eskola			
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 of my knowledge and belief.			
				Signature of Registered Contractor			
				Date			
General Remarks:							
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.

110
Wellogic

Import ID:

Tax No:	Permit No: 03-31-067	County: Houghton	Township: Torch Lake			
Well ID: 31000000822		Town/Range: 55N 33W	Section: 36	Well Status: Active	WSSN:	Source ID/Well No:
Elevation: 735 ft.		Distance and Direction from Road Intersection: .25 MILES S OF INTERSECTION RED BARN AND BAULMAN RD				
Latitude: 47.12318248		Well Owner: MIKE BORSUM				
Longitude: -88.42599098		Well Address:		Owner Address: PO BOX 234 DOLLAR BAY, MI 49722		
Method of Collection: Interpolation-Map						

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 182.00 ft.	Pump Installation Date: 6/26/2003	HP: 0.00
Well Type: New	Manufacturer: F.E. Myers	Pump Type: Submersible
Casing Type: Steel - unknown	Model Number:	Pump Capacity: 20 GPM
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 36.00 ft. depth	Draw Down Seal Used: No	
Borehole: 6.00 in. to 182.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
	Manufacturer: Amtrol	
	Model Number: 250	Tank Capacity: 44.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 32.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:			
Yield Test Method: Unknown	Sand	19.00	19.00
Pumping level 182.00 ft. after 1.00 hrs. at 40 GPM	Sand Clayey	17.00	36.00
	Sandstone	146.00	182.00

Screen Installed: No	Intake: Unknown

Well Grouted: Yes	Grouting Method: Unknown		
Grouting Material	Bags	Additives	Depth
Bentonite slurry	1.00	None	
Wellhead Completion: Pitless adapter			
Geology Remarks:			

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI
Type	Employment: Employee
Septic tank	Distance: 90 ft.
	Direction: Southeast
	Contractor Type: Water Well Drilling Contractor
	Reg No: 31-1677
	Business Name: SIRRTOLE 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:

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.



Import ID:

Tax No:	Permit No: W0031053	County: Houghton		Township: Torch Lake	
Well ID: 31000000567		Town/Range: 55N 32W	Section: 31	Well Status: Active	WSSN:
		Source ID/Well No:			
		Distance and Direction from Road Intersection: FIRE # 242 AT NORTH GROOSE POINT SHORES			
Elevation:		Well Owner: ROBERT F. MILKECH			
Latitude: 47.114509		Well Address:			
Longitude: -88.422823		Owner Address: 1331 ANTHONY STREET HANCOCK, MI			
Method of Collection: QQQ - Centroid					

Drilling Method: Cable Tool	Well Use: Household	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 140.00 ft.	Date Completed: 9/9/2000	Pump Installation Date:	HP: 0.50
Well Type: New	Height: 2.00 ft. above grade	Manufacturer: Goulds	Pump Type: Submersible
Casing Type: Steel - black		Model Number: 10SBO5412C	Pump Capacity: 10 GPM
Casing Joint: Welded		Drop Pipe Length: 130.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe		Drop Pipe Diameter:	Drilling Record ID:
Diameter: 3.00 in. to 136.00 ft. depth		Draw Down Seal Used: No	
Borehole: 6.00 in. to 140.00 ft. depth		Pressure Tank Installed: Yes	
		Pressure Tank Type: Unknown	
		Manufacturer: Amtrol	
		Model Number: 202	Tank Capacity: 20.0 Gallons
		Pressure Relief Valve Installed: No	

Static Water Level: 2.50 ft. Below Grade	Yield Test Method: Test pump	Formation Description	Thickness	Depth to Bottom
Well Yield Test:		Clay Sandy	28.00	28.00
Pumping level 130.00 ft. after 1.00 hrs. at 4 GPM		Clay & Gravel	31.00	59.00
		Sand Fine	1.00	60.00
Screen Installed: Yes	Filter Packed: No	Clay & Gravel Sandy	51.00	111.00
Screen Diameter: 6.00 in.	Blank:	Sand & Gravel Silty	9.00	120.00
Screen Material Type: Stainless steel-wire wrapped		Clay & Gravel Sandy	14.00	134.00
Slot	Length	Sand Fine Silty	2.00	136.00
12.00	4.00 ft.	Sand & Gravel	4.00	140.00
	Set Between			
	136.00 ft. and 140.00 ft.			
Fittings: Neoprene packer				
Well Grouted: Yes	Grouting Method: Unknown			
Grouting Material	Bags			
Bentonite dry granular	3.00			
	Additives			
	None			
Wellhead Completion: Pitless adapter				

Geology Remarks:	

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: GEORGE KERANEN
Type	Employment: Unknown
Septic tank	
Distance	Contractor Type: Water Well Drilling Contractor
65 ft.	Reg No: 31-1722
Direction	Business Name: KERNEN WELL AND PUMP
Northeast	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:

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL			3 OWNER OF WELL:	
County HOUGHTON	Twp. TERCH LAKE	Fraction SW 1/4 NE 1/4	Section No. 37	Town 55 N/S.
Distance And Direction from Road Intersections 4 MI. EAST OF DOLLAR BAY AT GROSS POINT SHULZES			Range 32 W/W.	
Street address & City of Well Location DOLLAR BAY MICH			Address EINO KEMPAINEN BOX 202 DOLLAR BAY MICH	
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	4 WELL DEPTH: (completed) Date of Completion	
SAND	0	10	64 ft. 8/25/72	
RED - CLAY	50	60	5 <input checked="" type="checkbox"/> Cable tool <input type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug	
WATER BEARING SAND	4	64	<input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/>	
			6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry	
			<input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial	
			<input type="checkbox"/> Test Well <input type="checkbox"/>	
			7 CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below surface 1 ft.	
			Diam. 5 in. to 6 1/2 ft. Depth 15 lbs./ft.	
			Weight 15 lbs./ft. Drive Shoe? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
			8 SCREEN: JOHN SON	
			Type: STAINLESS Dia.: 5"	
			Slot/Gauze 0.14 Length 4 FT	
			Set between 60 ft. and 64 ft.	
			Fittings: STANDARD	
			9 STATIC WATER LEVEL 4 1/2 ft. below land surface	
			10 PUMPING LEVEL below land surface 15 ft. after 1 hrs. pumping 50 g.p.m.	
			ft. after _____ hrs. pumping _____ g.p.m.	
			11 WATER QUALITY in Parts Per Million:	
			Iron (Fe) _____ Chlorides (Cl) _____	
			Hardness _____	
			12 WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit	
			<input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade	
			13 GROUTING:	
			Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
			Material: <input type="checkbox"/> Neat Cement <input type="checkbox"/>	
			Depth: From _____ ft. to _____ ft.	
			14 SANITARY:	
			Nearest Source of possible contamination 25 feet SOUTH Direction SEPTIC Type	
			Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
			15 PUMP:	
			Manufacturer's Name MYERS	
			Model Number SG51-SB HP 1/2	
			Length of Drop Pipe 24 ft. capacity _____ G.P.M.	
			Type: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/>	
			<input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating	
16 Remarks, elevation, source of data, etc. 10-9-72			17 WATER WELL CONTRACTOR'S CERTIFICATION:	
Drilled by: EDW. SIRTALA			This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.	
Completion by: HANCOCK MICH			Address HANCOCK MICH	
			Signed Edward Sirtala Date 9/1/72	
			AUTHORIZED REPRESENTATIVE	

Authority: Aot 308 PA 1978
Completion: Required
Penalty: Conviction of a violation of any provision is a misdemeanor.

import ID:

Tax No:	Permit No: W9931127	County: Houghton	Township: Torch Lake			
Well ID: 31000000394 Elevation: Latitude: 47.118197 Longitude: -88.401904 Method of Collection: QQQ - Centroid		Town/Range: 55N 32W	Section: 32	Well Status: Active	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection: Fire #116 on Boot Jack Road				
		Well Owner: Em Bushbinder				
		Well Address: Fire #116		Owner Address: 30245 So. Gibraltar Gibraltar, MI		

Drilling Method: Cable Tool Well Depth: 46.00 ft. Well Type: New	Well Use: Household Date Completed: 8/14/1999	Pump Installed: No Pressure Tank Installed: No Pressure Relief Valve Installed: No
Casing Type: Steel - black Casing Joint: Welded Casing Fitting: Drive shoe	Height: 2.00 ft. above grade	
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 Well Yield Test: Yield Test Method: Test pump Pumping level 37.00 ft. after 2.00 hrs. at 20 GPM				Formation Description		Thickness	Depth to Bottom
				Topsoil	1.00	1.00	
				Sand & Stones	4.00	5.00	
				Clay Sand Gravel	5.00	10.00	
Screen Installed: Yes Filter Packed: No Screen Diameter: 6.00 in. Blank: Screen Material Type: Stainless steel-wire wrapped				Clay & Gravel Sandy	31.00	41.00	
				Sand & Gravel	5.00	46.00	
Fittings: Neoprene packer							
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth							

Drilling Material	3.00	None	Depth	Geology Remarks:
Bentonite slurry				
Wellhead Completion: Pitless adapter				

Nearest Source of Possible Contamination:			Drilling Machine Operator Name: Jeff Eskola
Type	Distance	Direction	Employment: Employee
None			
None			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 _____ Date _____

General Remarks:

Other Remarks:

import ID:

Tax No:	Permit No:	County: Houghton	Township: Torch Lake			
Well ID: 31000001277 Elevation: Latitude: 47.127091 Longitude: -88.378243 Method of Collection: Interpolation-Map		Town/Range: 55N 32W	Section: 33	Well Status: Active	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection:				
		200 FEET EAST OF INTERSECTION OF POINT MILLS AND GROSSE POINT ROAD				
		Well Owner: DUANE W AHO				
		Well Address:		Owner Address:		
				POINT MILLS DOLLAR BAY, MI 49922		

Drilling Method: Rotary Well Depth: 120.00 ft. Well Type: Unknown	Well Use: Household Date Completed: 7/8/1981	Pump Installed: Yes Pump Installation Date: Manufacturer: F.E. Myers Model Number: SH52-58 Drop Pipe Length: 89.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No	Pump Installation Only: No HP: 0.50 Pump Type: Submersible Pump Capacity: Pump Voltage: Drilling Record ID:
Casing Type: Unknown Casing Joint: Welded Casing Fitting: Drive shoe	Height: 1.50 ft. above grade	Pressure Tank Installed: No Pressure Relief Valve Installed: No	
Diameter: 6.00 in. to 29.00 ft. depth		Borehole:	

Static Water Level: 24.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown Pumping level 100.00 ft. after 1.00 hrs. at 20 GPM			
	Formation Description	Thickness	Depth to Bottom
	Clay Sandy	12.00	12.00
	Clay	17.00	29.00
	Sandstone	91.00	120.00

[illegible]

Well Grouted: No			

	Geology Remarks:
Wellhead Completion: Pitless adapter	

Nearest Source of Possible Contamination:			Drilling Machine Operator Name:
Type	Distance	Direction	Employment: Unknown
Septic tank	60 ft.	East	

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

Reason Not Plugged:	<p align="center">Water Well Contractor's Certification</p> <p>This well was drilled under my supervision and this report is true to the best of my knowledge and belief.</p>
	<p>Signature of Registered Contractor Date</p>

General Remarks:

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.

116
Wellogic

Import ID:

Tax No: 014202004-00	Permit No: W10-31-011	County: Houghton	Township: Torch Lake
Well ID: 31000002179		Town/Range: 54N 33W	Section: 2
Elevation:		Well Status: Active	WSSN:
Latitude: 47.105396		Source ID/Well No:	
Longitude: -88.457177		Distance and Direction from Road Intersection:	
Method of Collection: Section - Centroid		.4 mile W of intersect of Upper Point Mills Rd. & Sved Rd.	
Well Owner: Jerry Hillenbrand			
Well Address:		Owner Address:	
24930 E. Sved Rd.		13496 Magala Lane	
Dollar Bay, MI 49922		Chino Hills, CA 91709	

Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 182.00 ft.	Pump Installation Date: 11/19/2009	HP: 0.50
Well Type: New	Manufacturer: Red Jacket	Pump Type: Submersible
Casing Type: Steel - black	Model Number: 50C21112S9	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 160.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.	Drilling Record ID:
Diameter: 6.00 in. to 45.50 ft. depth	Draw Down Seal Used: No	
Borehole: 6.00 in. to 182.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Diaphragm/bladder	
	Manufacturer: Amtrol	
	Model Number: PT2000	Tank Capacity: 20.0 Gallons
	Pressure Relief Valve Installed: No	

Static Water Level: 23.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test:	Sand & Gravel	35.00	35.00
Yield Test Method: Air	Clay	10.50	45.50
Pumping level 182.00 ft. after 1.00 hrs. at 12 GPM	Sandstone	136.50	182.00

Screen Installed: No	Intake: Bedrock Well

Well Grouted: Yes	Grouting Method: Driven/dry grout
Grouting Material: Bentonite dry granular	Depth: 4.00 ft. to 45.50 ft.
Bags: 2.00	Additives: None

Wellhead Completion: Pitless adapter	Geology Remarks:

Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Paul Lahti
Type: Septic tank	Employment: Employee
Distance: 70 ft.	Pump Installer: Robert Mantta
Direction: Northeast	Contractor Type: Water Well Drilling Contractor
	Reg No: 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 to the best of my knowledge and belief.	
Signature of Registered Contractor	Date

General Remarks:
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.

117
Wellogic

Import ID:

Tax No:	Permit No: W0S-31-064	County: Houghton		Township: Torch Lake	
Well ID: 31000001719 Elevation: Latitude: 47.110824 Longitude: -88.454431 Method of Collection: QQQ - Centroid	Town/Range: 54N 33W	Section: 2	Well Status: Active	WSSN:	Source ID/Well No:
	Distance and Direction from Road Intersection: .3 MILE SW OF INTER OF UPPER POINT MILLS RD & SENTER RD				
	Well Owner: WARD ERICKSON				
	Well Address: MI		Owner Address: 22344 BOSTON LOE RD HANCOCK, MI 49930		

Drilling Method: Rotary	Pump Installed: No																																																					
Well Depth: 321.00 ft.	Pressure Tank Installed: No																																																					
Well Type: New	Pressure Relief Valve Installed: No																																																					
Well Use: Household																																																						
Date Completed: 9/30/2005																																																						
Casing Type: Steel - unknown	Height: 1.50 ft. above grade																																																					
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																																																						
Well Yield Test:	Yield Test Method: Air																																																					
Pumping level 321.00 ft. after 1.00 hrs. at 15 GPM																																																						
Screen Installed: No	Intake: Bedrock Well																																																					
<table border="1"> <thead> <tr> <th>Formation Description</th> <th>Thickness</th> <th>Depth to Bottom</th> </tr> </thead> <tbody> <tr><td>Sand</td><td>58.00</td><td>58.00</td></tr> <tr><td>Clay</td><td>12.00</td><td>70.00</td></tr> <tr><td>Sand & Gravel Clayey</td><td>35.00</td><td>105.00</td></tr> <tr><td>Sand & Gravel</td><td>8.00</td><td>113.00</td></tr> <tr><td>Sand & Gravel W/Stones</td><td>7.00</td><td>120.00</td></tr> <tr><td>Clay & Gravel</td><td>46.00</td><td>166.00</td></tr> <tr><td>Sand & Gravel Clayey</td><td>10.50</td><td>176.50</td></tr> <tr><td>Sandstone</td><td>144.50</td><td>321.00</td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </tbody> </table>				Formation Description	Thickness	Depth to Bottom	Sand	58.00	58.00	Clay	12.00	70.00	Sand & Gravel Clayey	35.00	105.00	Sand & Gravel	8.00	113.00	Sand & Gravel W/Stones	7.00	120.00	Clay & Gravel	46.00	166.00	Sand & Gravel Clayey	10.50	176.50	Sandstone	144.50	321.00																								
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Clay & Gravel	46.00	166.00																																																				
Sand & Gravel Clayey	10.50	176.50																																																				
Sandstone	144.50	321.00																																																				
Well Grouted: Yes	Grouting Method: Unknown																																																					
Grouting Material: Bentonite slurry	Bags: 4.00	Additives: None	Depth:																																																			
Wellhead Completion: 12 inches above grade																																																						
Nearest Source of Possible Contamination:																																																						
Type: None	Distance:	Direction:																																																				
Drilling Machine Operator Name: PAUL LAHTI																																																						
Employment: Employee																																																						
Contractor Type: Water Well Drilling Contractor																																																						
Reg No: 31-1677																																																						
Business Name: SIIRTOLA WELL DRLG																																																						
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:

import ID:

Tax No:		Permit No:		County: Houghton			Township: Torch Lake	
<p>Well ID: 31000001158</p> <p>Elevation:</p> <p>Latitude: 47.105832</p> <p>Longitude: -88.437031</p> <p>Method of Collection: Interpolation-Map</p>				Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:
				54N 33W	1	Active		
				Distance and Direction from Road Intersection:				
				Well Owner: GERALD N ERICKSON				
Well Address:				Owner Address:				
				BOX 274 DOLLAR BAY, MI 49922				

Drilling Method: Cable Tool Well Depth: 170.00 ft. Well Type: Unknown	Well Use: Household Date Completed: 9/16/1978	Pump Installed: Yes Pump Installation Date: Manufacturer: Red Jacket Model Number: 50WI-9BC Drop Pipe Length: 160.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No	Pump Installation Only: No HP: 0.50 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID:
Casing Type: Unknown Casing Joint: Welded Casing Fitting: Drive shoe	Height:	Pressure Tank Installed: No Pressure Relief Valve Installed: No	
Diameter: 5.00 in. to 52.00 ft. depth			
Borehole:			

Static Water Level: 46.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown Pumping level 150.00 ft. after 1.00 hrs. at 10 GPM	Formation Description	Thickness	Depth to Bottom
	Sand Clayey	46.00	46.00
	Sandstone	124.00	170.00

Screen Installed: No	Intake: Bedrock Well		
Well Grouted: No			

	Geology Remarks:
Wellhead Completion: Pitless adapter, 12 inches above grade	

Nearest Source of Possible Contamination: Type Distance Direction Septic tank 75 ft. East			Drilling Machine Operator Name: Employment: Unknown	
			Contractor Type: Water Well Drilling Contractor Reg No: 07-0315	

Abandoned Well Plugged: No	Business Name: ROBERT A LARSON WELL DRILLING Business Address:
----------------------------	---

Reason Not Plugged: 	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Water Well Contractor's Certification</p> <p>This well was drilled under my supervision and this report is true to the best of my knowledge and belief.</p> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Signature of Registered Contractor Date </div> </div>
--------------------------------	---

General Remarks:

Other Remarks:

ACT 294 PA 1966

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

D67d

SEP 25 1978

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.



119

Report ID:

Tax No: 31-014-201-009-00		Permit No: W0531103		County: Houghton		Township: Torch Lake		
Well ID: 31000001700 Elevation: Latitude: 47.10858 Longitude: -88.43607 Method of Collection: GPS Std Positioning Svc SA Off				Town/Range: 54N 33W	Section: 1	Well Status: Active	WSSN:	Source ID/Well No:
				Distance and Direction from Road Intersection: 0.2 mile northeast on Senter Location Road from Senter Road on southeast side				
				Well Owner: Rory Erickson				Owner Address: 47640 Senter Location Road Hancock, MI 49930

Drilling Method: Cable Tool	Pump Installed: Yes	Pump Installation Only: No
Well Depth: 191.00 ft.	Pump Installation Date: 7/27/2005	HP: 0.75
Well Type: New	Manufacturer: Goulds	Pump Type: Submersible
Casing Type: Steel - black	Model Number: 10SB07422	Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 180.00 ft.	Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.	Drilling Record ID:
Diameter: 6.00 in. to 35.00 ft. depth	Draw Down Seal Used: No	
Borehole: 6.00 in. to 191.00 ft. depth	Pressure Tank Installed: No	
	Pressure Relief Valve Installed: No	

Static Water Level: 37.00 ft. Below Grade	Formation Description	Thickness	Depth to Bottom
Well Yield Test: Yield Test Method: Test pump Pumping level 190.00 ft. after 1.00 hrs. at 4 GPM			
Screen Installed: No Intake: Bedrock Well	Topsoil	2.00	2.00
	Sand	10.00	12.00
	Clay Sandy	8.00	20.00
	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	Geology Remarks:
Grouting Material Bags Additives Depth Bentonite dry granular 4.00 None 0.00 ft. to 35.00 ft.	
Wellhead Completion: Pitless adapter, 12 inches above grade	

Nearest Source of Possible Contamination: Type Distance Direction Septic tank 60 ft. East	Drilling Machine Operator Name: Jeff Eskola Employment: Employee
	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 of my knowledge and belief. Signature of Registered Contractor Date

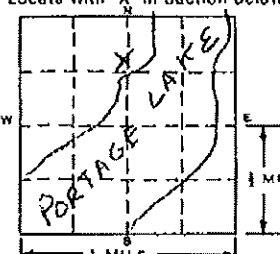
MICHIGAN DEPARTMENT OF PUBLIC HEALTH WATER WELL AND PUMP RECORD

120
PERMIT NUMBER: W3131097

1 LOCATION OF WELL		31543206005		Tax Parcel No.	
County HOUGHTON		Township Name TORCH LAKE		Fraction SW 1/4 NE 1/4 NW 1/4	
Section No. 06		Town No. 54 N		Range No. 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, MI 49930 Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Locate with 'x' in Section Below 				4 WELL DEPTH: 38.0 ft. Date Completed 08/09/96 <input type="checkbox"/> New Well <input type="checkbox"/> Replacement Well	
				5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger/Bored <input type="checkbox"/> Jetted	
				6 USE <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type II Public <input type="checkbox"/> Heat Pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public	
				7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input type="checkbox"/> Plastic <input checked="" type="checkbox"/> Welded Diameter 6.00 in. to 38.0 ft. depth 0.00 in. to 0.0 ft. depth Grouted Drill Hole Diameter 0.00 in. to 0.0 ft. depth 0.00 in. to 0.0 ft. depth Height: Above Surface 2.0 ft. Weight 18.97 lbs/ft. Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2 FORMATION DESCRIPTION		THICKNESS OF STRATUM		DEPTH TO BOTTOM OF STRATUM	
SAND		18.0		18.0	
CLAY		12.0		30.0	
SAND		8.0		38.0	
				8 SCREEN <input type="checkbox"/> Not Installed Type Stainless Steel Diameter 6.00 SLOT 0.010 Length 3.0 Set between 35.00 ft. and 38.00 ft. FITTINGS: <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Brenner Check <input checked="" type="checkbox"/> Blank above screen 1.5 ft. Other	
				9 STATIC WATER LEVEL: 0.00 ft. below land surface <input type="checkbox"/> 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: <input checked="" type="checkbox"/> Pitless adapter <input type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit	
				12 WELL GROUTED? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Wet cement <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement _____ Additives _____	
				13 Nearest source of possible contamination Type Septic Distance 100 ft. Direction SE Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No	
				14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name RED JACKET Model number CNS9BC HP 1/2 Volts 230 Length of Drop Pipe 25 ft. capacity 10 G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: Manufacturer's 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. SIIRTO A WELL DRILLING INC 1677 REGIST. RED BUSINESS NAME REGISTRATION NO. Address R#1 RD, 386C, HANCOCK, MI 49930 Signed Date 08/13/96 AUTHORIZED REPRESENTATIVE	
Data Source: MDNR					
17 Rig Operator's Name: Paul Ziemnick					

WATER WELL AND PUMP RECORD

PERMIT NUMBER

1 LOCATION OF WELL		3 OWNER OF WELL:																
County <u>Houghton</u>	Township Name <u>Torch lake</u>	Fraction <u>SE 1/4 NE 1/4 NW 1/4</u>	Section Number <u>6</u>															
		Town Number <u>54 N/8</u>	Range Number <u>32 E/W</u>															
Distance And Direction From Road Intersection <u>On Portage lake front</u> <u>(center)</u> <u>Christopher's Sub Division</u>		Address <u>Box 727</u> <u>Houghton MI 49931</u>																
Street Address & City of Well Location		Address Same As Well Location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																
Locate with "X" in Section Below		4 WELL DEPTH: Date Completed NO. DAY YEAR <input checked="" type="checkbox"/> New Well <u>36</u> ft. <u>08</u> <u>16</u> <u>91</u> <input type="checkbox"/> Replacement Well																
Sketch Map:		5 <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug <input type="checkbox"/> Hollow rod <input type="checkbox"/> Auger <input type="checkbox"/> Jettied <input type="checkbox"/>																
		6 USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Type I Public <input type="checkbox"/> Type III Public <input type="checkbox"/> Irrigation <input type="checkbox"/> Type IIa Public <input type="checkbox"/> Heat pump <input type="checkbox"/> Test Well <input type="checkbox"/> Type IIb Public <input type="checkbox"/>																
		7 CASING: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Plastic <input type="checkbox"/> Height: Above/Below <u>6</u> in. to <u>33</u> ft. depth Surface <u>1</u> ft. Weight <u>18.97</u> lbs./ft. Grouted Drill Hole Diameter <u>6</u> in. to <u>33</u> ft. depth Drive Shoe <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>6</u> in. to <u>33</u> ft. depth																
2 FORMATION DESCRIPTION <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>FORMATION DESCRIPTION</th> <th>THICKNESS OF STRATUM</th> <th>DEPTH TO BOTTOM OF STRATUM</th> </tr> </thead> <tbody> <tr><td><u>Sand</u></td><td><u>22</u></td><td><u>22</u></td></tr> <tr><td><u>Clay, Gravel</u></td><td><u>2</u></td><td><u>24</u></td></tr> <tr><td><u>Sand, Clayey</u></td><td><u>3</u></td><td><u>27</u></td></tr> <tr><td><u>Sand</u></td><td><u>9</u></td><td><u>36</u></td></tr> </tbody> </table>		FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	<u>Sand</u>	<u>22</u>	<u>22</u>	<u>Clay, Gravel</u>	<u>2</u>	<u>24</u>	<u>Sand, Clayey</u>	<u>3</u>	<u>27</u>	<u>Sand</u>	<u>9</u>	<u>36</u>	8 SCREEN: <input type="checkbox"/> Not Installed Type <u>Tel</u> Diameter <u>6</u> Slot/Groove <u>10</u> Length <u>3</u> Set between <u>36</u> ft. and <u>33</u> ft. FITTINGS: <input checked="" type="checkbox"/> K-Packer <input type="checkbox"/> Lead Packer <input type="checkbox"/> Drifter Check <input checked="" type="checkbox"/> Blank above screen <u>2.5</u> ft. Other <u>RE BTM</u>	
		FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM														
		<u>Sand</u>	<u>22</u>	<u>22</u>														
		<u>Clay, Gravel</u>	<u>2</u>	<u>24</u>														
<u>Sand, Clayey</u>	<u>3</u>	<u>27</u>																
<u>Sand</u>	<u>9</u>	<u>36</u>																
9 STATIC WATER LEVEL: <u>7</u> ft. below land surface <input type="checkbox"/> Flow																		
10 PUMPING LEVEL: below land surface <u>15</u> ft. after <u>1</u> hrs. pumping at <u>80</u> G.P.M. <u>15</u> ft. after <u>1</u> hrs. pumping at <u>80</u> G.P.M.																		
11 WELL HEAD COMPLETION: <input checked="" type="checkbox"/> Pitless adapter <input checked="" type="checkbox"/> 12" above grade <input type="checkbox"/> Basement offset <input type="checkbox"/> Approved pit		12 WELL GROUTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes From _____ to _____ ft. <input type="checkbox"/> Neat cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Other _____ No. of bags of cement _____ Additives _____																
13 Nearest source of possible contamination Type <u>Septic</u> Distance <u>25</u> ft. Direction <u>SE</u> Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Was old well plugged? <input type="checkbox"/> Yes <input type="checkbox"/> No		14 PUMP: <input type="checkbox"/> Not Installed <input type="checkbox"/> Pump Installation Only Manufacturer's name <u>Aermoter</u> Model number <u>A1250</u> HP <u>1/2</u> Volts <u>230</u> Length of Drop Pipe <u>30</u> ft. capacity <u>10</u> G.P.M. TYPE: <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Jet PRESSURE TANK: <u>Amtrol</u> Manufacturer's name <u>Amtrol</u> Model number <u>WX-202</u> Capacity <u>6.2</u> Gallons																
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. <u>Robert A. Larson W.D. 07-0315</u> REGISTERED BUSINESS NAME _____ REGISTRATION NO. _____ Address <u>121 Brix 188 L'Anse au Loup 49946</u> Signed <u>Robert A. Larson</u> Date _____ AUTHORIZED REPRESENTATIVE																
17. Rig Operator's Name: <u>Steve Larson</u>																		

WATER WELL RECORD

ACT 294 PA 1985

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1. LOCATION OF WELL			3. OWNER OF WELL:		
County HOUGHTON	Township Name TURCH LAKE	Fraction NW 1/4 NW 1/4	Section Number 5	Town Number 54 N.S.	Range Number 32 W.
Distance And Direction from Road Intersections ABOUT SIX MILES SOUTH ON BOOTJACK ROAD FROM LAKE LINDEN			Address P.O. BX 525 HOUGHTON, MI 49931		
Street address & City of Well Location LAKE LINDEN MI			4. WELL DEPTH: (completed) Date of Completion		
Locate with "X" in section below			66 ft.		
Sketch Map:			5. <input type="checkbox"/> Cable tool <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Driven <input type="checkbox"/> Dug		
			<input type="checkbox"/> Hollow rod <input type="checkbox"/> Jetted <input type="checkbox"/> Bored <input type="checkbox"/>		
			6. USE: <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Public Supply <input type="checkbox"/> Industry		
			<input type="checkbox"/> Irrigation <input type="checkbox"/> Air Conditioning <input type="checkbox"/> Commercial		
			<input type="checkbox"/> Test Well <input type="checkbox"/>		
			7. CASING: Threaded <input checked="" type="checkbox"/> Welded <input type="checkbox"/> Height: Above/Below		
			Diam. 6 in. to 6 3/4 in. Depth 62 ft.		
			Surface 12 ft.		
			Weight 5 1/2 lbs./ft.		
			Drive Shoe? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
2. FORMATION			8. SCREEN: JOHNSON		
THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM		Type: STAINLESS Diam. 6"		
SAND	4	4	Slot/Gauge .018 Length 4'		
CLAY	12	16	Set between 62 ft. and 66 ft.		
SAND - CLAYEY	46	62	Fittings: STANDARD		
GRAVEL	4	66	9. STATIC WATER LEVEL		
			3 ft. below land surface		
			10. PUMPING LEVEL below land surface		
			66 ft. after 1 hrs. pumping 5 1/2 G.P.M.		
			ft. after ___ hrs. pumping ___ G.P.M.		
			11. WATER QUALITY in Parts Per Million:		
			Iron (Fe) ___ Chlorides (Cl) ___		
			Hardness ___ Other ___		
			12. WELL HEAD COMPLETION: <input type="checkbox"/> In Approved Pit		
			<input checked="" type="checkbox"/> Pitless Adapter <input type="checkbox"/> 12" Above Grade		
			13. Well Grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
			<input type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/>		
			Depth: From ___ ft. to ___ ft.		
			14. Nearest Source of possible contamination		
			50 feet W Direction SEPTIC Type		
			Well disinfected upon completion <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
			15. PUMP:		
			<input type="checkbox"/> Not installed		
			Manufacturer's Name MYERS		
			Model Number SH52-511 HP 5 Volts 230		
			Length of Drop Pipe 60 ft. capacity ___ G.P.M.		
			Type: <input checked="" type="checkbox"/> Submersible		
			<input type="checkbox"/> Jet <input type="checkbox"/> Reciprocating		
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 best of my knowledge and belief.		
			SILVIA WELL DRILLING OISY		
			REGISTERED BUSINESS NAME		
			REGISTRATION NO.		
			Address HANCOCK MI		
			Signed Edward Silvius Date 10/26/78		
			AUTHORIZED REPRESENTATIVE		

OCT 29 1979

GEOLOGICAL SURVEY COPY

Appendix G

Michigan Natural Features Inventory Survey Results

Rare Species Explorer

9 species - *all plants & animals found in aquatic habitat of Houghton Co.*

Scientific Name	Common Name	Taxonomic Group	State Status	Federal 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 artedii	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

Gavia immer	Common loon	Birds	T	Visual survey, listen for call	October 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

For assistance with this site, email mnfi@msu.edu

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Michigan Department of Natural Resources

Endangered Species Assessment

Search by address, city, zip, and more

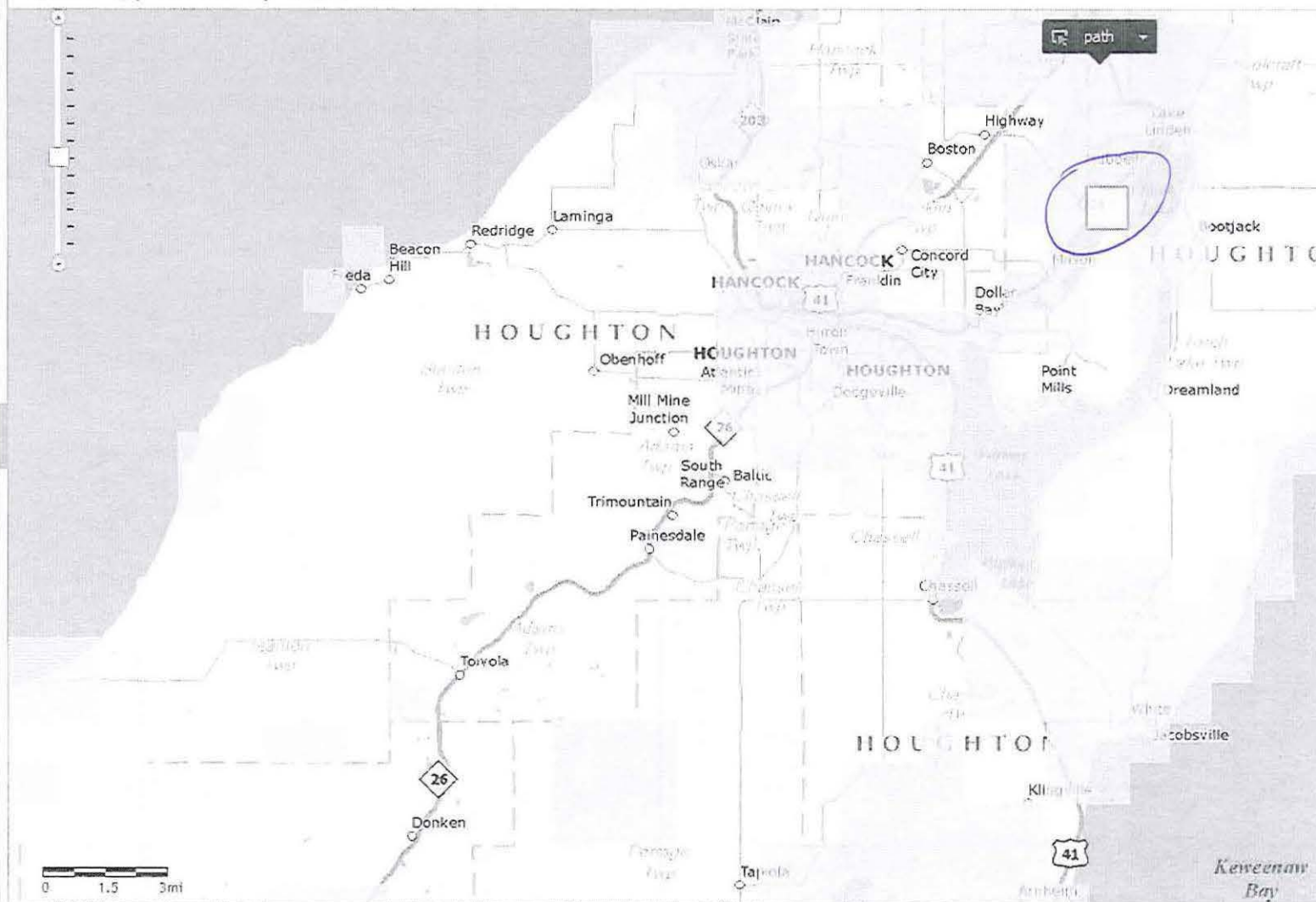
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Legend

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

- ☒ Unique Natural Feature(s)
- ☐ No Listed Features



Michigan
Natural
Features
Inventory



U.S.
Fish & Wildlife
Service

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

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mcgi.state.mi.us/esa/

12/20/12



No eat restrictions.
One meal per month.



One meal per week.
Six meals per year.
Do not eat these fish.

General Population

Length (inches)

6-8	8-10	10-12	12-14	14-18	18-22	22-26	26-30	30 +
-----	------	-------	-------	-------	-------	-------	-------	------

Women & Childr

Length (inches)

6-8	8-10	10-12	12-14	14-18	18-22	22-26	26-30	30 +
-----	------	-------	-------	-------	-------	-------	-------	------

Water body

Type of fish

Chemical(s)

Lake Superior Watershed For water bodies that are not listed, read the Mercury Advisory on page 5.

Deer Lake* (Alger Co.)	Northern Pike	Mercury							▼	◆	◆						●	◆	◆
Deer Lake (Marquette Co.)	All species	Mercury	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Duck Lake* (Gogebic Co.)	Walleye	Mercury					▲	▼	▼	▼	▼					▲	●	●	●
Lake Gogebic* (Gogebic Co.)	Walleye	Mercury					▲	▼	▼	▼	▼					▲	●	●	●
Lake Independence* (Marquette Co.)	Northern Pike	Mercury							▲	▲	▼						▲	▲	●
Lake Le Vasseur* (Marquette Co.)	Northern Pike	Mercury							▼	◆	◆						●	◆	◆
Langford Lake* (Gogebic Co.)	Walleye	Mercury					▲	▲	◆	◆	◆					▲	▲	◆	◆
Pomeroy Lake* (Gogebic Co.)	Walleye	Mercury					▲	▼	▼	▼	▼					▲	●	●	●
Portage Lake* (Houghton Co.)	Brown Trout	PCBs			▲	▲	▲	▲	▲	▲	▲				▲	▲	▼	▼	▼
	Walleye	Mercury, PCBs					▲	▲	▼	▼	▼					▲	▲	●	●
Silver Lead Creek (Marquette Co.)	Brook Trout	PCBs	▲	▲	▲	▲	▲	▲	▲	▲			▼	▼	▼	▼	▼	▼	▼
Siskiwit Lake* (Isle Royale)	Lake Trout	PCBs			▲	▲	▲	▲	▲	▲	▲				▲	▲	▲	▼	▼
	Lake Whitefish	PCBs	▲	▲	▲	▲	▲	▲	▲	▲	▲		▼	▼	▼	▼	▼	▼	▼
Tahquamenon River (Luce Co.)	Walleye	Mercury					▼	▼	▼	▼	▼					●	●	●	●
Teal Lake* (Marquette Co.)	Smallmouth Bass	Mercury					▲	▼	▼	▼						▼	●	●	●
	Walleye	Mercury					▲	▼	▼	▼	▼					▼	●	●	●
Thousand Island Lake* (Gogebic Co.)	Walleye	Mercury					▲	▼	▼	▼	▼					▲	●	●	●
Torch Lake* (Houghton Co.)	Northern Pike	Mercury, PCBs							▲	▲	▼						▼	▼	●
	Smallmouth Bass	Mercury, PCBs					▲	▼	▼	▼						▼	●	●	●
	Walleye	Mercury, PCBs					▲	▲	◆	◆	◆					▼	▼	◆	◆

* See Mercury Advisory on page 5.