Case No: 418	61	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P17		Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location	MW-07		pH:	2	Sample Date:	10112011	Sample Time:	18:45:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.70	ug/L	1			Yes	S2BVE

Case No: 4186	1 Contract:	EPW0903	8	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P17	Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	MW-07	pH:	2	Sample Date:	10112011	Sample Time:	18:45:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	9020	ug/L	1			Yes	S2BVE
Antimony	7.5	ug/L	1	J	J	Yes	S2BVE
Arsenic	136	ug/L	1			Yes	S2BVE
Barium	587	ug/L	1	Е	J	Yes	S2BVE
Beryllium	1.5	ug/L	1	J	J	Yes	S2BVE
Cadmium	3.7	ug/L	1	J	J	Yes	S2BVE
Calcium	159000	ug/L	1	Е	J	Yes	S2BVE
Chromium	46.1	ug/L	1		J+	Yes	S2BVE
Cobalt	10.7	ug/L	1	J	J	Yes	S2BVE
Copper	24700	ug/L	1			Yes	S2BVE
Iron	22900	ug/L	1			Yes	S2BVE
Lead	282	ug/L	1			Yes	S2BVE
Magnesium	15400	ug/L	1	Е	J	Yes	S2BVE
Manganese	744	ug/L	1	Е	J	Yes	S2BVE
Nickel	65.1	ug/L	1			Yes	S2BVE
Potassium	6700	ug/L	1			Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	75.4	ug/L	1			Yes	S2BVE
Sodium	37800	ug/L	1		J+	Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	404	ug/L	1			Yes	S2BVE

Case No: 418	61	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P18		Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location	MW-08		pH:	2	Sample Date:	10122011	Sample Time:	10:25:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.19	ug/L	1	J	J	Yes	S2BVE

Case No: 4186	51	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P18		Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	MW-08		pH:	2	Sample Date:	10122011	Sample Time:	10:25:00
% Moisture:					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	384	ug/L	1			Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	2.5	ug/L	1	J	J	Yes	S2BVE
Barium	200	ug/L	1	JE	UJ	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	0.18	ug/L	1	J	J	Yes	S2BVE
Calcium	80200	ug/L	1	Е	J	Yes	S2BVE
Chromium	10.0	ug/L	1	J	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	480	ug/L	1			Yes	S2BVE
Iron	2500	ug/L	1			Yes	S2BVE
Lead	21.9	ug/L	1			Yes	S2BVE
Magnesium	8140	ug/L	1	Е	J	Yes	S2BVE
Manganese	470	ug/L	1	Е	J	Yes	S2BVE
Nickel	16.2	ug/L	1	J	J	Yes	S2BVE
Potassium	5890	ug/L	1			Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	16100	ug/L	1		J+	Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	J	U	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P18	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	MW-08	pH:	2	Sample Date:	10122011	Sample Time:	10:25:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 418	61	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P19		Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location	: MW-09		pH:	2	Sample Date:	10122011	Sample Time:	11:50:00
% Moisture:					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No:	1861	Contract:	EPW09038	}	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Numb	er: ME3P19		Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Locat	on: MW-09		pH:	2	Sample Date:	10122011	Sample Time:	11:50:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4186	51	Contract:	EPW09038		SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P19		Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	MW-09		pH:	2	Sample Date:	10122011	Sample Time:	11:50:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	1970	ug/L	1			Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	257	ug/L	1	Е	J	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	0.15	ug/L	1	J	J	Yes	S2BVE
Calcium	50700	ug/L	1	Е	J	Yes	S2BVE
Chromium	10.0	ug/L	1	J	U	Yes	S2BVE
Cobalt	1.4	ug/L	1	J	J	Yes	S2BVE
Copper	71.7	ug/L	1			Yes	S2BVE
Iron	1800	ug/L	1			Yes	S2BVE
Lead	2.7	ug/L	1	J	J	Yes	S2BVE
Magnesium	27400	ug/L	1	Е	J	Yes	S2BVE
Manganese	369	ug/L	1	Е	J	Yes	S2BVE
Nickel	5.4	ug/L	1	J	J	Yes	S2BVE
Potassium	17600	ug/L	1			Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	75600	ug/L	1			Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	J	U	Yes	S2BVE

Case No: 4186	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P20	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	MW-10	pH:	2	Sample Date:	10122011	Sample Time:	18:10:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No:	41861	Contract:	EPW09038		SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Nur	mber: ME3P20		Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Loc	eation: MW-10		pH:	2	Sample Date:	10122011	Sample Time:	18:10:00
% Moisture	e:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No:	41861		Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Nur	mber:	ME3P20		Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Loc	cation:	MW-10		pH:	2	Sample Date:	10122011	Sample Time:	18:10:00
% Moisture	e:					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	1260	ug/L	1			Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	2.6	ug/L	1	J	J	Yes	S2BVE
Barium	200	ug/L	1	JE	UJ	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	0.32	ug/L	1	J	J	Yes	S2BVE
Calcium	16200	ug/L	1	Е	J+	Yes	S2BVE
Chromium	10.0	ug/L	1	J	U	Yes	S2BVE
Cobalt	0.74	ug/L	1	J	J	Yes	S2BVE
Copper	11.9	ug/L	1	J	J	Yes	S2BVE
Iron	5640	ug/L	1			Yes	S2BVE
Lead	2.4	ug/L	1	J	J	Yes	S2BVE
Magnesium	5000	ug/L	1	JE	UJ	Yes	S2BVE
Manganese	376	ug/L	1	Е	J	Yes	S2BVE
Nickel	4.0	ug/L	1	J	J	Yes	S2BVE
Potassium	5000	ug/L	1	J	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	10800	ug/L	1		J+	Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	J	U	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P27	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-01	pH:	2	Sample Date:	10112011	Sample Time:	16:45:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4	861	Contract:	EPW09038	}	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number	r: ME3P27		Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location	n: FB-01		pH:	2	Sample Date:	10112011	Sample Time:	16:45:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No:	11861	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Numb	er: ME3P27	7	Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Locati	ion: FB-01		pH:	2	Sample Date:	10112011	Sample Time:	16:45:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	200	ug/L	1	U	U	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	200	ug/L	1	UE	UJ	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	599	ug/L	1	JE	J	Yes	S2BVE
Chromium	10.0	ug/L	1	U	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	25.0	ug/L	1	U	U	Yes	S2BVE
Iron	100	ug/L	1	J	U	Yes	S2BVE
Lead	10.0	ug/L	1	U	U	Yes	S2BVE
Magnesium	80.9	ug/L	1	JE	J	Yes	S2BVE
Manganese	1.1	ug/L	1	JE	J	Yes	S2BVE
Nickel	40.0	ug/L	1	U	U	Yes	S2BVE
Potassium	5000	ug/L	1	U	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	866	ug/L	1	J	J	Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	U	U	Yes	S2BVE
Zinc	5.5	ug/L	1	J	J	Yes	S2BVE

Case No: 41	861	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Numbe	: ME3P28		Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location	n: FB-02		pH:	2	Sample Date:	10122011	Sample Time:	18:05:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	200	ug/L	1	U	U	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	200	ug/L	1	UE	UJ	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	525	ug/L	1	JE	J	Yes	S2BVE
Chromium	10.0	ug/L	1	U	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	25.0	ug/L	1	U	U	Yes	S2BVE
Iron	100	ug/L	1	J	U	Yes	S2BVE
Lead	10.0	ug/L	1	U	U	Yes	S2BVE
Magnesium	87.5	ug/L	1	JE	J	Yes	S2BVE
Manganese	0.84	ug/L	1	JE	J	Yes	S2BVE
Nickel	40.0	ug/L	1	U	U	Yes	S2BVE
Potassium	5000	ug/L	1	U	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	525	ug/L	1	J	J	Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	0.43	ug/L	1	J	J	Yes	S2BVE
Zinc	60.0	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P28	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-02	pH:	2	Sample Date:	10122011	Sample Time:	18:05:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P28	Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	FB-02	pH:	2	Sample Date:	10122011	Sample Time:	18:05:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	51	Contract:	EPW09038		SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P31		Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PB-01		pH:	2	Sample Date:	10112011	Sample Time:	17:07:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	1 Contra	ct: EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P31	Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PB-01	pH:	2	Sample Date:	10112011	Sample Time:	17:07:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	200	ug/L	1	U	U	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	200	ug/L	1	UE	UJ	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	358	ug/L	1	JE	J	Yes	S2BVE
Chromium	10.0	ug/L	1	U	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	25.0	ug/L	1	U	U	Yes	S2BVE
Iron	100	ug/L	1	J	U	Yes	S2BVE
Lead	10.0	ug/L	1	U	U	Yes	S2BVE
Magnesium	54.7	ug/L	1	JE	J	Yes	S2BVE
Manganese	15.0	ug/L	1	JE	UJ	Yes	S2BVE
Nickel	40.0	ug/L	1	U	U	Yes	S2BVE
Potassium	5000	ug/L	1	U	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	646	ug/L	1	J	J	Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	U	U	Yes	S2BVE

Case No: 41861	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P31	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PB-01	pH:	2	Sample Date:	10112011	Sample Time:	17:07:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4	1861	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number	r: ME3P32	,	Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location	on: PB-02		pH:	2	Sample Date:	10122011	Sample Time:	18:00:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	200	ug/L	1	U	U	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	4.4	ug/L	1	JE	J	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	8580	ug/L	1	Е	J	Yes	S2BVE
Chromium	10.0	ug/L	1	J	J	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	25.0	ug/L	1	U	U	Yes	S2BVE
Iron	100	ug/L	1	J	U	Yes	S2BVE
Lead	10.0	ug/L	1	U	U	Yes	S2BVE
Magnesium	1310	ug/L	1	JE	J	Yes	S2BVE
Manganese	1.6	ug/L	1	JE	J	Yes	S2BVE
Nickel	40.0	ug/L	1	U	U	Yes	S2BVE
Potassium	5000	ug/L	1	J	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	9630	ug/L	1			Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	1.7	ug/L	1	J	J	Yes	S2BVE
Zinc	7.0	ug/L	1	J	J	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	}	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P32	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PB-02	pH:	2	Sample Date:	10122011	Sample Time:	18:00:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	1	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P32	Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	PB-02	pH:	2	Sample Date:	10122011	Sample Time:	18:00:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	51	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	CHEM
Sample Number:	ME3P35		Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	MW-11		pH:	2	Sample Date:	10122011	Sample Time:	18:25:00
% Moisture:					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	1180	ug/L	1			Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	200	ug/L	1	JE	UJ	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	0.20	ug/L	1	J	J	Yes	S2BVE
Calcium	45500	ug/L	1	Е	J	Yes	S2BVE
Chromium	10.0	ug/L	1	J	U	Yes	S2BVE
Cobalt	0.48	ug/L	1	J	J	Yes	S2BVE
Copper	143	ug/L	1			Yes	S2BVE
Iron	1560	ug/L	1			Yes	S2BVE
Lead	11.8	ug/L	1			Yes	S2BVE
Magnesium	5610	ug/L	1	Е	J+	Yes	S2BVE
Manganese	95.8	ug/L	1	Е	J	Yes	S2BVE
Nickel	4.4	ug/L	1	J	J	Yes	S2BVE
Potassium	5340	ug/L	1			Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	63200	ug/L	1			Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	J	U	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	1	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P35	Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	MW-11	pH:	2	Sample Date:	10122011	Sample Time:	18:25:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 41861	Contract:	EPW09038	3	SDG No:	ME3P10	Lab Code:	СНЕМ
Sample Number:	ME3P35	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	MW-11	pH:	2	Sample Date:	10122011	Sample Time:	18:25:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	3.0	ug/L	1	J	J	Yes	S2BVE



# USEPA Contract Laboratory Program Inorganic Traffic Report & Chain of Custody Record

Case No:	41861	
DAS No:	44 5 7 601 0	
SDC No.	ME3P10	Ē

Date Shipped:	(0/13/1)	Chain of Custody Record	Sampler Signature: Mulber	For Lab Use Only	F0.10000
Carrier Name: Airbill:	UPS / 1Z-549-OW4-22-1008-255&		Received By (Date / Time)	Lab Contract No:	EPW09038
Shipped to:	ChemTech Consulting	1 John gulber, 10/13/11, 160	6 Ken Chance 10/19/11/0:10	Unit Price:	
	Group (CHEM) 284 Sheffield Street	2/ ,		Transfer To:	· · · · · · · · · · · · · · · · · · ·
	Mountainside NJ 07092 (908) 789-8900	3.		Lab Contract No:	
		4.		Unit Price:	

		l	<u> </u>	Oik Hou.					
INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE O DATE		ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME3P10	Ground Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1091 (HNO3), 5-1092 (NaOH) (2)	MVV-01	10/12/11	1015	E3P10	
ME3P11	Ground Water/ John Spielberg	ĽG	CN (21), TM/Hg (21)	5-1097 (HNO3), 5-1098 (NaOH) (2)	MW-02	7	1112	E3P11	
ME3P12	Ground Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1103 (HNO3), 5-1104 (NaOH) (2)	MVV-03	1	1610	E3P12	
ME3P13	Ground Water/ John Spielberg	IJG	CN (21), TM/Hg (21)	5-1109 (HNO3), 5-1110 (NaOH) (2)	MW-04	10/11/11	1200	E3P13	
ME3P27	Field QC/ John Spielberg	ĽG	CN (21), TM/Hg (21)	5-1209 (HNO3), 5-1210 (NaOH) (2)	FB-01	10/11/11	1645	E3P27	;
ME3P28	Field QC/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1215 (HNO3), 5-1216 (NaOH) (2)	FB-02	(0/12/1)	1805	E3P28	
ME3P31	Field QC/ John Spielberg	UG	CN (21), TM/Hg (21)	5-1233 (HNO3), 5-1234 (NaOH) (2)	PB-01·	(0/11/11	1707	E3P31	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC;	Additional Sampler Signature(s):  The Smilker	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	Concentration: /L = Low/M = Low/Medlum, H = High	Type/Designate: Composite = C. Grab = G	>	Custody Seal Intact? YES Shipment Iced?
CN = Cyanide - water,	TM/Hg = CLP Total-Metals/Hg - water			

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### **USEPA Contract Laboratory Program Inorganic Traffic Report & Chain of Custody Record**

Į	Case	NO
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41861

DAS No: SDG No:

ME3P10

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Date Shipped:	10/13/11		Chain of Custody F	Record	Sampler Signature:	rulber "	For Lab	Use Only	
Carrier Name:	UPS '	لـــــ ا	Relinquished By	(Date / Time)	Received By	(Date / Time)	Lab Contr	act No:	EPW09038
Airbill:	1Z-549-OW4-22-10	-	1 John Spe	elly. 10/13/11,160	a la lun	ાગેર્ધામાં 10:10	Unit Price	•	
Shipped to:	ChemTech Consult Group (CHEM)	•	2.	<i>//</i>			Transfer 1	-	
	284 Sheffield Stree Mountainside NJ 0		3.						
	(908) 789-8900				<u> </u>	1	Lab Contr	act No:	
			4.				Unit Price	:	
INORGANIC SAMPLE No.	MATRIXI SAMPLER	CONC/ TYPE	ANALYSIS/ - TURNAROUND	TAG No.J PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLL DATE/TIME		ORGANIC SAMPLE No	FOR LAB USE ONLY Sample Condition On Receipt
ME3P14	Ground Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1115 (HNO3), 5-1116 (NaOH) (2)	MW-05	10/11/11 1	3/5	E3P14	
ME3P15	Ground Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1121 (HNO3), 5-1122 (NaOH) (2)	MW-05D	) (	315	E3P15	
ME3P16	Ground Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	`(HNO3), 5-1135 (NaOH),	MW-06	1	650	E3P16	
ME3P17	Ground Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1136 (NaOH) (4) 5-1141 (HNO3), 5-1142 (NaOH) (2)	MW-07	\ '	845	E3P17	
ME3P29	Nield OC/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1221 (HNO3), 5-1222 (NaOH) (2)	FB-03			F8P29_	
	,			10/19	r/a				·

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC: ME3P16	Additional Sampler Signature(s);	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 89248
Analysis Key:	Concentration: ( = Low/M = Low/Medium, H = High	Type/Dosignate: Composite = C Grab = C		Custody Seal Intact?
CN = Cyanide - water, T	M/Hg = CLP Total Metals/Hg - water			

LABORATORY

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### JSEPA Contract Laboratory Program Inorganic Traffic Report & Chain of Custody Record

Case No:

41861

DAS No: SDG No:

ME3P10

Date Shipped: Carrier Name: Airbill: Shipped to:	UPS 1Z-549-OW4-22-10 ChemTech Consult Group (CHEM) 284 Sheffield Street Mountainside NJ 07 (908) 789-8900	ing t	Chain of Custody II Relinguished By  1	(Date / Time)	Sampler Signature: Am, Received By/	hulbe (Date / Jime) - 10/14/11  D:10	For Lab U  Lab Contract  Unit Price:  Transfer To:  Lab Contract  Unit Price:	t No:	EPW09038
INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLL DATE/TIME		ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME3P18	Ground Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1147 (HNO3), 5-1148 (NaOH) (2)	MVV-08	10/12/11 1	2-5	E3P18	
ME3P19	Ground Water/ John Spielberg	ĽG	CN (21), TM/Hg (21)	5-1153 (HNO3), 5-1154 (NaOH) (2)	MVV-09		50	E3P19	•
ME3P20	Ground Water/ John Spielberg	IJĠ	CN (21), TM/Hg (21)	5-1159 (HNO3), 5-1160 (NaOH) (2)	MVV-10	) (	810	E3P20	001 11
МЕВР30	Field QCX John Spielberg	17G	CN (21), 7M/Hg (21)	5-1227 (HNO3), 5-1228 (NaOH) (2)	FB-04	. /		E3P30	C/8/1 10/13/11
ME3P32	Field QC/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1239 (HNO3), 5-1240 (NaOH) (2)	PB-02	10/12/11 1	800	E3P32	<i>,</i>

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:  89249, 89250	
Analysis Key:	Concentration: (L = Low) M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? (Shipment Iced?	
CN = Cyanide - water, T	M/Hg = CLP Total Metals/Hg - water			1	

TR Number:

## **Regional Transmittal Form**

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

<b>DATE:</b>	11/21/2011
SUBJECT:	Review of Data Received for review on 11/4/2011
FROM:	Timothy Prendiville, Supervisor, Chief (SR-6J) Superfund Contract Management Section
то:	Data User: MDEQ Email address: walczakj@michigan.gov
	LEVEL 3 DATA VALIDATION
We have revi	ewed the data for the following case:
SITE NAME	: <u>C &amp; H Lake Linden Operations (MI)</u>
CASE NUMI	BER: 41861 SDG NUMBER: ME3P21
Number and	Type of Samples: _6 waters
Sample Num	bers: <u>ME3P21-P26</u>
Laboratory:	ChemTech Hrs. for Review:
Following ar	e our findings:

CC: Howard Pham Region 5 TPO Mail Code: SA-5J Case: 41861 SDG: ME3P21 Page 2 of 5

Site: C & H Lake Linden Operations (MI)

Laboratory: ChemTech

## Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Six (6) water samples, numbered ME3P21-P26, were collected on October 12, 2011. The lab received the samples on October 14, 2011 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using the CLP SOW ISM01.3 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

EXES flagged cyanide samples J-/R for improper preservation. In the EXES Superset Deliverable file, the pH entered was 2 for all analytes. The pH for cyanide should be entered in as 12. There is nothing in place for this reviewer to make the proper changes to the Superset Deliverable file. The flags for improper preservation have been removed from this reviewers report.

Case: 41861 SDG: ME3P21 Page 3 of 5

Site: C & H Lake Linden Operations (MI)

Laboratory: ChemTech

#### 1. HOLDING TIME:

No defects were found.

#### 2. CALIBRATIONS:

The following inorganic samples are associated with calibration standards used past the expiration date.

Hits are qualified "J" and non-detects are qualified "UJ".

Cyanide

ME3P21, ME3P22, ME3P23, ME3P24, ME3P25, ME3P26

#### 3. BLANKS:

The following inorganic samples are associated with an ICB/CCB or preparation blank concentration which is greater than the method detection limit (MDL). The sample result is greater than the MDL.

Hits less than the CRQL are qualified "U". The sample result is raised to the CRQL. Hits greater than the CRQL but less than 5 times the blank are qualified "J+".

Iron

ME3P21, ME3P23, ME3P25, ME3P26

Potassium

ME3P21, ME3P22, ME3P23, ME3P24, ME3P25, ME3P26

Vanadium

ME3P21, ME3P22, ME3P23, ME3P25, ME3P26

No samples were identified as field blanks.

#### 4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found for matrix spike or laboratory control samples.

#### **5. LABORATORY AND FIELD DUPLICATE:**

No defects were found for the laboratory duplicate samples.

ME3P23/24 are field duplicate pairs. The following inorganic analytes are associated with field duplicate results which did not meet technical data validation criteria; however, no sample results are qualified for field duplicates.

Sodium, Cyanide

#### 6. ICP ANALYSIS:

Case: 41861 SDG: ME3P21 Page 4 of 5

Site: C & H Lake Linden Operations (MI)

Laboratory: ChemTech

No defects were found for the serial dilution or ICS samples.

#### 7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).

Results are qualified "J".

Aluminum

ME3P22, ME3P23, ME3P24, ME3P25

Barium

ME3P21, ME3P22, ME3P23, ME3P24, ME3P25, ME3P26

Cadmium

**ME3P22** 

Chromium

**ME3P23** 

Copper

**ME3P23** 

Lead

ME3P22, ME3P23, ME3P25

Magnesium

ME3P21, ME3P23, ME3P24, ME3P25, ME3P26

Manganese

ME3P21, ME3P23, ME3P24, ME3P25, ME3P26

Nickel

ME3P21, ME3P22, ME3P23, ME3P24, ME3P26

Zinc

**ME3P22** 

All data, except those qualified above, are acceptable.

Case: 41861 SDG: ME3P21 Page 5 of 5

Site: C & H Lake Linden Operations (MI)

Laboratory: ChemTech

## **EXES ISM01.3 Data Qualifier Sheet**

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

## **Sample Summary Report**

Case No: 41861	Contract:	EPW09038		SDG No:	ME3P21	Lab Code:	CHEM
Sample Number: N	ME3P21	Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location: S	SW-01	pH:	2	Sample Date:	10122011	Sample Time:	13:30:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	200	ug/L	1	U	U	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	26.6	ug/L	1	J	J	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	16700	ug/L	1			Yes	S2BVE
Chromium	10.0	ug/L	1	U	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	27.0	ug/L	1			Yes	S2BVE
Iron	100	ug/L	1	J	U	Yes	S2BVE
Lead	10.0	ug/L	1	U	U	Yes	S2BVE
Magnesium	3300	ug/L	1	J	J	Yes	S2BVE
Manganese	5.4	ug/L	1	J	J	Yes	S2BVE
Nickel	4.7	ug/L	1	U	J	Yes	S2BVE
Potassium	5000	ug/L	1	J	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	11200	ug/L	1			Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	U	U	Yes	S2BVE

Case No: 41861	Contract:	EPW09038	3	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P21	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-01	pH:	2	Sample Date:	10122011	Sample Time:	13:30:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038		SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P21	Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-01	pH:	2	Sample Date:	10122011	Sample Time:	13:30:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	3	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P22	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-02	pH:	2	Sample Date:	10122011	Sample Time:	18:00:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4186	1 Contract:	EPW0903	8	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P22	Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-02	pH:	2	Sample Date:	10122011	Sample Time:	18:00:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	49.3	ug/L	1	J	J	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	102	ug/L	1	J	J	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	0.12	ug/L	1	J	J	Yes	S2BVE
Calcium	28100	ug/L	1			Yes	S2BVE
Chromium	10.0	ug/L	1	U	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	29.1	ug/L	1			Yes	S2BVE
Iron	920	ug/L	1			Yes	S2BVE
Lead	4.7	ug/L	1	J	J	Yes	S2BVE
Magnesium	5650	ug/L	1			Yes	S2BVE
Manganese	46.1	ug/L	1			Yes	S2BVE
Nickel	1.0	ug/L	1	J	J	Yes	S2BVE
Potassium	5000	ug/L	1	J	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	55900	ug/L	1			Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	22.1	ug/L	1	J	J	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	3	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P22	Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-02	pH:	2	Sample Date:	10122011	Sample Time:	18:00:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	3	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P23	Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-03	pH:	2	Sample Date:	10122011	Sample Time:	14:15:00
% Moisture :				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	1 Contract:	EPW09038	1	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P23	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-03	pH:	2	Sample Date:	10122011	Sample Time:	14:15:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	20.7	ug/L	1		J	Yes	S2BVE

Case No:	11861	Contract:	EPW09038	3	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Numb	er: ME3P23	l	Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Locat	ion: SW-03		pH:	2	Sample Date:	10122011	Sample Time:	14:15:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	16.7	ug/L	1	J	J	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	44.1	ug/L	1	J	J	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	17300	ug/L	1			Yes	S2BVE
Chromium	1.1	ug/L	1	J	J	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	19.6	ug/L	1	J	J	Yes	S2BVE
Iron	100	ug/L	1	J	U	Yes	S2BVE
Lead	1.5	ug/L	1	J	J	Yes	S2BVE
Magnesium	1220	ug/L	1	J	J	Yes	S2BVE
Manganese	5.5	ug/L	1	J	J	Yes	S2BVE
Nickel	1.8	ug/L	1	J	J	Yes	S2BVE
Potassium	5000	ug/L	1	J	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	3610000	ug/L	20	D		Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	51	Contract:	EPW09038	3	SDG No:	ME3P21	Lab Code:	CHEM
Sample Number:	ME3P24		Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-03D		pH:	2	Sample Date:	10122011	Sample Time:	14:15:00
% Moisture:					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	22.6	ug/L	1	J	J	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	39.6	ug/L	1	J	J	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	16900	ug/L	1			Yes	S2BVE
Chromium	10.0	ug/L	1	U	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	28.2	ug/L	1			Yes	S2BVE
Iron	110	ug/L	1			Yes	S2BVE
Lead	10.0	ug/L	1	U	U	Yes	S2BVE
Magnesium	2330	ug/L	1	J	J	Yes	S2BVE
Manganese	11.5	ug/L	1	J	J	Yes	S2BVE
Nickel	1.3	ug/L	1	J	J	Yes	S2BVE
Potassium	5000	ug/L	1	J	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	1700000	ug/L	20	D		Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	U	U	Yes	S2BVE
Zinc	60.0	ug/L	1	U	U	Yes	S2BVE

Case No: 4	861	Contract:	EPW09038	}	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number	r: ME3P24		Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location	n: SW-03D		pH:	2	Sample Date:	10122011	Sample Time:	14:15:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4186	51	Contract:	EPW09038		SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P24		Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-03D		pH:	2	Sample Date:	10122011	Sample Time:	14:15:00
% Moisture:					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 41861	Contract:	EPW09038	3	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P25	Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-04	pH:	2	Sample Date:	10122011	Sample Time:	15:15:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4186	1 Contract:	EPW0903	8	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P25	Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-04	pH:	2	Sample Date:	10122011	Sample Time:	15:15:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No: 4186	1 Contract	:: EPW0903	8	SDG No:	ME3P21	Lab Code:	CHEM
Sample Number:	ME3P25	Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-04	pH:	2	Sample Date:	10122011	Sample Time:	15:15:00
% Moisture:				% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	8.5	ug/L	1	J	J	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	27.3	ug/L	1	J	J	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	16000	ug/L	1			Yes	S2BVE
Chromium	10.0	ug/L	1	U	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	28.2	ug/L	1			Yes	S2BVE
Iron	100	ug/L	1	J	U	Yes	S2BVE
Lead	1.4	ug/L	1	J	J	Yes	S2BVE
Magnesium	3130	ug/L	1	J	J	Yes	S2BVE
Manganese	5.6	ug/L	1	J	J	Yes	S2BVE
Nickel	40.0	ug/L	1	U	U	Yes	S2BVE
Potassium	5000	ug/L	1	J	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	10800	ug/L	1			Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	U	U	Yes	S2BVE

Case No:	41861	Contract:	EPW09038	}	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Numl	er: ME3P26		Method:	Hg	Matrix:	Water	MA Number:	DEFAULT
Sample Locat	ion: SW-05		pH:	2	Sample Date:	10122011	Sample Time:	16:15:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Mercury	0.20	ug/L	1	U	U	Yes	S2BVE

Case No:	1861	Contract:	EPW09038	}	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Numb	er: ME3P26		Method:	CN	Matrix:	Water	MA Number:	DEFAULT
Sample Locat	on: SW-05		pH:	2	Sample Date:	10122011	Sample Time:	16:15:00
% Moisture :					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Cyanide	10.0	ug/L	1	U	UJ	Yes	S2BVE

Case No: 4186	51	Contract:	EPW09038	1	SDG No:	ME3P21	Lab Code:	СНЕМ
Sample Number:	ME3P26		Method:	ICP_AES	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	SW-05		pH:	2	Sample Date:	10122011	Sample Time:	16:15:00
% Moisture:					% Solids:			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Aluminum	200	ug/L	1	U	U	Yes	S2BVE
Antimony	60.0	ug/L	1	U	U	Yes	S2BVE
Arsenic	10.0	ug/L	1	U	U	Yes	S2BVE
Barium	26.7	ug/L	1	J	J	Yes	S2BVE
Beryllium	5.0	ug/L	1	U	U	Yes	S2BVE
Cadmium	5.0	ug/L	1	U	U	Yes	S2BVE
Calcium	16200	ug/L	1			Yes	S2BVE
Chromium	10.0	ug/L	1	U	U	Yes	S2BVE
Cobalt	50.0	ug/L	1	U	U	Yes	S2BVE
Copper	26.0	ug/L	1			Yes	S2BVE
Iron	100	ug/L	1	J	U	Yes	S2BVE
Lead	10.0	ug/L	1	U	U	Yes	S2BVE
Magnesium	3160	ug/L	1	J	J	Yes	S2BVE
Manganese	5.5	ug/L	1	J	J	Yes	S2BVE
Nickel	0.87	ug/L	1	J	J	Yes	S2BVE
Potassium	5000	ug/L	1	J	U	Yes	S2BVE
Selenium	35.0	ug/L	1	U	U	Yes	S2BVE
Silver	10.0	ug/L	1	U	U	Yes	S2BVE
Sodium	11700	ug/L	1			Yes	S2BVE
Thallium	25.0	ug/L	1	U	U	Yes	S2BVE
Vanadium	50.0	ug/L	1	J	U	Yes	S2BVE
Zinc	60.0	ug/L	1	U	U	Yes	S2BVE

## **Edit History Report**

Case No: 41861 Contract: EPW09038 SDG No: ME3P21 Lab Code: CHEM

Method: CN

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
ME3P21	Water	Cyanide	Validation Flag	U	UJ	Stephen Connet	11/22/11 5:17 PM	
ME3P21	Water	Cyanide	Validation Flag	R	U	Lauren Davis	11/21/11 2:18 PM	
ME3P22	Water	Cyanide	Validation Flag	U	UJ	Stephen Connet	11/22/11 5:17 PM	
ME3P22	Water	Cyanide	Validation Flag	R	U	Lauren Davis	11/21/11 2:20 PM	
ME3P23	Water	Cyanide	Validation Flag		J	Stephen Connet	11/22/11 5:18 PM	
ME3P23	Water	Cyanide	Validation Flag	J-		Lauren Davis	11/21/11 2:22 PM	
ME3P24	Water	Cyanide	Validation Flag	U	UJ	Stephen Connet	11/22/11 5:19 PM	
ME3P24	Water	Cyanide	Validation Flag	R	U	Lauren Davis	11/21/11 2:22 PM	
ME3P25	Water	Cyanide	Validation Flag	U	UJ	Stephen Connet	11/22/11 5:19 PM	
ME3P25	Water	Cyanide	Validation Flag	R	U	Lauren Davis	11/21/11 2:23 PM	
ME3P26	Water	Cyanide	Validation Flag	U	UJ	Stephen Connet	11/22/11 5:20 PM	
ME3P26	Water	Cyanide	Validation Flag	R	U	Lauren Davis	11/21/11 2:25 PM	

Method: ICP\_AES

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
ME3P21	Water	Magnesium	Validated Result	5000	3300	Lauren Davis	11/21/11 2:18 PM	
ME3P21	Water	Magnesium	Validation Flag	U	J	Lauren Davis	11/21/11 2:18 PM	
ME3P21	Water	Manganese	Validated Result	15.0	5.4	Lauren Davis	11/21/11 2:18 PM	
ME3P21	Water	Manganese	Validation Flag	U	J	Lauren Davis	11/21/11 2:18 PM	
ME3P21	Water	Nickel	Validated Result	40.0	4.7	Lauren Davis	11/21/11 2:18 PM	
ME3P21	Water	Nickel	Validation Flag	U	J	Lauren Davis	11/21/11 2:18 PM	
ME3P22	Water	Aluminum	Validated Result	200	49.3	Lauren Davis	11/21/11 2:19 PM	
ME3P22	Water	Aluminum	Validation Flag	U	J	Lauren Davis	11/21/11 2:19 PM	
ME3P22	Water	Cadmium	Validated Result	5.0	0.12	Lauren Davis	11/21/11 2:19 PM	
ME3P22	Water	Cadmium	Validation Flag	U	J	Lauren Davis	11/21/11 2:19 PM	
ME3P22	Water	Lead	Validated Result	10.0	4.7	Lauren Davis	11/21/11 2:19 PM	
ME3P22	Water	Lead	Validation Flag	U	J	Lauren Davis	11/21/11 2:19 PM	
ME3P22	Water	Nickel	Validated Result	40.0	1.0	Lauren Davis	11/21/11 2:19 PM	
ME3P22	Water	Nickel	Validation Flag	U	J	Lauren Davis	11/21/11 2:19 PM	
ME3P23	Water	Aluminum	Validated Result	200	16.7	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Aluminum	Validation Flag	U	J	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Chromium	Validated Result	10.0	1.1	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Chromium	Validation Flag	U	J	Lauren Davis	11/21/11 2:22 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
ME3P23	Water	Lead	Validated Result	10.0	1.5	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Lead	Validation Flag	U	J	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Magnesium	Validated Result	5000	1220	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Magnesium	Validation Flag	U	J	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Manganese	Validated Result	15.0	5.5	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Manganese	Validation Flag	U	J	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Nickel	Validated Result	40.0	1.8	Lauren Davis	11/21/11 2:22 PM	
ME3P23	Water	Nickel	Validation Flag	U	J	Lauren Davis	11/21/11 2:22 PM	
ME3P24	Water	Aluminum	Validated Result	200	22.6	Lauren Davis	11/21/11 2:23 PM	
ME3P24	Water	Aluminum	Validation Flag	U	J	Lauren Davis	11/21/11 2:23 PM	
ME3P24	Water	Magnesium	Validated Result	5000	2330	Lauren Davis	11/21/11 2:23 PM	
ME3P24	Water	Magnesium	Validation Flag	U	J	Lauren Davis	11/21/11 2:23 PM	
ME3P24	Water	Manganese	Validated Result	15.0	11.5	Lauren Davis	11/21/11 2:23 PM	
ME3P24	Water	Manganese	Validation Flag	U	J	Lauren Davis	11/21/11 2:23 PM	
ME3P24	Water	Nickel	Validated Result	40.0	1.3	Lauren Davis	11/21/11 2:23 PM	
ME3P24	Water	Nickel	Validation Flag	U	J	Lauren Davis	11/21/11 2:23 PM	
ME3P25	Water	Aluminum	Validated Result	200	8.5	Lauren Davis	11/21/11 2:24 PM	
ME3P25	Water	Aluminum	Validation Flag	U	J	Lauren Davis	11/21/11 2:24 PM	
ME3P25	Water	Lead	Validated Result	10.0	1.4	Lauren Davis	11/21/11 2:24 PM	
ME3P25	Water	Lead	Validation Flag	U	J	Lauren Davis	11/21/11 2:24 PM	
ME3P25	Water	Magnesium	Validated Result	5000	3130	Lauren Davis	11/21/11 2:24 PM	
ME3P25	Water	Magnesium	Validation Flag	U	J	Lauren Davis	11/21/11 2:24 PM	
ME3P25	Water	Manganese	Validated Result	15.0	5.6	Lauren Davis	11/21/11 2:24 PM	
ME3P25	Water	Manganese	Validation Flag	U	J	Lauren Davis	11/21/11 2:24 PM	
ME3P26	Water	Magnesium	Validated Result	5000	3160	Lauren Davis	11/21/11 2:25 PM	
ME3P26	Water	Magnesium	Validation Flag	U	J	Lauren Davis	11/21/11 2:25 PM	
ME3P26	Water	Manganese	Validated Result	15.0	5.5	Lauren Davis	11/21/11 2:25 PM	
ME3P26	Water	Manganese	Validation Flag	U	J	Lauren Davis	11/21/11 2:25 PM	
ME3P26	Water	Nickel	Validated Result	40.0	0.87	Lauren Davis	11/21/11 2:25 PM	
ME3P26	Water	Nickel	Validation Flag	U	J	Lauren Davis	11/21/11 2:25 PM	

To the		P	2
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Date Shipped:

Carrier Name:

Shipped to:

Airbill:

#### **USEPA Contract Laboratory Program** Inorganic Traffic Report & Chain of Custody Record

Relinguished By

3.

4.

1Z-549-OW4-22-1008-2583

ChemTech Consulting Group (CHEM) 284 Sheffield Street

Mountainside NJ 07092

(908) 789-8900

Chain of Custody Record

and the	Case No:	41861	
	DAS No:		
	SDG No:	ME3P2	į <u>L</u>

lo/uj(	DAS No: SDG No:	ME3P21	
alba KK	For Lab Use Only		discouling and the
(Date / Time) 15:10	Lab Contract No:	EPW09038	
10/14/11 12:20	Unit Price:		
	Transfer To:		

Lab Contract No:

							Unit Price	);	
INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION		ECOLLECT E/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME3P21	Surface Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1165 (HNO3), 5-1166 (NaOH) (2)	SW-01	10/12/11	1330	E3P21	
ME3P22	Surface Water/ John Spielberg	ĽG	CN (21), TM/Hg (21)	5-1171 (HNO3), 5-1172 (NaOH) (2)	SW-02	5	1800	E3P22	
ME3P23	Surface Water/ John Spielberg	L/G	CN (21), TM/Hg (21)	5-1177 (HNO3), 5-1178 (NaOH) (2)	SW-03		1415	E3P23	
ME3P24	Surface Water/ John Spielberg	`L/G	CN (21), TM/Hg (21)	5-1183 (HNO3), 5-1184 (NaOH) (2)	SW-03D	( -	1415	E3P24	
ME3P25	Surface Water/ John Spielberg	Ľ⁄G	CN (21), TM/Hg (21)	(HNO3), 5-1197 (NaOH),	SVV-04	$\rangle$	1515	E3P25	•
ME3P26	Surface Water/, John Spielberg	L/G	CN (21), TM/Hg (21)	5-1198 (NaOH) (4) 5-1203 (HNO3), 5-1204 (NaOH) (2)	SW-05		1615	E3P26	

Sampler Signature:

Received By

(Date / Time)

Shipment for Case Complete 71	Sample(s) to be used for laboratory QC: ME3P25	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 89251, 89252		
Analysis Key:	Concentration: (F= Low, M = Low/Medium, H = High  M/Hg = CLP Total Metals/Hg - water	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? YES Shipment Iced? YES		
CN - Cyanide - Water, 1	wing - CLP Total Metals/rig - water					

LABORATORY

Appendix G

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.

lax No:	Permit No:	W0031127	County: Hough	nton		wnship: Sci	noolcraft		
			Town/Range: 56N 32W	Section:	Well Status: Active	WSSN:	Source	e ID/Well No:	
l Well ID: 31	00000063	9	Distance and Direction from Road Intersection:						
Elevation:			}		TION OF FLORID		UM AND	OLD COLONY	
Latitude: 47.24284528			Well Owner:		· <del></del>			<del></del>	
Longitude: -88,420327	736		Well Address:		Ow	ner Address	: ::		
_					1				
Method of Collection:	interpolation-wap		L						
Drilling Method: Rotary			Pump Inst	alled: No	······································				
Well Depth: 302.00 ft.	Well Use: House	hold		ank Install					
Well Type: New	Date Completed:	12/26/2000	Pressure F	Relief Valve	Installed: No	÷		••	
Casing Type: Steel - black	Height: 1.50	ft. above grade	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ivan katan da	ing. Ling North States (1994)		sa li er sil	esti de se esti	
Casing Joint: Welded								보험된 하네요.	
Casing Fitting: Drive shoe									
Diameter: 6.00 in. to 26.00	ff denth								
Diamotor: 0.00 III. 10 20.00	ia dopar								
Borehole: 10.00 in. to 26.00					불병인 불통병 점합				
6.00 in. to 302.00	) ft. depth	•			기 가입다는 생활을 받았다. 인터를 보고 있는 것이 있다.				
Static Water Level: 19.00 f	t Below Grade						1.47	Depth to	
Well Yield Test:	Yield Test Me	thod: Air		Formatio	n Description		hickness	Bottom	
Pumping level 302.00 ft. afte	r 1,00 hrs. at 2 GPM		Sand & Sto	nes		5.0	0	5.00	
			Basalt			297	7.00	302.00	
Screen Installed: No	Intake: Bed	drock Well			<del></del>				
					<del></del> _				
								ļ	
선생활 전대 결혼한 연습.	보면하면 말을 먹으는 것		·						
				<del></del>				<del> </del>	
								<del> </del>	
Well Grouted: Yes G	Grouting Method: Unkno	own							
Grouting Material Bags		Depth							
Neat cement 10.00	None (	0.00 ft. to 26.00 ft.	Geology R	emarks:					
					•				
Wellhead Completion: 12	inchas chava arada	<del></del>				•		-	
wenneau Completion: 12	inches above grade								
Nearest Source of Possible	Contamination:		Drilling Ma	chine Oper	rator Name: PA	UL LAHTI			
Гуре	Distance	Direction	Employme	nt: Emplo	yee			1	
Septic tank	50 ft.	North							
					ter Well Drilling Co		Reg No: 1	16/7	
			Business A		RTOLA WELL DRII	LLING		1	
			D4311633 A		Well Contract	or's Certif	ication		
	蒋孝太 直孔压机		This well wa		der my supervision			to the best of	
			my knowled				•		
			11.5						
			Signature of	of Register	ed Contractor		Date		
General Remarks: BASED (	ON INFO PROVIDED BY	CUSTOMER							
ther Remarks:									

GEOLOGICAL SURVEY SAMPLE No.			
h	WATER V	VELL REC	CORD MICHIGAN DEPARTMENT
LOCATION OF WELL		4 PA 190	
County Township Name	to de la constitución de la cons	Fraction	Section Number Town Number Rungo Number
HOUGHTON SCHOOL GRAFT Distance And Direction from Read intersections	· · · · · · · · · · · · · · · · · · ·	SE M S	SEN SWA 18 56 N/8. 32 /E/W.
1 MILE & EAST OF LAURIUM AND	4001	VORTH	3 OWNER OF WELL
OF THE OLD COLONY ROAD.			Address
Street address & City of Woll Location  Locate with "X" in section below Sketci	h Mao:		4 WELL DEPTH: (completed) Date of Completion
Skotc)	it Moth		50 (, 9/28/79
LAURYM	400 X		5   Cable tool   Rotory   Driven   Dug
I MILES	Marketin Barrell and Bridge Street, St. St. Co.	home	Hollow rad   Jetted   Borad
			O USE: X Domestic Public Supply Industry    Intigation   Air Conditioning   Communicial
			Tost Wall
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			7 CASING: Threeded Wolded X Height: Above/1876W Surface 2 ft.
2 FORMATION	THICKNESS OF	DEPTH TO	6 in to 25 ft. Depth Wutaht 19. 96./11.
TOWN THOU	STRATUM	STRATUM	In to It. Dopth   Drive Shoe? Yes K No
SANDY CLAY	6	6	B SCREEN: NONE
1 Carrage Daniel		<i>12</i>	Stor/Gauro Longth
SANDY CLAY AND BOULDER	6	(12)	Sat botweenft, andfl,
PORTAGE LAKE LAVA SERIES	38	50	Filtings;
			9 STAYIC WATER LEVEL
74 fg. 22 3 10 10 10 10 10 10 10 10 10 10 10 10 10			5. It, below land surface
·			44. 11, after 12ms, pumping 77/2 g.p.m.
			ft, after hrs, pumping u.p.m.
		,··; · · · · · · · · · · · · · · · · · ·	Iran (Fa) Chloridos (CI)
			Hantagan
			Hardness Other  12 WELL HEAD COMPLETION: In Approved Pit
			X Pitiess Adapter   12" Above Grade
			13 Well Grouted? X Yas No X Nuat Coment Bentonite
		<u> </u>	Depth: From 25 ft. to SURFACE
			14 Nearest Source of possible contamination  75 feet NW Direction SEPTIC Type
	ļ		Well disinfacted upon completion [X] Yas [] No
			16 PUMP; Not installed
			Manufacturer's Namo RED JACKET  Model Number 501/098C HP 1/2 Volts 115
			Length of Drop Pipa 40 ft, capacity 8 G.P.M.
			Typa: 🖔 Submarsible
			Jot Rociprocating
nac Y 5H6 aH264 IL HEEDED			
16 Remarks, clavation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION: I was drilled under my jurisdiction and this report is true
		to the bo	est of my knowledge and belief.
		*, /\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	TY PLNG & HTG., INC 1722-31 STERED BUSINESS HAME REGISTRATION NO.
-		Addross	POB 458, DOLLAR BAY, MI 40922
		Slaged	Marye Karman Cone 10/2/79
D57d 100M (Rov. 12-68) (10°F C) 10		niffica 5	AUTHORIZED REPRESENTATIVE

TAX NO: MICHIGAN DE				4	PERMIT NO:	
1. LOCATION OF WELL WATER W	ELL AI	וט א מע	MP REC	ORD		
County Township Name	,	Fraction		Section No.	Town No.	Range No.
Distance and Direction from Road Intersection		SE 1/45	1/4 5 C1/4 3. OWNER C	S MICH	56	32
	) ग्रहाप्टिक	STION	a. Ovvneric Address	N. AAEI'F		
OF CHAMIL RUND AND WEST	ROA D	•		,		•
Street Address & City of Well Location			Address S	iame as Well Loca	ntion 🙀 Yes 🔲	No
	Sketch Map		4. WELLDE		Completed Ne	
w 400	red .com		5. Cable Hollow	Tool DR		gud nev
WEST Redo DEC	*	•		Household Ty irrigation Ty Test Well Ty	rpe Ila Public 🔲 Hes	e III Public at Pump
1 MIE	Tuo.	05071110	7. CASING:	Steel Tr	1 -	: Above/ <u>Below</u> e:ft
2. FORMATION DESCRIPTION	THICKNESS STRATUM	BOTTOM OF STRATUM	Diameter:	Other	1. dapth Weigh	u: 191 lbs/li
SOND AND GRAVER	4	4	BOREHO	In, 10 LE:	it. depth	re Shoe
SANDY CLAY AND GRAVER	31	35	Diameter	in, to 7	ft. depth She	ile Packer
SAND AND GRAVER	17	57		☐ Not installed	Gravel-Pack	
FIRE SAND (CLEAN)	1/10	68	Type_S.	TAINGES	DiameterLength:	6"NOM
SAND AND GRAVET	3	71	Set Belwe	en6_1_	II, and Bremer Che	71 1
					Brenter Che	ck
			9. STATICY	VATER LEVEL:		wing
					and Surface hrs. Pumping at	20 G.P.M.
			11. WELL HE	ADCOMPLETION		Grade
			12. WELL GR	Dement 🗆 B	o Yes From : entonite Oth Additives	tof90
			13. NEARES	SOURCE OF PO	SSIBLE CONTAMINA tlance 75 ft. Di tlanceft. Di	
USE A 2ND SHEET IF NEEDED	J	1 -	14. PUMP:	☐ Not Installed		
Cement/Bentonite Slurry Concrete Grout No. of Bags Casing Removed?	Bentonito Bentonito Yes	- Chips	Manufactu Model Nur Length of TYPE: PRESSUR	rer's Name 57 nber 2 44 50 Orop Pipe 6 Submersible RE TANK:	AVELTE  YOUTHP    One    Jet    Other	Z Voite //5 /5 G.P. N
16. REMARKS: (Elevation, Source of Data, etc.)			•		MTTOL	Gallons / S
AUG 3.1 1995			RACTOR'S CER		Capacity	
17. DRILLING MACHINE OPERATOR:		dge and belie	ł.			
Employee Subcontractor	REGISTE	RTE 1	LOSKEL Av 2.1	2 CAU	31-1- 1467	GISTRATION NO.
SEP 4 1996	Signed		DEO REPRESENTAT	-	Date_7	-14-96

## WATER WELL AND PUMP RECORD

	i		1		П			- 1	
į l	. !		1	- [	11	- 1	ļ	- 1	ł
			1	1.	Ш	- 1		- 1	- 1
		PE	RM	IT N	UN	ABE	R		

1 LOCATION OF WELL									-
County	wnship Namo	-, <del> </del>	Fraction		Section Number	Town Nu		Range Nu	
	Schoolcraft		SE14	NEW WAY		56	N/S	] 32	E/W
Distance And Direction From Road Inter		0.00		3 OWNER OF	WELL:				
.75 Mile West of									
and S641, then .2	5 mile Sout	n.		Address					-
Street Address & City of Well Location	_			Address Sa	me As Well Location	[X] san	۲۵۹ [	] No	
Locate with 'X' in Section Below	S	ketch Map:		4 WELL DEPTI		d : X	Al (A)	, HO	
		A STATE OF THE STA		402 FT	08 28	91	Banlaca	ment Well	
L_i_X				5 Cable to			Daven		Dug
		-		Hallow re			Jetted		
<b>╽</b> ╨┝╶╌╣┈┈┼╌╌╢╌╴┥ <sup>┋</sup> ┰╸ <mark>`</mark>	\	3		6 USE: X Doir	nestic Type I	Public		Type III Put	dic
	\ \	V)		gant []		la Public		Heat pump	
	CB	1	•	Test		lb Public			
	xi -			7 CASING: [X	Steal 🛄 Thrase		ht: Aboy	<i>পূৰ্বা</i> উঠিক জ	
MILE		<del></del>			Plastic NWelde 672 ft. depth	, Onli	ace2		
2 FORMATION DESCRI	PTION	THICKNESS OF	DEPTH TO BOTTOM OF	ł .	5 <u>0 7 2</u> 11, depth	Wei	ght ] 8	97 <sub>lbs./ft.</sub>	
		STRATUM	STRATUM	Growled Dril	Hole Diameter	i Dav	a Chna	Yes	
sand & gravel - c	Ιαναν	12	12		o ft depth			□ No	
Sand a graver - c	Idyey	1- !	3 4	8 SCHEEN	t, depth		~		<del>-,</del>
gravel & cobbles	- clavev	5	17	1			X Not in		
			<del></del>	ſ					
clay		50.5	67.5	1		-			
					K-Packer				ck .
bedrock	· · · · · · · · · · · · · · · · · · ·	334.5	402		oove scieen	ft.	Olher		
				9 STATIC WATE					
		<u> </u>	V	2	li. below land	surface		[] Flo	w
					EVEL below land st				
			<del></del>	1	ft. efter hrs.				
					fi. after hrs.	bnwbiuð a	·	_ G.P.M.	
	***************************************	<del>                                     </del>	<del></del>	11 WELL HEAD		iapter	12- 4	shove grade	
				COMPLETIO	N: Besemen	-	ДАррг		
			. , , , , , , , , , , , , , , , , , , ,	12 WELL GROU	TED? X No	Yes F	om	10	ti.
				Neal ce	mant     Banta	,,,,,,	Other		
					•		Ome		
	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		of cement rev of possible conta	Additives _ ammation	<del></del>		
				Type S.E.D	tic Dista	nce 150	ff. Dire	ction We	st
	<del></del>	1		Well disinfacte	ed upon completion?	Yes		lo	
				Was old well s		Yes Yes		lo	
					Not installed		omp (ns	tallation Onl	y
		<u> </u>		Manufacture	rs name Grun	dfos		<del></del>	
				Model numb	er <u>10510                                  </u>	HP	<u>1v</u>	olts 2.30	
but and It was und air		.	·	Length of Dr	op Pipe <u>357</u>	ft. capa	city <u>11</u>		. G.P.M.
the many to use of	Miz			-	Submersible	D Jei			
				PRESSURE T Manufacture	ANK: rs name <u>Amtr</u>	01			
SECT ON A SHEET IF NOR	nėo			Model numb	ar #202	Capa		0	.Gallons
15, Remarks, elevation, source of da	·	- <del> </del> -	16. WATER		ACTOR'S CERTIF		<u>.</u>	<u></u>	
vers den Crister i di dance Si veda dence besedul	, •		This wel		er my jurisdiction an		rt is Iruo		
१८ संदर्भः । मङ्गरम्बरः । । स्वरणात्मः		1			-				-
				TOTA WE	Drilli LESS NAME		NC.	167	<i>!</i>
17. Rig Operator's Name:			Address		Box 386	<u>С. На</u>	ncoc	k MI	<u> 4993</u>
Paul Ziemnicl	<u>(</u>			m : J	2,		21	0CT91	
D67d 2/89			Signet	AUTHORI	ZED REPRESENTATIVE		ate 🚣 💄	~ ~ 1 ~ 1	

11m Ud 1882

Authority: Completion: Populty:

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

T OF PUBLIC HEALTH

		2	3	7	7
DE E	البيليما	IRAP		1	-

GEOLOGICAL SURVEY NO.	MARTE	PEMII.	A R. I.P. SAL	IN PHOP I	ADA		23/2
	WATER	WELL !	AND PU	imp rec	טאט	PERMIT N	UMBER
1 LOCATION OF WELL	Township Name	****	Fraction		Section Number	Town Number	Range Number
HOUGHTON	SCHOOL CRAF	Τ	14	1/4 1/4	/6	56 N/8	32 KW
Distance And Direction From Road In	tersection	K VAL	LEY	3 OWNER OF	Well		
ROAD ON WEST	VALLEY RUA	DAN	io .	A 1.7.			
HOU FIET NORTH				Addr			
Street Address & City of Well Location				Address Sa	me As Well Location	n) 🖾 Yes 🖸	] No
Locate with "X" in Section Below		eich Map:	<del></del>	4 WELL DEPYH	Date Complete	VEAR IN NOW WE	alt
	•	13		63 FT.	12 19	94   Replaces	ment Well
<mark>╽┢┈┽┈┤┈</mark> ┈┤			و کر	5 🔀 Cable too		<u> </u>	Dug Dug
w		1	ζ <u>Σ</u>	Hollow ro		Jetted	<u> </u>
	Х	Ì	3	8 USE: Dom			Type III Public Hest pump
	^	- 1	x yaur	Imga Test	_		Last bruth
X	n		200	7 CASING Diameter			/e/B870tv
MILE	\	( 			Plastic X Welder	- Darione	
2 FORMATION DESC	RIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM		tt depth	Weight /8:	Z 165./ft.
				Grouted Drill	Hale Dismeter	Drive Shoe	🗷 Yes
CLAY SANI	7	4'	lt.	3n, 10	ft. depth	, <u></u>	□ No
SANDY CLAY		3'	7'	B SCREEN:	(	Not in	stalled
	<u> </u>		<u>,</u>	Туро	10 10	Diameter	······································
CLAY SAND	*	フ	14'	Slot/Gauze _ Set between	1/20	angth <u>4</u> and <u>163</u>	f,
	_	49'	63	FITTINGS.	K-Packer	Lead Packer	Bremer Check
SAND & GRAV	EL	7 /	رق	Blank ab	ove screenf	1 Other	
·				26			Flow
					it. below land VEL: below land su	sunace . riace	
	•			)	it. after 23 hrs. r	_	_ G.Р.М.
					t. alter hrs. s		
			·	11 WELL HEAD	Pitless ad		
	·			COMPLETION	Basement		oved pit
				12 WELL GROU	TED? No [	Yes From	to ft.
·		·		☐ Noat cen	nent 🔲 Bentar	nte 🗍 Other_	-
	· · · · · · · · · · · · · · · · · · ·		<del></del>		co of possible conta		<del></del>
				Type SE	PT/C Distant	06 90 ft Dire	ction <u>NE</u>
<del></del>					d upon completion?	₩ Y05 □ N	,
				Was old well p	<del></del>	☐ Yes ☐ N	····
•				ι.	Not installed	- Pump Inst	lafation Only
		<u>`</u>		Manufacturer Model numbs	LOP4C.42T	02p /2 V	olts 230
·				<u>.</u>		II. Capacity	
				TYPE: 2	Submersible	☐ Jet	
				PRESSURE TA	ANK: 57A	- RITE	·
USE A 2ND SHEET IF	NEEDED			Model numbe	8776	Capacity	36 Gallons
16. Remarks, elevation, source of	<del></del>			WELL CONTRA	ACTOR'S CERTIFIC	CATION:	**************************************
		ļ	to the bi	asi of my knowled	r my jurisdiction and Ige and ballet.		
		į	KERI	INEN WI	ELL & PUNI	P 31-1	722
17. Rig Operator's Name:			Addensa	REGISTERED BUSIN	ESS HAME X 238 CH	WINET M	722 IN NO. ICH, 49913
<b>→</b>		ſ	Raginar				

G.EORGE KERANEN

JANNES ILLANDRAM
ANTHORIZED REPRESENTATIVE Authority: Completion: Penalty:

Act. 388 PA 1978
Required
Conviction of a violation
of any provision is a
misdemeanor.

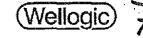
Date 2 - 21 - 94

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

Fig.	TAW WAT	ER WELL	AND	PUMP I	RECORD		PERMIT NUM	BER: 14 6	200
LOCATION OF HELL 31563	216001					7.6	x Parcel No.		the state of the s
Sounty HOUGHYON	Township Name SCHOOLCRAF			ction SW 1/4 N	E 1/4 SE		Section No. 16	Town No. 56 N	Range No. 32 W
Vistance And Direction From Road -25 MILE E OF INTERSECT OF RD & SEIVI RD, LAKE LINDEN Street Address & City of Well Lo	TRAPROCK VALLEY		· · · · · · · · · · · · · · · · · · ·	Addre		is Well	Location? (	x] Yes []	Но
cocate with 'x' in Section Below	; s	(etch Map:			DEPTH: 2.0 ft.		Completed 8/31/94	[x] New W	Mell Icement Well
	20/x	SEIVI	KD	5 ( ) (	Cable tool	[x] R		[ ] Driven	
E - X % mi.	Jalit 1 s			6 USE	[x]Domesti [ ]]rrigat	c []	Type I Publi Type II Publ Type IIb Pub	c []Type	III Public Pump
	ELEVATIO		ms I		•		() Threade		: Above te 1.5 ft.
2 FORMATION DESCRIP	TJON	THICKNESS OF STRATUM	DEPTH T BOTTOM STRATUM	OF 0. Grout	.00 in. to .00 in. to ted Drill	0.0 Hole Di	ft. depth ameter		18 1687ft. Shoe [x] Yes
SAND-CLAYEY	_	88.0	88.0		.00 in. to .00 in. to				( ) 40.
SAND		4.0	92.0		EN Stainless	Steel	Diamet		nstalled
				SLOT Set 3	0.012 Detween INGS; [x]K	89.00 -Packer	Length ft. and 92 []Lead Pa n 2.0 ft.	.00 ft.	emmer Check
				. }	IC WATER L	EVEL:	elow land su		[] Flow
				10 PUMF	92 ft.af	ter i.	land surfact O hrs.pumping O hrs.pumping	gat 55 G	P.R. P.M.
			,	11 WELL	LETION:	(x)Piti []Base	ess adapter ment offset	[ ]12'' ab	ove grade d pit
				<b>-</b>   ()	GROUTED? lest cemen of begs o	(x) r	No [x]Yes   Bentonite tAdditi	[ ]Other	
				Type ₩ell	Septic	Dista ted upo	ssible containce 115 ft, n completion?	Direction	[ ]No
				Manu Mode Leng	ifacturer of number of Dro	ÉPJ51 p Pipe	led []Pump NYERS UHP 1/2 Vol: 84 ft. capac	ts	on Only
				Manı	SSURE TANK ufacturers	: :name A	le []Jet mtro] pacity 30 !	Ġallons	
15 Remarks, elevation, source of d	ata,etc.		This	Hell Hes	ractor's drilled un best of m	der my	CATION: jurisdiction edge and bel	end this r	eport
					TOLA WELL			1677 EGISTRATION	NO.
Data Source: MDNR			, ddina				K, MI 49930	agrandi i on	
/ Rig Operator's Namer Paul Ziemnick Of	Cresh Dr		Addre \$igne	10	THORIZED F	<i>a</i>		Date 08/3	31/94
AUTHORITY: Act 368 PA 1978	COMPLETION: Requi	red PENAL	TY: Conv	iction of			ny provision	is a misde	meanor.



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



Import ID:

Failure to comply is a misdemeanor.

Permit No: -County: Houghton Tax No: Township: Schoolcraft Town/Range: Well Status: Source ID/Well No: WSSN: 56N 32W Well ID: 31000001193 Distance and Direction from Road Intersection: 1.9 MILES EAST OF INTERSECT OF US 41 AND OLD COLONY ROAD Elevation: Latitude: 47.242448 Well Owner: Well Address: Owner Address: Longitude: -88,405674 **Method of Collection:** Interpolation-Map

Drilling Method: Rotary		• •	nstallation Only	: No				
Well Depth: 242.00 ft. Well Use: Househol	Pump Installation Date: HP: 0.75  Manufacturer: F.E. Myers Pump Type: Submersible  Model Number: S2J72-12 Pump Capacity: 12 GPM							
Well Type: New Date Completed: 5/ Casing Type: Steel - unknown Height: 1.50 ft.								
Casing Joint: Welded								
Casing Fitting: Drive shoe	Drop Pipe Length: 204.00 ft. Pump Voltage: Drop Pipe Diameter: Drilling Record ID:							
,g,		Draw Down Seal Used: No						
Diameter: 6.00 in. to 25.50 ft. depth		Pressure Tank Installed: Yes						
•		Pressure Tank Type: Unknown						
		Manufacturer: Amtrol		*				
Borehole: 8.00 in. to 25.50 ft. depth	Model Number: 202 Tank Capacity: 30,0 Gallons							
		Pressure Relief Valve Installed: No						
Static Water Level: 8.00 ft. Below Grade		Frank Description		Depth to				
Well Yield Test: Yield Test Metho	d: Unknown	Formation Description	Thickness	Bottom				
Pumping level 242.00 ft. after 1.00 hrs. at 4 GPM		Clay Sandy	6.00	6.00				
	•	Sandstone	236.00	242.00				
Date of the Date o	t- >A ( - 1)							
Screen Installed: No Intake: Bedroc	K vveil							
[요즘 물 등 등 도움이 되었다. 그림을 보고 있다. 그 그 그리고 있다. 그 그림을 보고 있다. 그렇게 한 것을 받는데 보다는 것을 보고 있는데 그리고 있다. 그리고 있다.			<del>                                     </del>					
[일본 기계 등 하는 기계 등 기계			<del>                                     </del>					
	ines de Ali Provincio de la 1888. Ali Romanio de La 1888 de la 188							
그래 일반이었다. 경향, 학교는 내 등 관련 역할 때 그 말 그								
그렇게 본지를 살았다. 아무리를 많는 어떻게 하셨다.	발생되었다.							
그는 그 시간 주요 이 가 무슨데 그들을 가 다.	병생대임 원화							
Well Grouted: Yes Grouting Method: Unknown			<del> </del>					
Grouting Material Bags Additives Dep	th		<del>                                     </del>					
	ft. to 25.50 ft.	Geology Remarks:						
·								
Wellhead Completion: Pitless adapter				•				
	···.							
Nearest Source of Possible Contamination:		Drilling Machine Operator Name: PAUL ZIE	MANIIZ	<del></del>				
	Direction	Employment: Unknown	SVIINIE	٠ -				
.,,,,	East	Employment onknown						
		Contractor Type: Water Well Drilling Contractor	r Reg No: 1	377				
		Business Name: SIIRTOLA WELL DRILLING						
그의 이번없는 그렇다는데 밤 흥빛이 그 불만 그린		Business Address:		7.				
		Water Well Contractor's C		,-				
나는 내용의 관화하기 한 호텔에 받았다. 전	This well was drilled under my supervision and the	iis report is true t	o the best of					
		my knowledge and belief.						
그 가는 사람들은 아이들은 이 회약을 받								
		Signature of Registered Contractor	Date					
General Remarks:			_ · <del></del>					
Other Remarks:		<u> </u>						



Tax No:



Township: Schoolcraft

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

County: Houghton

Permit No: W0431035

	10wn/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 32W 19 Active							
Well ID: 31000001471	Distance and Direction from Road Intersection:							
	0.5 mile west of Pepin Road on Gas Plant Road on north side 500 feet							
Elevation:								
Latitude: 47.22976	Well Owner:							
Longitude: -88.42255	Well Address: Owner Address:							
Method of Collection: GPS Std Positioning Svc SA Off								
Drilling Method: Cable Tool	Pump Installed: Yes Pump Installation Only: No							
Well Depth: 210.00 ft. Well Use: Household Well Type: Replacement Date Completed: 10/18/2004	Pump Installation Date: 10/18/2004 HP: 0.75  Manufacturer: Sta-Rite Pump Type: Submersible							
Casing Type: Steel - black Height: 2.00 ft. above grade	Model Number: 10P4D02J04 Pump Capacity: 10 GPM							
Casing Joint: Welded	Drop Pipe Length: 200.00 ft. Pump Voltage:							
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in. Drilling Record ID:							
	Draw Down Seal Used: No							
Dlameter: 6.00 in. to 25.00 ft. depth	Pressure Tank Installed: Yes							
	Pressure Tank Type: Diaphragm/bladder Manufacturer: Other							
Borehole: 9.00 in. to 25.00 ft, depth	Model Number: BN4202 Tank Capacity: 20,0 Gallions							
6.00 in. to 210.00 ft. depth	Pressure Relief Valve Installed: No							
,								
Static Water Level: 10.00 ft. Below Grade	Formation Description Thickness Depth to Bottom							
Well Yield Test: Yield Test Method: Test pum Pumping level 200.00 ft. after 1.00 hrs. at 3 GPM	Clay & Gravel W/Boulders 7.50 7.50							
t dipping for 200.00 to and 1.00 the at 0 01 m	Basalt Broken 5.50 13.00							
<u> </u>	Basalt 197.00 210.00							
Screen Installed: No Intake: Bedrock Well								
그림을 살고 중 결계를 잃고 있을까요? 그 같은 가득했다고 있는	######################################							
그렇지 않는 것 같아 무섭 목표면서 내려 하는 살고 있다. 그는 문제 바로 중심한 것을 했다.	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\							
그는 이 사람이 살림에 얼마를 보고 있다. 그 나는 말을 받는 것이								
- 이번 보고 있는 것 같아 하는 사람들에 가장 하는 때문에 되었습니다. 그런 그런 사람들로 보고 있다. 								
그가 어려웠다. 생각 화장화를 받아 내는 중요 그림을 받는 것이 없다.								
Well Grouted: Yes Grouting Method: Displacement plug								
Grouting Material Bags Additives Depth								
Neat cement 6.00 None 4.00 ft. to 25.00 ft	Geology Remarks:							
	·							
Wellhead Completion: Pitless adapter, 12 inches above grade								
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Ted Keranen							
Type Distance Direction	Employment: Employee							
Drainfield/Dry well 70 ft. Southeast	Control to Tune W. C. W. I. D. W. C. C. C. D. M. O. C.							
Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor Reg No: 2413 Business Name: Keranen & Eskola Well Drilling							
Reason Not Plugged: Well still in use for non-drinking water purpos	· · · · · · · · · · · · · · · · · · ·							
	Water Well Contractor's Certification							
그리고 있는데 그 그른 동호바다 경에 그는 양일 목모임	This well was drilled under my supervision and this report is true to the best of							
	my knowledge and belief.							
Conset Demonstra	Signature of Registered Contractor Date							
General Remarks: Other Remarks: Tank Manufacturer:Baron								





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

Failure to comply is a misdemeanor. Import ID: Permit No: W1031038 Tax No: 31-012-170-010-50/60 County: Houghton Township: Schoolcraft Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 32W 20 Active Well ID: 31000002201 Distance and Direction from Road Intersection: 0.1 mile north of Cemetery Road on Angman Road on west side Elevation: Well Owner: Latitude: 47.2312 Well Address: Owner Address: Longitude: -88,3847 Method of Collection: GPS Std Positioning Svc SA Off Drilling Method: Cable Tool Yes Pump Installation Only: No Pump Installed: Well Depth: 44.00 ft. Well Use: Household Pump Installation Date: 5/5/2010 HP: 0.50 Date Completed: 5/4/2010 Well Type: New Manufacturer: Red Jacket Pump Type: Submersible Casing Type: Steel - black Height: 2.00 ft. above grade Pump Capacity: 10 GPM Model Number: 50C21112G9 Casing Joint: Welded Pump Voltage: Drop Pipe Length: 36.00 ft. Casing Fitting: Drive shoe Drop Pipe Diameter: 1.00 in. **Drilling Record ID:** Draw Down Seal Used: No Diameter: 6.00 in. to 40.00 ft, depth Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Borehole: 6.00 in. to 44.00 ft. depth Model Number: V60 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: Static Water Level: 1.00 ft. Below Grade Depth to Formation Description Thickness Bottom Well Yield Test: Yield Test Method: Test pump 1.00 Pumping level 40.00 ft. after 5.00 hrs. at 3 GPM 1.00 **Topsoil Sandy** 2.00 Sand 1.00 Sand Silty W/Stones 3.00 5.00 Filter Packed: No Screen Installed: Yes Sand & Gravel Silty 14.00 19.00 Clay Sand Gravel Soft 42.00 Screen Diameter: 5.00 in. Blank: 1.00 ft. Above 23.00 Screen Material Type: Stainless steel-wire wrapped Red Sand Silty 44.00 Slot Length Set Between 10.00 4.00 ft. 40.00 ft. and 44.00 ft. Fittings: Neoprene packer, Bottom plug Grouting Method: Driven/dry grout Well Grouted: Yes Additives **Grouting Material** Depth Bags Bentonite dry granular 3.00 None 0.00 ft. to 36.00 ft. Geology Remarks: Wellhead Completion: Pitless adapter, 12 inches above grade Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** Type Distance Direction Employment: Employee Septic tank Southeast 75 ft. Contractor Type: Water Well Drilling Contractor Drainfield/Dry well 85 ft. Southeast Reg No: 2413 Business Name: Keranen & Eskola Well Drilling Business Address: 30330 Lincoln School Road, Calumet, Ml, 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 General Remarks: Other Remarks:

GEOLOGICAL SPINCT SAMILE NO.		10					
	WATER \	WELL REG	CORD	М	ICHIGAN DEPAI	RTMENT	سسسيدسيد سري
1 LOCATION OF WELL	7,C 1 20	a kina atau araba Nation			OF PUBLIC HEAL		
County Township Name		Fraotion		Section Number	, ,		
HOUGHTON SCHOOLCRA Distance And Diseases from Road Intersections	FT	<u> </u>	3 OWNER OF WE	_ 20 <u> </u>	56 N/8/ ]	- 32 J	ZW.
1/4 MILE WEST OF THE WEST	VALLEY RO	3 A D		, a			
AND 150' NORTH OF THE OLD (			Address	•			: \
Street address & City of Wall Location Locate with "X" it section below Sk	etch Mop;	,	A WELL BERTH	(completed) Dr	Trans.		
SECTION 20 OLD COLUMN	etan Wub:	•	4 WELL DEPTH:	•			ļ
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	· Comment		Hollow ro		1 Dorad	<u> </u>	
	150		6 USE: Domo	ostic 🔲 Public	Supply []		
		فمع	∏irrign ∏Test \		anditioning []	Commercia	ត
	VII	liey	7 CASING: The	popular K popular	Height: Abov	vo/Balow.	
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2 FORMATION	THICKNESS OF	DEPTH TO		61, in the Depth			.
	STRATUM	STRATUM	8 SCREEN:	ft, Depth	Thus gross	Aos Mo	1-4
TOP SOIL	1	1	1	110171	Dia.;		
SOFT RED CLAY	3	Jı	!			,	
JOHN NED GEAY		<u>'</u>	í	ft, and	ft,		
HARD CLAY AND ROCKS	38	(12)	Fittings;				1
(RED & VHITE LAYERS)			9 STATIC WATER	R LEVEL			
SOFT JACOBSVILLE SANDSTONE JACOBSVILLE SANDSTONE		_58	10 PUMPING LE	t. bolow land surf VEL bolow land si	ago urface		
OKCOBSVILLE SAMPSTONE	132	100		t, altor <u>2</u> hrs. pr		g.p.m.	
						•	
PORTAGE LIKE LAVA SERIES	23	213	11 WAYER OLIAL	t. aftor hrs. pr LITY in Parts Por A	ampino	g.p.in.	
JACOBSVILLE SANDSTONE	38	245		Chlotl			. 1
ONO VEN CLOCKE OMETO LONG		<del></del>	1			,	
				Other			
			1	COMPLETION: [	-•		
				13 Yes X No	U 1x Nonne Gra	18	
				rinatae8 🔲 trem	· []		
·			Depth: From	on of possible con	)ft.		
			-4			\ <sup>1</sup>	Тура
			Well disinfon	Directio Direction to the complete	on Yes No	)	
			16 римр;	<i>f</i> \	ot installed		
				r's Name			
•				op Pipsft,			
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	1,		01.	ы <u>П</u>	Reciprocating		
USC A 2HB SHEEF IF NEEDED							
16 Remarks, elevation, source of data, etc.				TOR'S CERTIFIC		e true	
ENCOUNTERED A LAYER OF BAS THE CAMPSTONE BETWEEN DEPT		to the be	ist of my knowled	igo and bolief.	•		1
190 AND 2431. WELL LOCATIO	no ur N Aprox.	N VI	STERED BUSINESS	HAME LI	REGISTRA	TION NO.	
1/4 HILE DAST OF THE KEVER	NAW FAUL						
		6	15/	Jours .	/	, , , <del>, , , , , , , , , , , , , , , , </del>	].
1001 But 10.00	1070	Signod	AUTHORIZED REPR	( SEGRET ATIVE	Date _ Z/	6/79_	}
D67d 、 100M (Rev. 12-88)	10 /0						





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

Failure to comply is a misdemeanor. Import ID: Permit No: Tax No: County: Houghton Township: Schoolcraft Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 32W 21 Well ID: 31000001555 Distance and Direction from Road intersection: .5 MILE NORTH OF THE OLD SCHOOL ROAD; .25 MILE WEST OF THE Elevation: TRAPROCK VALLEY ROAD Well Owner: Latitude: 47.23638493 Well Address: Owner Address: Longitude: -88.37720443 Method of Collection: Interpolation-Map Drilling Method: Cable Tool Pump Installed: Yes Pump Installation Only: No Well Depth: 32.00 ft. Well Use: Household Pump Installation Date: HP: 0.30 Well Type: Unknown Date Completed: 1/9/1980 Manufacturer: Red Jacket Pump Type: Submersible Casing Type: Unknown Model Number: 50W19BC Pump Capacity: 10 GPM Height: Casing Joint: Threaded & coupled Drop Pipe Length: 26.00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: **Drilling Record ID:** Draw Down Seal Used: Diameter: 6,00 in. to 29,00 ft, depth Pressure Tank Installed: Pressure Relief Valve Installed: No Borehole: Static Water Level: 10.00 ft. Below Grade Depth to Formation Description Thickness Bottom Yield Test Method: Unknown Well Yield Test: Pumping level 24.00 ft. after 3.00 hrs. at 10 GPM Sand Fine 3,00 3.00 Clay & Cobbles Hard 16.00 19.00 21.00 Clay Gravely 2.00 29.00 Screen Installed: Yes Filter Packed: No 8.00 Sand Fine Sand Water Bearing Coarse 3.00 32.00 Screen Diameter: 6.00 in. · Blank: \*u Screen Material Type: Stainless steel-wire wrapped Slot Length -Set Between 16.00 3.00 ft. 29.00 ft, and 32.00 ft. Fittings: Neoprene packer Well Grouted: No Geology Remarks: Wellhead Completion: Pitless adapter **Drilling Machine Operator Name:** Nearest Source of Possible Contamination: Direction Type Distance Employment: Unknown Other 75 ft. South Contractor Type: Water Well Drilling Contractor Reg No: 1222 Abandoned Well Plugged: No Business Name: VALLEY P & H INC. Business Address:

EQP-2017 (4/2010)

General Remarks:

Reason Not Plugged:

Page 1 of 1

Other Remarks: Contamination Source 1:ABANDONED COW BARN

State of Michigan

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

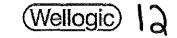
my knowledge and belief.

Signature of Registered Contractor

2/3/2005 2:05 PM



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



Depth to

Bottom

12.00

21.00

50.00

60.00

80.00

94.00

123.00

138.00

176.00

183.00

198.00

202.00

Thickness

12,00

9.00

29.00

10.00

20.00

14.00

29.00

15.00

38.00

7.00

15.00

4,00

mport ID:

Permit No: County: Houghton Town/Range:

Township: Schoolcraft

WSSN: Well Status:

Source ID/Well No:

Well ID: 31000001558

Elevation:

Tax No:

Latitude: 47.229973 Longitude: -88,364633

Method of Collection: QQQ - Centroid

Distance and Direction from Road Intersection:

No

Formation Description

Section:

2.5 MILE NORTH ALONG CEMETARY ROAD; FROM LAKE LINDEN AT

Active

TRAPROCK RIVER

Pump Installed:

Sand Fine

Red Clay

Red Clay

Sand Clayey

Sand Clayey

Sand Clayey

Sand Clayey

Sand Fine

Sand Fine

Clay & Sand Gravely

Clay & Sand Gravely

Sand & Gravel Water Bearing

Pressure Tank Installed:

Pressure Relief Valve Installed:

Well Owner:

56N 32W

Well Address:

Owner Address:

Νo

Drilling Method: Cable Tool

Well Depth: 202.00 ft.

Well Use: Household

Well Type: Unknown Casing Type: Unknown Date Completed: 12/31/1970

Height: 4.00 ft. above grade

Casing Joint: Threaded & coupled

Casing Fitting: Drive shoe

Diameter: 6.00 in. to 196.00 ft. depth

Borehole:

Static Water Level: 0.00 ft. Above Grade (Flowing)

Well Yield Test:

Yield Test Method: Unknown

Pumping level 35.00 ft. after 1.00 hrs. at 14 GPM

Inrestricted Flow Rate:

Screen Installed: Yes

Blank: \*u

Screen Diameter: 6.00 in.

Screen Material Type: Stainless steel-wire wrapped

Slot 18.00 Length 4.00 ft.

Set Between

198.00 ft. and 202.00 ft.

Filter Packed: No

Fittings: Unknown

Well Grouted: No

Geology Remarks:

Wellhead Completion: 12 inches above grade

Nearest Source of Possible Contamination:

Type Septic tank Distance 80 ft.

Direction

Abandoned Well Plugged:

Southwest

Employment: Unknown

Contractor Type: Water Well Drilling Contractor

Business Name: EDW, SIIRTOLA

**Drilling Machine Operator Name:** 

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

Reg No: 0154

General Remarks: Other Remarks:

Reason Not Plugged:

EQP-2017 (4/2010)

Page 1 of 1

State of Michigan

2/3/2005 2:30 PM



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

Wellogic 13

Failure to comply is a misdemeanor.

Tax No:	Permit No:		County: Hough		1		Schoolcraft			
		j	Town/Range:	Section:	Well Status:	WSSN	Source	e ID/Well No:		
Well ID: 31000001226		ł	56N 32W 22 Active Distance and Direction from Road Intersection:							
		ļ	10.25 MILE SOUTH OF SEIVI ROAD ON VALLEY ROAD AND 0.75 MILE EAST							
Elevation:			WILL COOK OF SERVING OF AVEEL HOVE VIEW MILE ENGINE							
Latitude: 47.23885			Well Owner							
Longitude: -88.347459			Well Address: Owner Address:							
Method of Collection:					1					
matrica of competition	morpolation map						<del></del>			
Drilling Method: Cable Too	ol .		Pump Inst	alled: Yes	}	Pump in:	stallation Onl	y: No		
Well Depth: 142.00 ft. Well Use: Household			Pump installation Date: HP: 0.50							
Well Type: New	Date Completed; 9/7.		Manufacturer: Red Jacket Pump Type: Submersible							
Casing Type: Steel - unknown	wn Height: 2.00 ft. at	pove grade		mber: 50C		•	pacity: 10 (	SPM		
Casing Joint: Welded Casing Fitting: Drive shoe			Drop Pipe	Length: 1	20.00 π.	Pump Vo	ntage: Record ID:	!		
Casing Fitting: Drive sine	•		1	n Seal Used	: No	բրյյոց բ	record in:			
Diameter: 6.00 in. to 43.00 f	t. depth			rank Installe		<del></del>				
			E .	Tank Type:						
			Manufactu	rer: Amtro	o <b>l</b>					
Borehole: 6.00 in. to 142.00	ft. depth			nber: 203		Tank Ca	pacity: 12.0	Gallons		
			Pressure F	Relief Valve	installed:	No				
Static Water Level: 2.00 ft.	Below Grade	<del></del>	<del></del>	<u></u>				Depth to		
Well Yield Test:	Yield Test Method:	Test pump	,	Formation Description			Thickness	Bottom		
Pumping level 120.00 ft. after		, ,	Clay Sandy	/			14.00	14.00		
			Clay & Gra				16.00	30.00		
		· <del></del>	Red Clay &				12.00	42.00		
Screen installed: No	Intake: Bedrock	Weil	Sandstone	<del></del>			100.00	142.00		
			£. <b> </b> -				L- <u></u>			
							<del></del>			
			: 15							
								[		
Well Grouted: Yes G			<del></del>							
Grouting Material Bags	routing Method: Unknown Additives Depth	,	<del></del>	<del></del>						
Bentonite dry granular 3.00	None		Geology R	emarks:				L		
· - ·				-						
· · · · · · · · · · · · · · · · · · ·										
Wellhead Completion: Pitle	ess adapter		1							
Nearest Source of Possible (	Contamination:		Drilling Ma	chine Opera	tor Name	GEORGE K	FRANEN			
Type		irection	1 -	nt: Unknow		OLVINOL N		- 1		
Septic tank	80 ft. E	ast								
			Contractor	Type: Wate	er Well Drilling	Contractor	Reg No: 1	1722		
		1 1 1 1 1			ANEN WELL	& PUMP				
		*	Business A				ster st			
			This		Vell Contra			40 4b - 1 1 - 1		
[12] 영화 - 사용통료를 즐기 하는 사용 보기			nus well wa	as drilled und Ige and belie	er my supervi: f.	sion and this	report is true	to the pest of		
			,	-5- 6114 50110	••			1		
			Clamatura	of Boaloto-	d Cantraster		Date	)		
General Remarks:		<u> </u>	Joignature (	or Kegistere	d Contractor	· · ·	Date			
Other Remarks:	· · · · · · · · · · · · · · · · · · ·			<del></del> ,	······	····				
EOD 2047 (4/2040)	Dogg 1 of 1					ata of Michig	0144	2004 7:40 AM		



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

Tax No:	Permit No: W9731179	County: Hough			Township	: Osceola			
		•		Well Status:	Wss	N: Sourc	e ID/Well No:		
Well ID: 31000001219		56N 33W Distance and D	26 rection from	Active	section:				
	Distance and Direction from Road Intersection: ON HARMA ROAD EAST OF GOLF COURSE ROAD								
Elevation:			_	-					
Latitude: 47.219002	Well Owner:	_	<del>-</del> -	Owner Ad	dr				
Longitude: -88.448611	•	Weil Address:   Owner Address: RTE 2, BOX 1330							
Method of Collection: Interpolation	оп-Мар	CALUMET, MI	49913	:					
Drilling Method: Rotary		Pump insta	alled: Yes		Pumo l	nstallation On	v: No		
- · ·	l Use: Household		illation Date	1	HP: 0.5		,		
	e Completed: 9/26/1997	Manufactu				ype: Submer			
<b>5</b> 7.	Height: 2.00 ft. above grade	1	iber: 10P4		•	Capacity: 10 (	3PM		
Casing Joint: Welded Casing Fitting: Drive shoe		Drop Pipe	Length: 1	10.00 π.	Pump \	roitage: Record ID:			
odding triang, Diffe shoe			Seal Used	: No	Dining	Record ID.			
Diameter: 6.00 in, to 27.00 ft, depth		Pressure T	ank Installe	d: Yes					
			ank Type:						
Borehole: 8,00 in. to 25,00 ft. depth		i i	Manufacturer: A.O. Smith  Model Number: V100 Tank Capacity: 12.0 Gallons  Pressure Relief Valve Installed; No						
6.00 in. to 125.00 ft, depth	· ·								
•									
Static Water Level: 17,00 ft. Below Gra	ade Yield Test Method: Bailer		Formation	Description		Thickness	Depth to Bottom		
Well Yield Test: Pumping level 110.00 ft. after 1.00 hrs. a	Clay & Ston				8.00	8.00			
t amping to tol thought after 1,00 me. o	10 07 ,11	Hardpan				117.00	125.00		
<u> </u>					·				
Screen Installed: No	Intake: Bedrock Well					<del> </del> -	<u> </u>		
		출시 <del></del>		····		<del></del>	<del> </del>		
그렇 일말을 하는데 다른 사람들이 불살했다.		<b>   </b>				<del></del> -	<del>                                     </del>		
- 이미크 : 여행 경임 - 그리트 - 그리를 돌려가고 박 생생하다. - 남이성 이용통 중에는 남자 아니트를 들어가고 말았다고 있다.									
는 마음이 모델 등록 하시아 아름이 날아보다 말을 보를 했다. 이 시장 : 사용 현기 시스 - 보호 : 10 - 자연 - 복고 : 1111 11 1						ļ	<u> </u>		
		(				<del> </del> -			
		,			<del></del>	<del></del>	<del> </del>		
Well Grouted: Yes Grouting Me	ethod: Unknown					†			
Grouting Material Bags Additive	•								
Neat cement 5.00 None	0.00 ft. to 25.00 ft.	Geology Re	emarks:						
	-						İ		
Wellhead Completion: Pitless adapter	<u></u>	<del>-</del>							
·	······································								
Newsof Sause of Beauty Contact	.tloni	Dellie - M	hine O	for Name :	ICCC POY	'A' A			
Nearest Source of Possible Contamina Type D	istance Direction	Drilling Mad Employmen			JEFF ESK	.ULA			
31 _	0 ft. East	Linkoyatic	in Employe		•		1		
		Contractor	Type: Wate	er Well Drilling	Contracto	r Reg No:	1722		
그리 인텔 는 참 하늘들어된 경험				ANEN WELL	& PUMP				
얼마 그렇다면 하는 학교 생활 수입		Business A			otor's C	ordisionaline			
그림에 가는 기를 하는 사람이 함께 함께 되었다. 보는 사람들 사람들은 사람들이 가는 사람들이 되었다.		This well wa				ertification is report is true	to the best of		
나님값 함께 되는 항품들이		my knowled							
		Ÿ			٠.		}		
		Signature o	f Registere	d Contractor		Date			
General Remarks:									
Other Remarks:			<del> </del>						

TAX NO:	MICHIGAN D WATER W					PERMITNO:	/
I, LOCATION OF WELL	WAIGHW	VELL AT	וטיין טוי	WP MEC	UND	W9731	179
1	Township Name		Fraction		Section No.	Yown No.	Range No.
HOUGHTON	OSCFOO	- A	1/4 /	117145 F 114	26	56N	33W
Distance and Direction from Road Inte.	rsection			3. OWNERO	FWELL		
ON HARMA, B	OAD EAST.	OF 606	, <del>[</del>	Address			
COURSE ROAD			-				
Street Address & City of Well Location		<del></del>		Address S	ame as Well Loc	ation Yes [	J No
Locate with 'x' in Section Below	7 · B	Sketch Map		4. WELLDER			lleW well
	MARMO				11. 9.1	A. G	Replacement Well
	X & .		-	5. Cable 1		otary ∐D uger/Bored ∏J	gud Dug
\*\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\	Course						ype III Public
X	Cou				Household Tr	/pe Ha Public H	
	1	•			Test Well T		
.		ين ا		7. CASING:	Steel TI	readed Heigi	ht: Above/Below
A CONVEYTON DE CONTROL		THICKNESS	DEPTH TO		Plastic W	elded Surfa	ice:ii
2. FORMATION DESCRIPTION		STRATUM	DEPTH TO BOTTOM OF STRATUM	Diameter'	Other	Tt. denth Wein	ht: /8, 92_lbs/it.
			8'	Digito (Ct.	ln, to	,it, depth	•
CLAY & RUCKS		- 5'	<u>S.</u>	BORE HOL			rive Shoe
HARD BUCK		117	125'		in. to	25_II. depth Si	tale Packer
;					Not Installed		-ked
				Туре		Diamete	·
3						Langth:	
		·		FITTINGS:	nK.Packe	or Bremer Ch	neck
j						ft. Other	
				9. STATIC W			
				17-	It. Below Land	Surface F	owing
	· · · · · · · · · · · · · · · · · · ·	-			LEVEL: Below Li		
<u> </u>				☐//A ☐Plunger	ii. Aller/ Bailer	nrs. Pumping a \Air	t <u>/ 0</u> G.P.M.
		<del> </del>			D COMPLETION:		
				Pitiess		12" Above	
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				Baseme		Weil Hou	
100				12. WELL GRO		Yes From	102_51L
# <del>1</del>				No. of Bags		entonite LO	ner
						SIBLE CONTAMINA	ATION:
XVO:				Туре_ <i>с_Е</i>	P.715 Dist	anceft_[	Direction FAST.
USE A 2ND SHEET IF	NEEDED	"		Туре	: Disi	ancet. I	Direction
15. ABANDONED WELL PLUGGED?	Yes No	·			Not Installed		tallation Only
Casing Diameterin.	Depthft.			Manutacture Model Numl	ers Name <u>574</u>	21-02 HP 1	12 Volls 736
PLUGGING MATERIAL:	Neat Cement	Bentonite		Length of C	rop Pige //O	ft. Capacity	G.P.W.
CemenuBentonite Sturry No.ofBags	Cacina Romayada	Bentonite			-	Lat Dother	' <del></del> [
16. REMARKS: (Elevation, Source of		149	40	PRESSUR!		6 5M17	ا بر.
Heliactura, Irigathan, popies of	wala, civ.j	•		Model Numi	pet 1/ 1/2010	Capacity	Gallions_3.6
	•	15. WATER V	VELL CONTI	ACTOR'S CERT			
		This well	was drilled t	under my jurisdic		ort is true to the be	st of my
17. DRILLING MACHINE OPERATOR:		1	e and belief.		100000	7,	/-1フラク・・
Employee Subcontractor	c. A	HEO:STEHE	HOSINESS NAW	E WARLE	41.12011	AI	CH, 457/3
Name JEFF ESKG	<u> </u>	Address /	(TE. 1	130x 238	CALL	MET, NIL	CH, 449/3
AG-1-254 2456		Signed	Zanko a	TO HEPRESENTATIVE		Date	-1-97



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

Wellogic /6

Imbott in:			F-7				·····	
Tax No:	Permit No:	W313083	County: Hough			ownship:		
1			Town/Range:	1	Well Status:	WSSN	Source	e ID/Well No:
Wall ID: 2400	2000440	Λ	56N 33W	25	Active			
Well ID: 3100	JUUU 14U	4	Distance and D					
Elevation:	•		0.3 MILE EAST	OF INTERS	ECT OF M-26 A	ND GAS P	LANT ROAD	
Latitude: 47.227828			Well Owner:					
Longitude: -88.4357			Well Address:		10	wner Add	ress:	
Method of Collection: Inte	rpolation-Map							
monor of outcoment.	- Inde		<u> </u>					
Drilling Method: Rotary		· · · · · · · · · · · · · · · · · · ·	Pump Inst	alled: Yes		Pump Ins	stallation Onl	v: No
Well Depth: 302.00 ft.	Well Use: Hous	ehold		allation Date		HP: 1.00		<b>,</b>
Well Type: New	Date Completed			rer: Red		Pump Ty	pe: Submer	sible
Casing Type: Steel - unknown	Helght: 2.0	0 ft. above grade		nber: 8NS			pacity: 10 C	
Casing Joint: Welded	•	, -	Drop Pipe	Length: 2	85,00 ft.	Pump Vo		
Casing Fitting: Drive shoe			Drop Pipe			•	Record ID:	
			Draw Dow	n Seal Used	: No			
Diameter: 6.00 in. to 26.00 ft. de	pth		Pressure 7	ank Installe	d: Yes	_		
			Pressure 7	ank Type:	Unknown			
•			Manufactu	rer: Amtro	ol .			
Borehole: 10.00 in. to 26.00 ft. d	epth		Model Nun	nber: 250	-	Tank Ca	pacity: 10.0	) Gallons
			Pressure F	Relief Valve I	Installed: N	0		
		<del></del>						
Static Water Level: 3.00 ft. Belo				Formation	Description		Thickness	Depth to
Well Yield Test:		thod: Unknown						Bottom
Pumping level 302.00 ft. after 1.00	) hrs, at 2 GPM		Sand & Gra	avel Clayey			8.00	8.00
			Gravel				3.00	11.00
	fortalise De	J 1. 347-11	Unidentified	d Consolidate	90 FM		291.00	302.00
Screen Installed: No	intake: 66	drock Well			<del></del>		ļ.—	<del> </del>
그렇는 본을 그 눈하셨다. 그를 제일하		할 수없 그림 밖	- <del> </del>					<b></b>
기가 들었다. 항상 그는 그 가는 생활한 한 영화 학생 생활의 			·				<u> </u>	<del> </del> -
나 유럽일로 다른 소리를 잃었는 때문에	보세다 그런 보이다.							<del> </del>
그 날았네!!!! 그 그 기가는 그래를 통								
그 나팔한 본도는 아이가 하면 많은 달날.		类 计操机 "点		<del></del>				
[변경 등본호임] - 그리네 글로토함				<del></del>				<del> </del>
	용 하는 경기 기계		<del> </del>		<del></del>			<del> </del>
Well Grouted: Yes Grout	ing Method: Unkn	OWO		-				
	dditives	Depth						<del>                                     </del>
•		4.00 ft. to 26.00 ft.	Geology R	emarks:			<u> </u>	
_			]					
Wellhead Completion: Pitless a	dapter		· ·					
	-							
· · · · · · · · · · · · · · · · · · ·						,		
Nearest Source of Possible Con	tamination:		Drilling Ma	chine Opera	itor Name: F	AUL ZIEM	NICH	
Туре	Distance	Direction	Employme	nt: Unknow	'n			
Septic tank	90 ft.	Northeast		· <u>-</u>			· · · · · · · · · · · · · · · · · · ·	
<u> </u>		<u> </u>	Contractor	Type: Wate	er Well Drilling (	Contractor	Reg No: 1	1677
· 17季季次年3、4、1、美田学覧会					TOLA WELL DI	RILLING		
			Business A		=			
			· · [		Vell Contrac			
					ler my supervisi	on and this	report is true	to the best of
		station to	iny knowled	lge and belie	l.			
		_						1
			Signature	of Registere	d Contractor		Date	
General Remarks:								
Other Remarks:	<del></del>							

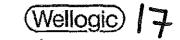


Completion is required under authority of Part 127 Act 368 PA 1978.

County: Houghton

Town/Range:

56N 33W



Source ID/Well No:

Township: Calumet

WSSN:

Well Status:

Active

Import ID: Tax No:

Failure to comply is a misdemeanor.

Permit No:

Well ID: 3100000	1105	56N 33W  25	<del></del>	<u> </u>					
Well ID. 3 100000	1400	Distance and Direction from Road Inter		•					
Elevation:		ABOUT ONE MILE SOUTH OF LAURIUN	I ON HIGHWAY M2	6					
		W. I. C	<del>, </del>	·					
Latitude: 47.220021		Well Owner:	T6	<del></del>					
Longitude: -88.431186		Well Address:	Owner Address:						
Method of Collection: Interpolation-M	lap								
Drilling Method: Rotary		Pump Installed: Yes	Pump Instaliati	on Only: No					
	se: Household	Pump Installation Date:	HP: 0.50						
	mpleted: 9/8/1980	Manufacturer: F.E. Myers	Pump Type: S						
	ght: 2.00 ft. above grade	Model Number: SH5-511	Pump Capacity						
Casing Joint: Welded		Drop Pipe Length: 93.00 ft.	Pump Voltage:						
Casing Fitting: Drive shoe	1	Drop Pipe Diameter:	Drilling Record	ID:					
Diameter: 6.00 in. to 32.00 ft. depth		Draw Down Seal Used: No Pressure Tank Installed: No							
Diameter: 6.00 in. to 32.00 it. depui		Pressure Relief Valve Installed:	No						
		Fressale Relief Valve Installed.	140						
Borehole:									
-									
Static Water Level: Below Grade	•	Famoution Bosoniusian		Depth to					
Well Yield Test: Yield	d Test Method: Unknown	Formation Description	inic	kness Bottom					
Pumping level 40.00 ft, after 1,00 hrs, at 30 (	GPM .	Sand & Gravel	16.00						
		Clay & Gravel	16.00	32.00					
		Unidentified Consolidated Fm	69.00	101.00					
Screen installed: No li	ntake: Bedrock Well								
기가는 경기에서 가는 얼마를 받는데 보다.									
[프릴릭크로 출범: 스크 휴립스트 및 프로그리트]									
풍성을 가 보니 아마 라틴 관련에 될 것이다	회생활활성하다 이 생활을	[ ] .							
- 프램 - 1 일본 - 1 프립티노 크린 라마드									
				<del></del>					
경우는 이 기관 이 가는 전투 경험을 받는다.			<del></del>	<del></del>					
Well Grouted: No		:							
A CONTRACTOR OF THE CONTRACTOR									
그 경험 등 이렇게 하를 모르는 감독 등로		Geology Remarks:							
일이 범인하는 방법 호텔의 가리를 보고 있다.									
			•						
Wellhead Completion: Pitless adapter		•							
Nearest Source of Possible Contamination		Drilling Machine Operator Name:							
Type Dista		Employment: Unknown		<b>-</b>					
Septic tank 60 ft.	West	Control Turner 111 - 111 - 111	- 0 1	N. AG					
Abandanad Miail Dhamada 11		Contractor Type: Water Well Drillin	g Contractor Re	g No: 0154					
Abandoned Well Plugged: No	e e	Business Name: SIIRTOLA WELL Business Address:	DRILLING						
Reason Not Plugged:		Water Well Contr	actor's Cartisia	ation					
Reason Not Flugged:		This well was drilled under my super							
		my knowledge and belief.	nation and this report	is a ne to the pest of					
	:	Tours April 10	_	D-4:					
Opening Demonstrate		Signature of Registered Contractor	<u>r</u>	Date					
General Remarks: Other Remarks:	<del></del>								
COP 2017 (A/2010) Page 1 of			State of Michigan	8/22/2004 0:08 AM					



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

Wellogic | {

Failure to comply is a misdemeanor. ımport ID: Tax No: Permit No: W0631029 County: Houghton Township: Schoolcraft Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 32W 30 Active Well ID: 31000001779 Distance and Direction from Road Intersection: 200' E OF INTER OF PEPIN RD & GAS PLANT RD Elevation: 1089 ft. Latitude: 47.22737 Well Owner: Well Address: Owner Address: Longitude: -88,41395 Method of Collection: GPS Std Positioning Svc SA Off Drilling Method: Rotary Pump Installed: Pump Installation Only: No Well Depth: 262,00 ft. Well Use: Household Pump Installation Date: HP: 0.75 Well Type: New Date Completed: 1/9/2006 Manufacturer: Red Jacket Pump Type: Submersible Casing Type: Unknown Height: 1.50 ft. above grade Model Number: 75F211CNS1 Pump Capacity: 10 GPM Casing Joint: Welded Drop Pipe Length: 240,00 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 26.00 ft, depth Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer; Amtrol Borehole: 10,00 in. to 26,00 ft. depth Model Number: BN4202 Tank Capacity: 20.0 Gallons 6.00 in. to 262.00 ft. depth Pressure Relief Valve Installed: Static Water Level: 10.00 ft. Below Grade Depth to Formation Description Thickness Well Yield Test: Yield Test Method: Air **Bottom** Pumping level 262.00 ft. after 1.00 hrs. at 5 GPM Sand & Clay Clayey 10.00 10.00 Basalt 252.00 262.00 Screen Installed: No Intake: Bedrock Well Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Bags Additives Depth Unknown 4.00 ft. to 26.00 ft. 10.00 None Geology Remarks: Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: Drilling Machine Operator Name: PAUL LAHTI Type Distance Direction Employment: Employee Pump Installer: DAVID SIIRTOLA Septic tank Southeast Contractor Type: Water Well Drilling Contractor Reg No: 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 General Remarks:

MICHIGAN DEPARTM	IENT L
PUBLIC HEALTH	Ar '
bor Town Number Rai	iga Numbur
56 (N/8. 32	2 E/W.
	Miles Commence of the Commence
) Date of Completion	
6/22/81 -	
Rotary Driven	Dug
Jetted Bored	<u> </u>
Public Supply	dustry
Air Conditioning Co	
oldud 🔼 Helaht: Abova/	กฮาอัพ
Surface F	ft,
Depth   Weight 8.971	hs./ft.
Dupth   Drive Shou? Yes	
_	
Diad	<u> </u>
Longih	his document paid for with State funds
ndft,	Š
	v v
	, g
d surface	<u> </u>
and surface	<u> </u>
nrs, pumping <u>8</u>	9.p.m. 7
2%	Ö
ma, ponding	. 0.p.m.
Pur Million: UNKNO	/N• Š
Chloridos (C1)	
216	
Other	
NS In Approved Pri	<b>,</b>
No	
ntonito	
n. 165 URE Acids	
" 1, 1 1, 1 1, 1 1, 1 1, 1 1, 1 1, 1 1,	

GEOLOGICAL SURVEY SAMPLE No.		•	19	
•	1	WATER \	VELL REC	CORD MICHIGAN DEPARTMENT
1 LOCATION OF WELL		ACT 29		66 OF PUBLIC HEALTH
	Township Nonie		Fraction	
	SCHOOLCRAFT		MAR	NI/4 NI/4 30 56 (N/s. 32 E/W.
Distance And Direction from Road In 1/2 MILE EAST OF		2001		3 OWNER OF WELL!
SOUTH OF THE GAS				Address
Street address & Clay of Woll Locat			والمراجعة المراجعة ا	
K   K' in section belo	•			4 WELL DEPTH: (completed) Date of Completion
	MURIUM			123 11. 6/22/81 · 6 [Xcable tool
1 1 4	17		LAX.	Hollow red Jetted Bored
	AURIUM + X ->1 Zm. 10	<u> </u>	20 40 15	6 USE: K Domastic Public Supply Industry
	X	200··· 孙	12 ct	Irrigation
	->1341 K	<u>.</u>	7 -	7 CASING: Threaded Wolded Height: Above/8816W
1 MIL TON	E-	, and the second se	DEPTH TO	burace 11,
2 FORMATION		THICKNESS OF STRATUM	BOTTOM OF	in to It. Dunth   Drive Short Yes No 17
	-		7	8 SCREEN: NONE.
SANDY CLAY AND BO	ULDERS	8	(8)	Type;Dia.!
PORTAGE LAKE LAVA	Sunius	115	123	Stat/Gauzo Longth
LORINGE TWE PULL	DERIES	1 30	14-7	Sot betweenft, andft, Fittings;
		]		9 STATIC WATER LEVEL.
		ļ		10 PUMPING LEVEL below land surface
				108 ft. after 1 hrs. pumping 8 s.p.m.
	ļ			100 ti. after 4.8 hrs. pumping 27/1 g.p.m.
ما المراجع الم			·	11 WATER QUALITY In Ports Por Milition: UNKNOWN.
				Iron (Fo) Chloridos (Cl)
	ļ			HardnossOther
		<u> </u>	<u> </u>	12 WELL HEAD COMPLETION:   In Approved Pri
			ļ	Pitless Adapter 12" Above Grade
				13 Woll Grouted? Yes No  X Noti Commit Bentonite
		<u> </u>		Dopth: From 20 th to UREACH.
				14 Nearost Source of possible contemination
*	1		•	75 fact E Direction SEPTIC Type
				Wolf disinfacted upon completen No No Not Installed
		 		Manufacturer's Name RED JACKET
				Model Number 50W19BC HP/2 Volts 230
				Longth of Drop Pipe 108 ft. capacity 5, G.P.M.
v	1			Type: // Submersible    Jet   Reciprocating
USE A 2HD SHEET IF A			TO WATER	WELL CONTRACTOR'S CERTIFICATION:
to natualization again a	; Qata, Oto,		This wol	It was drilled under my jurisdiction and this report is true
•		ļ		ost of my knowledge and belief,  Y VI   S. Pillip 31-1778  ISTERED BUSINESS HAME REGISTRATION NO.
		ļ	j	
•		!	Addrons	17 1, Box 212, CALUMET, HI 4991
		1	l /	1 1 1 1/2 1/20

JAUG 3

100M (88v, 12:68)

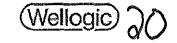
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1981



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

Permit No:



Township: Schoolcraft

Import ID: Tax No:

Failure to comply is a misdemeanor.

County: Houghton

	1 -	Section:	Well Status:	WSSN:	Source	e ID/Well No:
Wall ID: 24000004206	56N 32W	29	Active			
Well ID: 31000001386	Distance and D					
Elevation:	0.75 MILE WES SCHOOL ROAD		ROCK VALLEY	ROAD AND 7	5 FEET SC	OUTH OF OLD
Latitude: 47.228332	Well Owner:		1			
Longitude: -88.393674	Well Address:		Jo	wner Addres	is;	
Method of Collection: Interpolation-Map		•	ļ			
	<u> </u>					
Drilling Method: Cable Tool	Pump Inst	alled: Yes	3	Pump Insta	llation Onl	y: No
Well Depth: 107.00 ft. Well Use: Household		allation Date		HP: 0.50		
Well Type: Unknown Date Completed: 5/31/1978	Manufactu			Pump Type		
Casing Type: Unknown Height: 2.00 ft. above grade	*	nber: 3SN		Pump Capa	•	3PM
Casing Joint: Threaded & coupled Casing Fitting: Drive shoe	Drop Pipe	Length: 6	3.00 16.	Pump Volta Drilling Red	-	
Casing Fitting. Drive shoe		n Seal Used	: No	Dinning Nec	,ora ib.	
Diameter: 5.00 in. to 107.00 ft. depth		ank Installe				
· · · · · · · · · · · · · · · · · · ·		Relief Valve		0		
Borehole:						
Static Water Level: Above Grade (Flowing) Well Yield Test: Yield Test Method: Unknown	,	Formation	Description	1	Thickness	Depth to Bottom
Pumping level 15.00 ft. after 2.00 hrs. at 15 GPM	Brown San	d Silty			2,00	12.00
	Clay & San				3.00	30.00
	Clay & Grav				00	34.00
Unrestricted Flow Rate:	Clay & San				3.00	50.00
Screen Installed: No Intake: Bedrock Well	Red Clay S				1.00	64.00
	Sand & Gra				00	65.00
· 회문 발 10호 호텔 및 로스장 - 1호 회전 1 - 12 발	Clay Sand Clay & Grav			00 5.00	69.00 84.00	
- 불리기로 가득하다 하고 있는 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그	Clay & Grav		9.0		93.00	
그를 회급한 그를 모르는 것은 그를 보는 것이 없는 그들은 것이 없다.	Clay & Grav			2.00	105.00	
경도 경로 환경하는 물로를 가는 하는 것은 사람이 없었다.	Sand Coars		****		00	106.00
· 등 학교로 등록 하기를 받는다는 그는 하는 하는 그는데 그	Gravel			1.0	00	107.00
Well Grouted: No						
	Geology R	emarks:			·	
Wellhead Completion: Pitless adapter						
Nearest Source of Possible Contamination:	Drilling Ma	chine Opera	itor Name:			
Type Distance Direction		nt: Unknow				
Septic tank 70 ft. East			· · · · · · · · · · · · · · · · · · ·			
Abandoned Well Plugged: No	Business N	łame: VAL	er Well Drilling ( LEY PLBG & H		Reg No: 1	1681
a Wasta	Business A		N. II. O	4 1 4 4		
Reason Not Plugged:			Vell Contrac			1 a 1 h a b 4 . *
	3	is drilled und ige and belie	ler my supervisi f.	on and this re	port is true	to the best of
Name and December 2	Signature o	or Registere	d Contractor		Date	
General Remarks: Other Remarks:			*			
OD 2017 (4(2010) Page 1 of 1			Ct-	to of Michigan	o toni	2004 7:25 AM



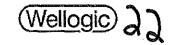
## Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

Import ID: Failure to co	mply is a misder	neanor.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<u> </u>				
Import ID:   Tanke to co	County: Hough			Township:	Schoolcraft				
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Town/Range:	Section:	Well Status:	WSSN		e ID/Well No:			
W-II ID. 0400004740	56N 32W	29	Active						
Well ID: 31000001749	Distance and D								
Elevation: 649 ft.	.2 MILE S OF IN	ITER OF GA	AS PLANT RD	& CEMETER	RY RD				
			·- — —		·				
Latitude: 47.221699	Well Owner: Well Address:			Owner Add					
Longitude: -88.394289	55538 N CEM	ETERV PO	[	JWREF Add	ress;				
Method of Collection: Interpolation-Map	MI	- ILKI ND	•						
Drilling Method: Rotary	Pump Inst			-	stallation Onl	ly: No			
Well Depth: 46.00 ft. Well Use: Household Well Type: Unknown Date Completed: 11/10/2005		allation Dat irer: Red		HP: 0.50	pe: Submer	aibla			
Casing Type: Steel - unknown Height: 1.50 ft. above grade			Jacket		pe: Submer				
Casing Joint: Welded	3	Length: 3	30.00 ft.	Pump Vo		31 141			
Casing Fitting: Drive shoe	Drop Pipe	_		-	Record ID:				
		n Seal Used	d: No						
Diameter: 6.00 in. to 43.00 ft. depth	Pressure 1	ank Install	ed: Yes						
	E .	ank Type:							
	Manufactu								
Borehole: 6.00 in. to 46.00 ft. depth	4	Model Number: bn4202 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: No							
	Pressure	kellet valve	installed:	10					
Static Water Level: 12.00 ft, Below Grade						Depth to			
Well Yield Test: Yield Test Method: Air		Formation	n Description		Thickness	Bottom			
Pumping level 46.00 ft. after 1.00 hrs, at 60 GPM	Sand Claye	y			43.00	43.00			
	Sand				3.00	46.00			
Screen Installed: Yes Filter Packed: No		<del></del>				<del> </del>			
Screen Diameter: 6.00 in. Blank: 1.50 ft, Above				<del></del>	<del>'</del>	<del> </del>			
Screen-Material Type: Stainless steel-wire wrapped Slot Length Set Between	}	<del></del>	<del></del>			<del> </del>			
12.00 3.00 ft. 43.00 ft. and 46.00 ft.						<del> </del> -			
1.200 M 2/M 72/00 M					·				
Fittings: Neoprene packer									
	·					L			
Well Grouted: Yes Grouting Method: Unknown						ļ			
Grouting Material Bags Additives Depth Bentonite slurry 1.00 None	Caalami D	on subset		<del></del>		L			
Bentonite sturry 1.00 None	Geology R	emarks:							
			•						
Wellhead Completion: Pitless adapter									
<u>'</u>			•						
Nearest Source of Possible Contamination:		chine Oper		PAUL LAHT	1				
Type Distance Direction	Employme	nt: Employ	ree						
Septic tank 57 ft. Southeast	Contractor	Tunar Mar	ter Well Drilling	Carrieration	D No	1077			
Abandoned Weli Plugged: No	Rusiness	iype, wai lame• Sii⊑	ter well Drilling RTOLA WELL D	Contractor	Reg No: 1	1077			
walloottod Holf Lingbon. 110	Business A		TOLA TYLEE D	TALO					
Reason Not Plugged:			Well Contra	ctor's Ce	rtification	· · · · · · · · · · · · · · · · · · ·			
		as drilled und	der my supervis			to the best of			
	my knowled	ige and belie	əf.						
	Signature	of Registere	d Contractor		Date				

General 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:	Failure to com	iply is a misd	emeanor.			<del> </del>	
Tax No:	Permit No:	County: Hou	ighton		Township:	Schoolcraft	
-		Town/Range	Section:	Well Status	: WSSN	Source	e ID/Well No:
Well ID: 3100	0001561	56N 32W Distance and	28 Direction fro	Active om Road Inte			
Planetien				ECTION OF T	RAPROCK V	ALLEY ROAD	& GAY
Elevation:		ROAD; GAY			<u> </u>		
Latitude: 47.21409866	·	Well Owner:		-	1- 411		
Longitude: -88.3692121		Well Address	1.		Owner Add	iress:	
Method of Collection: Inter	polation-Map	MI		•	1		
					·		
Drilling Method: Rotary	IN DESCRIPTION OF THE PROPERTY	Pump in			-	stallation Oni	y: No
Well Depth: 152.00 ft. Well Type: Unknown	Well Use: _Household Date Completed: 7/16/1986		stallation Dat turer; F.E.		HP: 0.75	o ype: Submer	cibio
Casing Type: Steel - unknown	Height:		umber: SJ6			apacity: 11 (	
Casing Joint: Unknown			e Length:		Pump Vo		<i></i>
Casing Fitting: Drive shoe			e Diameter:			Record ID:	
			wn Seal Use				
Diameter: 6.00 in, to 148.50 ft, de	epth		Tank Install				
		i i	Tank Type:				
Borehole:		Manufac	turer: Amtı umber: #20		Tank C	ennaltur 10 C	Callana
borenole:		umber: #20 Relief Valve		No Tank C	apacity: 42.0	Galions	
		1,0004	. INCIDE TUITE	instance,	140		
Static Water Level: 60,00 ft. Beli Well Yield Test:	ow Grade Yield Test Method: Unknown		Formatio	n Description	1	Thickness	Depth to Bottom
Pumping level 152.00 ft. after 1.00	hrs. at 8 GPM	Sand				12.00	12.00
		Clay Sar	dy			134.00	146.00
<u> </u>		Sand			·	6.00	152.00
Screen Installed: Yes	Filter Packed: No					<del> </del>	<del> </del>
Screen Diameter: 6.00 in. Screen Material Type: Unknow	Blank: *u		<del></del> *			<del> </del>	<del> </del>
Slot Length	Set Between				- <del></del> -	<del>                                     </del>	<b> </b>
12.00 4.00 ft.	148.00 ft, and 152.00 ft.						
					, <u></u>		
		ļ				<del> </del>	<b></b>
Fittings: Unknown			<del></del>			<u> </u>	
Well Grouted: No		taja l			<del></del>	<del> </del>	
Well Glouled: 140					**	<del> </del>	
		Geology	Remarks:			<del></del>	1
	- 약을 고향되었다. 중요한 경기 - 경호 : 180 - 기업을 경기 -						
Wellhead Completion: Pitless a	dapter						
Nearest Source of Possible Cont	amination:	Drillina I	Machine Oper	rator Name:			
Туре	Distance Direction		nent: Unkno				
Septic tank	60 ft. West						
		Contract	or Type: Wa	ter Well Drillin	ig Contractor	Reg No:	1677
Abandoned Well Plugged: No			s Name: SIII s Address:	RTOLA WELL	DRILLING		
Reason Not Plugged:		pusines		Well Contr	actor's C	artification	
TOTO TOTAL TRANSPORT		This well				s report is true	to the best of
	and the second second		edge and beli			- , - , - , , , , , , , , , , , , , , ,	
		Signatur	e of Realster	ed Contracto	r	Date	
General Remarks:		(-1311-141					
Other Remarks:							

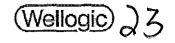


Tax No:

Elevation:

## Water Well And Pump Record

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



import ID:

Failure to comply is a misdemeanor. Permit No: County: Houghton

Township: Schoolcraft Well Status: Town/Range: Section: WSSN: Source ID/Well No:

Well ID: 31000001565 Distance and Direction from Road Intersection:

5 MILE NORTHEAST OF INTERSECTION OF TRAPROCK VALLEY ROAD &

Well Owner: Well Address:

> Sand Clay Sandy

Gravel

Sand Clayey

56N 32W

Owner Address:

HP: 0.50

Pump Voltage:

**Drilling Record ID:** 

Method of Collection:

Casing Type: Steel - unknown

Diameter: 6.00 in. to 65.00 ft. depth

Drilling Method: Rotary

Well Depth: 69.00 ft.

Well Type: Unknown

Casing Joint: Welded Casing Fitting: Drive shoe

Borehole:

Latitude: 47.2199803

Longitude: -88,37929299

Interpolation-Map

Pump Installed: Well Use: Household **Pump Installation Date:** 

Date Completed: 4/2/1982

Height:

Manufacturer: F.E. Myers

Model Number: SK52-58 Drop Pipe Length: 58.00 ft.

Yes

Drop Pipe Diameter:

Draw Down Seal Used: Pressure Tank Installed:

Pressure Tank Type: Unknown

**Formation Description** 

Manufacturer: Well-X-Trol Model Number: #202

Tank Capacity: 30.0 Gallons

12.00

26.00

27.00

4.00

Thickness

Depth to

Bottom

12.00

38.00

65.00

69.00

Pump Installation Only: No

Pump Type: Submersible

Pump Capacity: 8 GPM

Pressure Relief Valve Installed:

Static Water Level: 5.00 ft. Below Grade

Well Yield Test: Yield Test Method: Unknown

Pumping level 65.00 ft. at 15 GPM

Filter Packed: No

Set Between

Screen Diameter: 6.00 in.

Screen Installed: Yes

Screen Material Type: Unknown

Slot Length

22.00 4.00 ft.

64.00 ft. and 65.00 ft.

Blank: \*u

Fittings: Neoprene packer

Well Grouted: No

Geology Remarks:

Wellhead Completion: Pitless adapter

Nearest Source of Possible Contamination:

Type Septic tank

Reason Not Plugged:

Distance 60 ft.

Direction Northwest

Abandoned Well Plugged:

Contractor Type: Water Well Drilling Contractor

**Drilling Machine Operator Name:** 

Reg No: 0154 Business Name: SIIRTOLA WELL DRILLING INC.

Business Address:

Employment: Unknown

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

Other Remarks: EQP-2017 (4/2010)

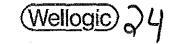
General Remarks:

Page 1 of 1

State of Michigan

2/3/2005 4:14 PM





Import ID:

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

Tax No:	Permit No:	VV0431025	County: Hough	iton	<u></u>		Schoolcraft				
			_		Well Status:	WSSN	: Source	e ID/Well No:			
Well ID: 310	10000001	$\cap$	56N 32W 27 Active								
VVGII 1D. 310	100000311	U	Distance and Direction from Road Intersection:  1.2 miles east on Lake Linden-Gay Road (\$562) from Traprock Valley Road								
Elevation:			(S641), then 500		n-Gay Road (s	556Z) IIOIII	таргоск уапе	y Roaq			
Latitude: 47.21588			Well Owner								
			Well Address:			Owner Add	ress:				
Longitude: -88.35876			,		-			ı			
Method of Collection: G	PS Std Positioning Svc	SA Off									
Drilling Method: Cable Tool			Pump Inst	alled: Yes		Dump In	staliation Onl	u No			
Well Depth: 136.00 ft.	Well Use: House	hold	F			HP: 0.75		y: NO			
Well Type: New	Date Completed:			Pump Installation Date: 1/10/2004 HP: 0.75  Manufacturer: Goulds Pump Type: Submersible							
Casing Type: Steel - black		ft. above grade									
Casing Joint: Welded	v	Ü	Drop Pipe	Length: 1:	20.00 ft.	Pump Vo					
Casing Fitting: Drive shoe			Drop Pipe	Diameter:	1.00 in.	Drilling I	Record ID:				
				n Seal Used							
Diameter: 6.00 in. to 132.00 ft.	, depth		1, ,	ank Installe							
					Diaphragm/b	ladder					
Davebeler 6 00 to 45 406 00 8	donth			rer: Other		Tank O	-nasihu 20.0	College			
Borehole: 6.00 in. to 136.00 ft. depth			1	nber: BN4: telief Valve l		i ank C	apacity: 20.0	Gallons			
·			, Fressule i	cijet falve i	motaneu. i	10					
Static Water Level: 88.00 ft. E	3elow Grade	, , , , , , , , , , , , , , , , , , , ,		F 41	D		761-1	Depth to			
Well Yield Test:	Yield Test Me	thod: Test pump	· [	rormation	Description		Thickness	Bottom			
Pumping level 111,00 ft, after 1.50 hrs. at 11 GPM			Topsoil		·		2.00	2.00			
			Clay & Grav				3.00	5.00			
<u> </u>		*	Red Sand C				5.00	10.00			
Screen Installed: Yes	Filter Packed: No		Clay & Grav		··		18.00	28.00			
Screen Diameter: 5.00 in. Screen Material Type: Stainl	Biank: 1.00 ft. Abo		Clay & Grav		· · · · · · · · · · · · · · · · · · ·		5,00 37.00	33.00 70.00			
Slot Length	Set Between			Clay Sandy Soft 37.00 Clay & Gravel 60.00							
12.00 4.00 ft.	132,00 ft, and	136.00 ft.		Clay & Gravel         60.00         130.00           Sand & Gravel         5.00         135.00							
			Sand Heavi				1.00	136.00			
Fittings: Neoprene packer, Bot	itom plug										
							<del></del>				
	uting Method: Driver	, -		-			<u> </u>	<b> </b>			
Grouting Material Bags Bentonite dry granular 5.00	Additives [	Depth	Geology R	morket			<u> </u>	I			
Bornorine dry grantital 5.55	None		Geology IX	allia, ko.							
Wellhead Completion: Pitles	s adapter, 12 inches ab	ove grade									
		·									
				<del></del>							
Nearest Source of Possible Co		B1		chine Opera		Jeff Eskola		ł			
Type	Distance	Direction	Employme	nt: Employe	ee .						
Septic tank Drainfield/Dry well	225 ft. 250 ft.	South South	Contractor	Type: Wate	er Well Drilling	Contractor	Reg No; 2	2/13			
Draithed/Diy well	230 (t.	30001			nen & Eskola		_	1			
그 박일하는 일 사는 그가는 당하는					5961 Lake Lin			İ			
					Vell Contra						
			This well wa		ler my supervis			to the best of			
				ge and belie							
								1			
			Signature o	of Registere	d Contractor		Date				
General Remarks:											
Other Remarks: Tank Manufac	turer:Baron							1			



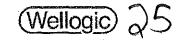
(Wellogic) 25

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

Failure to comply is a misdemeanor. import ID: Tax No: 31-012-177-007-00 Permit No: W0531079 County: Houghton Township: Schoolcraft Well Status: Source ID/Well No: Town/Range: Section: WSSN: 56N 32W 27 Active Well ID: 31000001698 Distance and Direction from Road Intersection: 1 mile east of Traprock Valley Road (\$641) on Lake Linden-Gay Road (\$562) on Elevation: Well Owner: Latitude: 47.21505 Well Address: Owner Address: Longitude: -88.36091 Method of Collection: GPS Std Positioning Svc SA Off Drilling Method: Cable Tool Pump Installed: Yes Pump Installation Only: No HP: 0.75 Well Depth: 180.00 ft. Well Use: Household Pump Installation Date: 7/15/2005 Well Type: New Date Completed: 7/15/2005 Manufacturer: Goulds Pump Type: Submersible Model Number: 10SB07412L Casing Type: Steel - black Height: 2.00 ft. above grade Pump Capacity: 10 GPM Casing Joint: Welded Drop Pipe Length: 100,00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: 1,00 in. **Drilling Record ID:** Draw Down Seal Used: No Diameter: 6,00 in, to 176,00 ft, depth Pressure Tank Installed: Pressure Relief Valve Installed: No Borehole: 6.00 in, to 180,00 ft, depth Static Water Level: 80.00 ft. Below Grade Depth to Thickness Formation Description Bottom Well Yield Test: Yield Test Method: Test pump Pumping level 84:00 ft. after 1.00 hrs. at 14 GPM 2.00 2.00 Topsoil Red Clay & Gravel 20.00 22.00 Clay & Boulders 3.00 25.00 Screen Installed: Yes Filter Packed: No Clay & Gravel Sandy Hard 10.00 35.00 Clay & Gravel Screen Diameter: 5.00 in. Blank: 1.00 ft. Above 2.00 37.00 Screen Material Type: Stainless steel-wire wrapped Boulders 5.00 42.00 Clay Sandy Soft Slot Length Set Between 6.00 48.00 8.00 176,00 ft. and 180,00 ft. 50.00 4.00 ft. Boulders 2.00 97.00 Clay & Gravel Soft 147.00 Clay Sandy Soft 11.00 158,00 Fittings: Neoprene packer, Bottom plug Clay & Stones Gravely 160.00 2.00 Clay Sand Gravel 14.00 174.00 Well Grouted: Yes Grouting Method: Driven/dry grout Clay & Sand Silty 1.00 175.00 Grouting Material Additives Depth (Continued On Page 2) Bags 0.00 ft. to 176.00 ft. Bentonite dry granular 7.00 None Geology Remarks: Wellhead Completion: Pitless adapter, 12 inches above grade Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** Jeff Eskola Direction Employment: Employee Type Distance Septic tank 60 ft. West Drainfield/Dry well 80 ft. West (Continued on page 2)



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



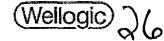
mport ID:

Tax No: 31-012-177-007-00 Permit No: W0531079 County: Houghton Township: Schoolcraft Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 32W Active Well ID: 31000001698 Distance and Direction from Road Intersection: 1 mile east of Traprock Valley Road (S641) on Lake Linden-Gay Road (S562) on Elevation: Well Owner: Latitude: 47.21505 Well Address: Owner Address: Longitude: -88,36091 Method of Collection: GPS Std Positioning Svc SA Off

	· · · · · · · · · · · · · · · · · · ·	(Continued	from Page 1)
Formation Description	Thickness	Depth to Bottom	GEOLOGY REMARKS:
Sand & Gravel	2.00	177.00	4
Sand	3.00	180.00	<b>(</b>
			<u> </u>
			-
			4
			· · · · · · · · · · · · · · · · · · ·
		<u> </u>	<del>]</del>
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	<del> </del>	·	
	<del></del>		
	<del>  </del>		·
			Contractor Type: Water Well Drilling Contractor Reg No: 2413
		·	Business Name: Keranen & Eskola Well Drilling
	<del></del>		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 Pegistered Contractor Date



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



Failure to comply is a misdemeanor. import ID: Permit No: Tax No: County: Houghton Township: Schoolcraft Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 32W 26 Active Well ID: 31000001225 Distance and Direction from Road Intersection: 2 MILES EAST THEN 0.5 MILE NORTH OF INTERSECT OF TRAPROCK VALLEY Elevation: ROAD AND GAY ROAD Well Owner: Latitude: 47.217085 Owner Address: Well Address: Longitude: -88.340317 Method of Collection: Interpolation-Map Drilling Method: Rotary Pump Installed: Pump Installation Only: No Well Depth: 202.00 ft. Well Use: Household Pump installation Date: Well Type: New Date Completed: 9/11/1987 Manufacturer: F.E. Myers Pump Type: Submersible Casing Type: Steel - unknown Height: Model Number: SJ72-J711P Pump Capacity: 11 GPM Casing Joint: Welded Drop Pipe Length: 189.00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: **Drilling Record ID:** Draw Down Seal Used: Diameter: 6.00 in. to 25.00 ft. depth Pressure Tank Installed: Pressure Tank Type: Unknown Manufacturer: Amtrol Borehole: 8.00 in. to 25.00 ft, depth Model Number: 202 Tank Capacity: 30.0 Gailons Pressure Relief Valve Installed: Static Water Level: 18.00 ft, Below Grade Depth to Formation Description Thickness Well Yield Test: Yield Test Method: Unknown **Bottom** Pumping level 202.00 ft. after 1.00 hrs. at 2 GPM 5.00 5.00 Sand 16.00 Clay 11.00 186,00 202.00 Sandstone Screen Installed: No Intake: Bedrock Weil Grouting Method: Unknown Well Grouted: Yes **Grouting Material** Additives Bags Depth Neat cement 3.00 5.00 ft. to 25.00 ft. Geology Remarks: None Wellhead Completion: Pitless adapter **Drilling Machine Operator Name:** Nearest Source of Possible Contamination: Distance Direction Туре Employment: Unknown Septic tank North Contractor Type: Water Well Drilling Contractor Reg No: 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



Tax No:

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

Wellogic 27

Township: Osceola

Failure to comply is a misdemeanor.

County: Houghton

Permit No:

		_	Town/Range: 56N 33W	Section:	Well Status: Active	WSSN:	Source	e ID/Well No:
Well ID: 3100	0000123	8	Distance and D			ection;		
			0.75 MILE WES				341 THEN 0.7	5 MILE
Elevation:			NORTH ON EAS	ST CALUME	ET MICHIGAN			
Latitude: 47.204358	•		Well Owner:		r			
Longitude: -88.482354			Well Address:		ļ	Owner Addr	ess:	
Method of Collection: Inte	erpolation-Map					_		
Drilling Method: Rotary			Pump Insta	alled: Ye	<u> </u>	Pump ins	tallation Onl	v. No
Well Depth: 260,00 ft.	Well Use: House	ehold	Pump Inst			HP: 0.75		,,, ,,,
Well Type: New	Date Completed:	7/28/1993	Manufactu			Pump Ty	e: Submer	sible
Casing Type: Steel - unknown	Height:	,	Model Nun			-	pacity: 6 G	PM
Casing Joint: Welded			Drop Pipe		260.00 ft.	Pump Vo		
Casing Fitting: Drive shoe			Drop Pipe Draw Dow		i: No	Drilling R	ecord ID:	
Diameter: 6.00 in. to 42.00 ft. de	enth			ank Install				
	2001				Unknown			
			Manufactu	rer: Othe	r			
Borehole:	•	÷	Model Nun				pacity: 40.0	) Gallons
			Pressure F	Relief Valve	Installed:	No		
Static Water Level: 8.00 ft. Beld Well Yield Test:		thod: Unknown		Formation	n Description		Thickness	Depth to Bottom
Pumping level 260.00 ft, after 1.0		anour omainm	Loam Claye	y Sandy			4.00	4.00
			Boulders	<u></u>			18.00	22.00
` <u></u>			Sand & Silt				6.00 -	28.00
Screen Installed: No	Intake: Be	drock Well	Sand Silt G	ravel			12.00	40.00
			Hardpan				220.00	260.00
강화한 불교 기록 개를 가 있다.	프롤이를 발표를						<del></del>	<del> </del> -
								<del> </del>
		경취장 변경도	\$11 <u> </u>					
			<u></u> -					ļ
Well Grouted: No	And the state of t		in a second			<del></del>	<del></del>	<del> </del>
	명한 동안 동안다.				· · · · · · · · · · · · · · · · · · ·		<del></del>	<del> </del>
- 속에 오는 것은 말라면 보면하게 해 본 때 했다. - 것은 : 전기 이 그래를 기고급해가 당하였습			Geology R	emarks:		·		1
	그리다 함께 하는 명목							:
	-1	1	·					
Wellhead Completion: Pitless	adapter, 12 inches at	oove grade	[					1
The Carlotte Control of the Carlotte	(Adam)	i i i						·
Nearest Source of Possible Con	tamination:		Drilling Ma	chine Oper	ator Name:	S KARVAKK	(0	
Туре	Distance	Direction	Employme					
Sewer line	60 ft.	Northwest	Contract	Tues M.	1 14( )( O D D)	0.0.1		1000
					ter Well Drilling ARVAKKO WE		Reg No:	1888
			Business A		WINNWW ALE	re ouirrill	· ·	
		ng e indi			Well Contra	ctor's Ce	rtification	
				s drilled un	der my supervi			to the best of
			my knowled	ge and belie	ef.			
			· ,]					
			Signature o	of Registere	ed Contractor		Date	
General Remarks:	OON AID			<u> </u>		<u></u>	,	
Other Remarks: Tank Manufactu	rer:CON-AIR			<u> </u>				



Tax No:

County: Houghton

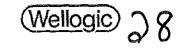
Section:

34

Well Status:

Active

Town/Range:



Source ID/Well No:

Township: Osceola

WSSN:

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

Permit No:

M-ILID, OAOOOOAOOO	<u> </u>	56N 33W	34	<u>Active</u>		<u> </u>		
Well ID: 31000001239	1	Distance and Direction from Road Intersection:						
The section of the se		1.5 MILES SOUTH OF OSCEOLA AND 800 FEET WEST OF THE ELECTRIC						
Elevation:		RK ROAD						
Latitude: 47.213803		Well Owner:						
Longitude: -88.48341	We	ell Address:			Owner Add	ress:		
Method of Collection: Interpolation-Map	-	. •						
inetriod of Collection: Interpolation-iviap		<u></u>					<del></del>	
Drilling Method: Cable Tool		Pump Insta	alled: No	· <del></del>				
Well Depth: 152.00 ft. Well Use: Household		Pressure T						
Well Type: Unknown Date Completed: 6/26/1984		1,			No			
Casing Type: Steel - unknown Height: 2.00 ft. above grad	le.	-(110330101)	CHOI FAIFE	, motunea,	110			
Casing Joint: Welded								
Casing Fitting: Drive shoe				[발발:16] [발] [발				
				검색하는 함정				
Diameter: 6.00 in, to 43.00 ft, depth								
1,41,100								
Borehole:						野 机甲基化		
		The first of		e selalah				
Static Water Level: 5.00 ft. Below Grade .		1				<b>T</b> 1.1.1	Depth to	
Well Yield Test: Yield Test Method: Unknow	wn	1	Formatio	n Description		Thickness	Bottom	
Pumping level 140.00 ft. after 2.00 hrs. at 7 GPM		Clay & Stones Sandy				18.00	18.00	
		Clay & Grav				24.00	42.00	
₹ *		Clay & Bou	ders Sand	/		3.00 -	45.00	
Screen Installed: No Intake: Bedrock Well		See Comm	ents			107.00	152.00	
<u> </u>								
l 마시크를 많다고 보는 그들을 받는 다음을 다 얼마 그 때 그렇다.		· [				<u> </u>		
[ 교육 등장 교육 및 독급 환경 기업 회 기업 회장 교육 등 기관 등 등급]								
		<u> </u>				<u></u>		
[기밀상병] : 이 사는 기업활성으로 2호 16 전 기업도 보고 18 H.		L				<u> </u>		
Well Grouted: No		<b></b>		<del></del>				
마스트를 발발하고 말을 모습니다 그렇게 살을 만나면 하다		L				l	l	
	\$1.50 m	Geology R						
	All Lie	PORTAGE	LAKE LAV	SERIES				
		-						
Wellhead Completion: 12 inches above grade		Į.						
<u></u>		5 70 . 14	13				<del></del>	
Nearest Source of Possible Contamination:  Type Distance Direction				rator Name:				
		Employme	nt: Onkno	wn				
Septic tank 75 ft. East		Contractor	Type: Me	ter Well Drilling	Contractor	Dan Nac d	1770	
Abandonad Wall Dlumada No		Business	lype, γγ∂ ۱/۸ نصصوا	rer wen Danné LLEX MELL &	DITMD	Reg No:	1//0	
Abandoned Well Plugged: No		Business A		LLET WELL &	PUMP			
Reason Not Plugged:		Dusilless P		Well Contra	- oá a via Ca	Historian		
Reason Not Plugged:		-					to the best of	
	1.47	my knowled		ider my supervi ef.	ision and this	reportis irde	TO HE DESCOL	
		1,	22 2110 001					
		Signature o	of Register	ed Contractor		Date		
General Remarks:								
Other Remarks:								



Well ID: 31000001452

Tax No:

## Water Well And Pump Record

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

County: Houghton

Town/Range: 56N 33W

Wellogic 2

Source ID/Well No:

Township: Osceola

WSSN:

Well Status:

35

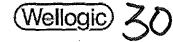
Distance and Direction from Road Intersection:

Failure to comply is a misdemeanor. Permit No: W9731071

Elevation:	ON GOLF COURSE ROAD ACROSS TH	1E ROAD FROM GOLF CLU	JB		
Latitude: 47.207	Well Owner:	<del></del>			
	Well Address:	Owner Address:			
Longitudes, -00.401404					
Method of Collection: Interpolation-Map		·			
Drilling Method: Cable Tool	Pump Installed: Yes	Pump Installation On	ly: No		
Well Depth: 66.00 ft. Well Use: Household	Pump Installation Date:	HP: 0.50	iy. No		
Well Type: New Date Completed: 9/22/1997	Manufacturer: Sta-Rite	Pump Type: Submer	rsible		
Casing Type: Steel - unknown Height: 2.00 ft. above grade	Model Number: 10P4C02J-0	Pump Capacity: 10			
Casing Joint: Welded	Drop Pipe Length: 50.00 ft.	Pump Voltage:			
Casing Fitting: Drive shoe	Drop Pipe Diameter:	Drilling Record ID:			
	Draw Down Seal Used: No				
Diameter: 6.00 in. to 46.00 ft. depth	Pressure Tank Installed: Yes				
	Pressure Tank Type: Unknown				
	Manufacturer: A.O. Smith		4		
Borehole: 6.00 in. to 66,00 ft, depth	Model Number: V100	Tank Capacity: 12.0	0 Gallons		
·	Pressure Relief Valve Installed:	No			
Static Water Level: 34.00 ft, Below Grade		<u> </u>	Depth to		
Well Yield Test: Yield Test Method: Unknown	Formation Description	n Thickness	Bottom		
Pumping level 55,00 ft. after 1,00 hrs. at 25 GPM	Clay & Gravel	16.00	16.00		
	Black Boulders	1.00	17.00		
·	Clay & Gravel	13.00	30.00		
Screen Installed: No Intake: Bedrock Well	Clay W/Stones Hard	7.00	37.00		
- 사용화활활동으로 대발하고하는 학교 회생은 이번 하고 밝혔	Clay & Gravel Hard	9.00	46.00		
그림은 물병이 있는 사람들은 얼마를 하는 것이다. 그 그는 그렇게	Unidentified Consolidated Fm	20.00	66.00		
(회생님: [발발] - [일말] 및 발발 - 발발 [기 점 - 기 시 시 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기 기			<u> </u>		
된 불의병자 하일로 불리 불빛이 얼마는 말을 때 다고 들어?		<del></del>	<del> </del>		
- 경찰, 함께 하는 아이들의 경찰, 함께 하는 사람들이 살아 있다.	₩.		<del> </del>		
연극은 바람들은 시작하는 연호를 보고 보다 하는 이 회에 있는 하는데	<u> </u>	<del></del>	<del> </del> -		
그는 어릴까 전하는 만을 가는 하면 통신인 하는데 그렇게 되었어?	·		<del> </del> -		
Well Grouted: Yes Grouting Method: Unknown			<del> </del>		
Grouting Material Bags Additives Depth			1		
Bentonite dry granular 4.00 None	Geology Remarks:				
	-				
Welihead Completion: Pitless adapter		~			
	<b>—</b>				
Nearest Source of Possible Contamination:	Drilling Mochine Operator Name:	IEEE ECKOLV			
Type Direction	Drilling Machine Operator Name: Employment: Employee	JEFF ESKOLA			
Septic tank 55 ft. South	Employment Employee				
oo iii oo dar	Contractor Type: Water Well Drilling	ng Contractor Reg No:	1722		
	Business Name: KERANEN WEL				
	Business Address:				
	Water Well Cont	ractor's Certification			
	This well was drilled under my super		to the best of		
	my knowledge and belief.				
	Signature of Registered Contracto	or Date			
General Remarks:					
Other Remarks:					
OP-2017 (4/2010) Page 1 of 1		State of Michigan 8/24	/2004 8:31 AX		



# 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:		<del></del>				
Tax No: 31-009-085-017-00	Permit No: W0831109	County: Hough			ownship: Os	
		1	Section:	Well Status:	WSSN:	Source ID/Well No:
Well ID: 310	00002062	56N 33W	35	Active	<del>_!</del>	<del></del>
l Mell ID. 210	00002002	Distance and D		*		
Elevation:		0.25 mile south	of Golf Cour	se Road on Old	County Road	on west side
Latitude: 47.20972		Well Owner:				
Longitude: -88.46073		Well Address:		ļo	wner Addres:	S:
Method of Collection: Gi	PS Std Positioning Svc SA Off	<u> </u>				
Drilling Method: Cable Tool		Pump Inst	alled: Ye	s	Pump Instal	lation Only: No
Well Depth: 180.00 ft.	Well Use: Household	Pump Inst	allation Dat	te: 9/5/2008	HP: 0.75	·
Well Type: New	Date Completed: 9/2/2008	Manufactu	rer: Red	Jacket	Pump Type:	Submersible
Casing Type: Steel - black	Height: 2.00 ft. above grade	Model Nur	nber: 750	21112G1	Pump Capa	city: 10 GPM
Casing Joint: Welded		Drop Pipe	Length: 1	169.00 ft.	Pump Voltag	ge:
Casing Fitting: Drive shoe		Drop Pipe	Diameter:	1.00 in.	<b>Drilling Rec</b>	ord ID:
		Draw Dow	n Seal Used	d: No		
Diameter: 6.00 in. to 38,00 ft. d	lepth	Pressure 1	fank Instali	ed: Yes		
		Pressure 1	Tank Type:	Diaphragm/bla	ıdder	
		Manufactu	rer Amtr	rol .		

Diameter: 6.00 in. to 38.00 ft. depth  Borehole: 6.00 in. to 180.00 ft. depth	Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Amtrol Model Number: BN8205 Tank Capacity: 34,0 Gallons Pressure Relief Valve Installed: Yes				
Static Water Level: 14.00 ft. Below Grade Well Yield Test: Yield Test Method: Bailer	Formation Description	Thickness	Depth to Bottom		
Pumping level 180.00 ft. after 1.00 hrs. at 6 GPM	Sand & Stones	2.00	2.00		
	Clay & Boulders	13.00	15.00		
·	Clay & Gravel Hard	15.00	30.00		
Screen Installed: No Intake: Bedrock Well	Basalt Broken	8.00	38.00		
│ 말하는 말하다 하고 않는 말로 말로 하는 다른 이 아니라 하는 말로 다.	Basalt '	142.00	180,00		
Well Grouted: Yes Grouting Method: Driven/dry grout			<del> </del>		
Grouting Material Bags Additives Depth Bentonite dry granular 9.00 None 0.00 ft. to 38.00 ft.  Wellhead Completion: Pitless adapter, 12 inches above grade	Geology Remarks:				
Magnet Source of Rescible Confirmination:	Drilling Machine Operator Names   James E	ckolo			

Wellhead Completion: Pitless	adapter, 12 inches	above grade	
Nearest Source of Possible Cor Type Septic tank	ntamination: Distance 50 ft.	Direction West	Drilling Machine Operator Name: James Eskola Employment: Employee
Drainfield/Dry well	70 ft,	West	Contractor Type: Water Well Drilling Contractor Reg No: 2413  Business Name: Keranen & Eskola Well Drilling  Business Address: 30330 Lincoln School Road, Calumet, MI, 49913  Water Well Contractor's Certification  This well was drilled under my supervision and this report is true to the best of my knowledge and belief.
er er er er er er er er er er er er er e			Signature of Registered Contractor Date



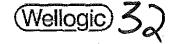
Wellogic 3

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

Failure to comply is a misdemeanor. Import ID: Tax No: Permit No: County: Houghton Township: Calumet Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 33W 36 Active Well ID: 31000001415 Distance and Direction from Road Intersection: 1.25 MILES NORTH ALONG HWY M26 FROM LAKE LINDEN Elevation: Well Owner: Latitude: 47,202523 Well Address: Owner Address: Longitude: -88,429232 Method of Collection: Interpolation-Map Drilling Method: Cable Tool Pump Installation Only: No Pump Installed: Well Depth: 250.00 ft. Well Use: Household Pump installation Date: HP: 0.75 Pump Type: Submersible Well Type: Unknown Date Completed: Manufacturer: F.E. Myers Height: 2.00 ft. above grade Pump Capacity: Casing Type: Unknown Model Number: SD7A21 Casing Joint: Threaded & coupled Drop Pipe Length: 231,00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Dlameter: **Drilling Record ID:** Draw Down Seal Used: Diameter: 5.00 in. to 58.00 ft. depth Pressure Tank Installed: Pressure Relief Valve Installed: No Borehole: Static Water Level: 55.00 ft. Below Grade Depth to Thickness Formation Description **Bottom** Well Yield Test: Yield Test Method: Unknown 48.00 48.00 Pumping level 250.00 ft. after 1.00 hrs. at 1 GPM Sand Clayey Red Sandstone 202.00 250.00 Screen Installed: No intake: Bedrock Well Well Grouted: No Geology Remarks: Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** Distance Direction Employment: Unknown Type Septic tank 100 ft. West Contractor Type: Water Well Drilling Contractor Reg No: 0154 Business Name: EDW SIRTOLA Abandoned Well Plugged: **Business Address:** Water Well Contractor's Certification Reason Not Plugged: This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor General Remarks: Other Remarks:



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



mport ID:

Failure to comply is a misdemeanor. Tax No: Permit No: W9931023 County: Houghton Township: Calumet Well Status: Town/Range: Section: WSSN: Source ID/Well No: 56N 33W 36 Active Well ID: 31000001450 Distance and Direction from Road Intersection: 1500 FEET SOUTHEAST OF GOLF COURSE ROAD Elevation: Latitude: 47.209512 Well Owner: Well Address: Owner Address: Longitude: -88.446683 Method of Collection: Interpolation-Map

<del></del>						
Drilling Method: Cable Tool	Pump Installed: Yes Pump Ir	stallation Only	/: No			
Well Depth; 65,00 ft, Well Use: Household	Pump Installation Date: HP: 0.5					
Well Type: New Date Completed: 12/15/1998	, ,	ype: Submers	ible			
Casing Type: Steel - unknown Height: 2.00 ft. above grade	Model Number: 10P4C025-0 Pump Capacity: 10 GPM					
Casing Joint: Welded	Drop Pipe Length: 40.00 ft. Pump V					
Casing Fitting: Drive shoe	_	Record ID:				
	Draw Down Seal Used: No					
Diameter: 6.00 in. to 28.00 ft. depth	Pressure Tank Installed: Yes					
,	Pressure Tank Type: Unknown					
	Manufacturer: A.O. Smith					
Borehole: 6,00 in, to 65.00 ft, depth	Model Number: V-60 Tank C	apacity: 6.0 0	Sallons			
	Pressure Relief Valve Installed: No	.,,.				
	,					
Static Water Level: 13.00 ft. Below Grade	B . (1 B . (1)	]	Depth to			
Well Yield Test: Yield Test Method: Test pump	Formation Description	Thickness	Bottom			
Pumping level 60.00 ft, after 1.00 hrs, at 8 GPM	Clay	3.00	3.00			
	Boulders	1.00	4.00			
·	Clay & Stones	4.00	8.00			
Green Installed: No Intake: Bedrock Well	Clay & Boulders	5.00	13.00			
1 1일 전 보고 있다. 하는 사람이 가는 사람이 되었다. 그런 말로 보는 것이 되는 것이 되었다. 1 1일 하는 것이 하는 것이 하는 것이 되었다. 그는 사람들이 되었다. 그는 것이 되었다. 그는 것이 되었다.	Clay & Stones	15.00	28.00			
[ - [ - [ - ]	Unidentified Consolidated Fm	37.00	65.00			
[일종] 그 전화로 하고를 하다고 통해된 하고 일종이를 하고 있었다. 중화 점						
[일본] 그리가 불통 물에 일반했다는 말을 하는 사람들은 살았다.						
보이는 경험을 가셨다고 되었다는 그 사람들은 기를 살았다.						
Well Grouted: Yes Grouting Method: Unknown						
Grouting Material Bags Additives Depth						
Bentonite dry granular 4.00 None	Geology Remarks:					
Wellhead Completion: Pitless adapter	]					
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: JEFF ESK	OLA ·				
TypeDistance Direction	Employment: Employee					
Septic tank 75 ft. Northeast						
	Contractor Type: Water Well Drilling Contractor	Reg No: 1	722			
	Business Name: KERANEN WELL & PUMP	-				
그들은 그 가는 그 작은 그리지만 되면 이 곳만이 한다.	Business Address:					
그 성도 이번 이 물었다. 현재가 가는 이 말았다. 본 다	Water Well Contractor's C	ertification				
그 얼마 하는 그는 그를 만들어 함께 받을 때 함께 된다.	This well was drilled under my supervision and thi	s report is true t	o the best of			
	my knowledge and belief.					
	(					
	Signature of Registered Contractor	Data				
General Remarks:	Signature of Registered Contractor	Date				
Other Remarks:	9	<del></del>				

MICHIGAN DEPARTMENT OF PUBLIC HEALTH GEOLOGICAL SURVEY NO. WATER WELL AND PUMP RECORD PERMIT NUMBER 1 LOCATION OF WELL Township Name Section Number Fraction Town Number Range Number Houghton Sci 14SU Schoolcraft NW 14SE 3 OWNER OF WELL: 0.6 mile W of Intersection of M-23 and Bootjack Road Addrass Street Address & City of Well Location Locate with "X" in Section Below Sketch Map: WELL DEPTH: Date Completed X New Well BOOTT ACK Driven Cable tool Rotary Dug Mallow rad Auger Jetted 6 USE: X Domestic Type I Public Type III Public

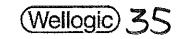
			Irrigation Type lia Public Hest pump
]			Test Well Type IIb Public
A MILE	•		7 CASING: X Stort Threaded Height, Above/Bolow
	THICKNESS	рерти то	6 in to 28 It depth   Surface 1.5ft.   Weight 8.97lbs./it
2 FORMATION DESCRIPTION	OF STRATUM	BOTTOM OF STRATUM	in to ft. depth
the same of the sa			Grouted Drill Hole Drameter Drive Shoe
Sand	4	4	in toti depth No
		1	8 SCREEN. X Not Installed
Sand-Clayey.	11	15	Type Diameter
			Slot/Gauze Length
Clay & Gravel	13	28	Set betweenft, andft.
		]	FITTINGS K-Packer Lead Packer Bromer Check
Sandstone	234	262	Blank above screen ft. Other
			9 STATIC WATER LEVEL
			115 ti. below land surface  Flow
>			10 PUMPING LEVEL: below land surface
		<u> </u>	262 N. alter 1 hrs. pumping at 6 G.P.M.
	J		ti. after hrs. pumping at G.P.M.
	1		11 WELL HEAD Pilless adapter 12 above grade
			Basement offset Approved pit
			12 WELL GROUTED? X No Yes From 10 11
		<del></del>	Near coment Bentonite Other
			No. of hags of cornent Additives
			13 Nearest source of possible contamination
•		<u> </u>	Type Barn Distance 100 / Direction S
•			Well disInfected upon completion? X Yes No
			Was old well plugged? Yes No
		ĺ	14 PUMP: Not Installed Pump Installation Only
ven and services as			Menutucluror's name Myers
	1		Model number \$2310 HP 1 Volts 230
			Length of Drop Pice 239 tt. capacity 12 G.P.M.
350			TYPE: Submersible Jet
(x // 150 -			PRESSURE TANK: Amtrol
57 , 50 , 50 , 50 , 50 , 50 , 50 , 50 ,			PRESSURE TANK: Amtrol Manufacturer's name 4202
USE A ZNO SHEET IF NEEDED			Model number 1/202 Capacity 30 Gallons
15. Remarks, elevation, source of data, etc.		This we	R WELL CONTRACTOR'S CERTIFICATION: Il was dulled under my jurisdiction and this report is true
4/4		]	est of my knowledge and helief.
		511	rtola Mell Drilling, INC. 1677 REGISTERED BUSINESS NAME REGISTRATION NO.
17. Rig Operator's Name: (X)		Address	Rte. 1, Box 386C Hancock, MI 499
Paul Ziemnick	•	Addition	06/30/92
		Signed	AUTHORIZED REPRESENTATIVE Date
67d 2/89 CED // 1000			Authority: Act 388 PA 1978 Completion: Required

OLL 4 1992 Complete Penalty:

Conviction of a violation of any provision is a misdemessor.

DEOLOGICAL SURVEY SAMELE NO.				
		WATER \	WELL REC	065 OF
1 LOCATION OF WELL	ownship Namo		Fraction	PUBLIC HEALTH Section Number Town Number   Range Number
E	SCHOOL C.	A AP T	5w %3	3W 43W4 31 756 N/S. R32 E/W.
Distance And Direction from Road to		. A.		3 OWNER OF WELL:
Baile west	· JAIRE L	10000		Address
Street Address & City of Well Locate	មា			·
Lucate with "X" or surring helps	N Sket	ich Map:		4 WELL DEPTH: (completed) Date of Completion
		/	,	165 11 6/15/72
	(			5 Cable tool Rotary Driven Dug Hollow rod Jutted Bored
				6 USE: Domostic Public Supply Industry
		}		Irrigation Air Conditioning Commercial
	W) X			Test Well  7 CASING: Thresdoo Welded Height: Above/Server
1 MILE		CARE & INDE	در	Diam. (Masdoo M) Welded   Height: Appya
2 FORMATION		THICKNESS	DEPTH TO BOTTOM OF	6 in, to 34 ft. Depth Weight 20 ibs./ft.
Contraction		STRATIM	STRATUM	tn. toft, Dupth   Drive Shou? Yes K No
TUP SOIL			1	8 SCHEEN: NONE Typo: Dia,;
				Slot/Gauze Lungth
SAND	**************************************	5	6	Sat between ft. and ft.
Alborate Par	- # <del>4</del>	19	120	Futings:
CLAY ! 120	<u> </u>			9 STATIC WATER LEVEL
PONSLOME	BATE	140	165	
				10 PUMPING LEVEL below land surface  11 6 11, after 4 hrs. pumping 5 0.p.m.
				11, arter /s. hrs. pumping 0.p.m.
				ft. after hrs. pumping g.p.m.
				11 WATER QUALITY In Parts Per Million:
				Iron (Fe) Chloridus (CI)
				HardnessOther
				12 WELL HEAD COMPLETION:   In Approved Pit
		<del></del>		Pittoss Adapter (2) 12" Above Grade  13 Wett Grouted? (1) Yes No
<b>{</b>				Neat Coment Bentonito A Dake MHD
,				Depth; From 0 ft. to 3/ h.
				14 Nuarest Source of possible confamination Type
1				Well disinfected upon completion X yes No
<b>.</b>				15 PUMP: Not installed
				Manufacturer's Name NAYERS
				Model Number 36-52-51 HP 5 Volts 23 5 Length of Drop Pipe 151 ft, copacity G.P.M.
	· , <del>, , , , , , , , , , , , , , , , , ,</del>			Type: S Submorable
- ,		_		
	EEDED			
16 Remarks, elevation of	data, etc.,	. I	17 WATER	WELL CONTRACTOR'S CERTIFICATION:
	•		to the be	II was drilled under my jurisdiction and this report is true est of my knowledge and betief.
1916 19 11 80	> v/&_		KO)	YKKA WELL DRILLING OOB!
				BOUTE I BARAGA MAKH 19908
			Augines /	DO 40/ 1/
	** * * * * * * * * * * * * * * * * * * *		Signud <u>(</u>	VIOLETTI MARINE DATE 2/23/73
NA7a · · · · ×				v when her her manual received





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

Tax No: Permit No:	County: Hou	ghton	T	ownship: S	choolcraft	
	Town/Range:	Section:	Well Status:	WSSN:	Source	ID/Well No:
W-IIID. 0400000075	56N 32W	32	Active	3720		Well # 7
Well ID: 31000000675			m Road Interse		,	
Claustians	NORTHEAST	SIDE OF LAK	E LINDEN OFF	OF 15TH ST	REET EXTE	ENDED
Elevation:		<del></del>				
Latitude: 47.202421	Well Owner:		7-			
Longitude: -88,397825	Well Address:		lo	wner Addres	ss:	
Method of Collection: GPS Std Positioning Svc SA Off			. [			
		-			· .	
Drilling Method: Rotary	Pump Ins	talled: No				
Well Depth: 230.00 ft. Well Use: Type I public	Pressure	Tank Installe	d: No			1
Well Type: New Date Completed: 8/20/2001	Pressure	Relief Valve	Instailed: N	lo		
Casing Type: Steel black Height: 3.00 ft. above grade			was a service of	general de la companya de la company		
Casing Joint: Welded						
Casing Fitting: None	i i jaga ya N	Nei jejitot				
DI						
Diameter: 8.00 in. to 207.00 ft. depth						
				i Ykubaki		
Borehole: 12.00 in, to 207.00 ft, depth				jirin ka		
8.00 in. to 227.00 ft. depth		93 BRIG.				
0.00 m. to 227.00 k. dopin						
Static Water Level: 0.00 ft. Above Grade (Flowing)						Depth to
Well Yield Test: Yield Test Method: Air	l	Formation	Description		Thickness	Bottom
Pumping level 190.00 ft. after 9.00 hrs. at 400 GPM	Red Sand	& Clay			0.00	10.00
	Clay & Gr	avel Sandy			.00	15.00
•	Sand & C				0.00	45.00
Unrestricted Flow Rate:		& Silt Soft			.00	50.00
Screen Installed: Yes Filter Packed: No		Hard W/Clay			5.00	75.00
Screen Diameter: 8.00 in. Blank: 11.00 ft. Above	See Comments				.00	80.00
Screen Material Type: Stainless steel-slotted	Sand				.00	89.00
Slot Length Set Between	·	Gravel & Sand Clay Gravel Sand W/Silt			.00 .00	92.00 95.00
20.00 ft. 207.00 ft. and 227.00 ft.	Clay Sand		<u> </u>		0.00	115.00
		avel Sandy			1.00	126.00
Fittings: Neoprene packer	Clay Sand				4.00	150.00
i italiga. Nooprono paolici	Sand Gra				0.00	160.00
Well Grouted: Yes Grouting Method: Unknown			(Continued C			
Grouting Material Bags Additives Depth	Geology	Remarks:				
Neat cement 78.00 None 0.00 ft. to 207.00 f	t. STRATUN	16: LAYERS	OF HARD AND	SOFT CLAT	WITH SILT	ļ
	l					
Wellhead Completion: 12 inches above grade	ĺ					
				4/11 1 5 4 4 5 Ph		
Nearest Source of Possible Contamination:	1 -	lachine Opera		WILLIAM B.		
Type Distance Direction	Employm	ent: Employ	ee			
Unknown	<u> </u>		(Continued	on nage ?	)\	
	<del> </del>		Continued	on page z	-1	
	\			•		
Constal Remarks, SCREEN HAS 7 ESET OF 20 SLOT 2 SEPT OF 40	SLOT AND 44	EEET OF FE	SLOT			
General Remarks: SCREEN HAS 7 FEET OF 20 SLOT, 2 FEET OF 40 Other Remarks:	OLOT, AND T	FEET OF 30	<u> </u>			

EQP-2017 (4/2010)

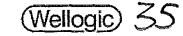
Page 1 of 2

State of Michigan

9/11/2002 12:10 PM



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 Town/Range: Section: Well Status: WSSN: Source ID/Well No: 56N 32W Active Well # 7 Well ID: 31000000675 Distance and Direction from Road Intersection: NORTHEAST SIDE OF LAKE LINDEN OFF OF 15TH STREET EXTENDED Elevation: Well Owner: Latitude: 47.202421 Well Address: Owner Address: Longitude: -88.397825 Method of Collection: GPS Std Positioning Svc SA Off

		(Continued	from Page 1)
Formation Description	Thickness	Depth to Bottom	GEOLOGY REMARKS:
Gravel & Stones W/Sand Coarse	7.00	167.00	.
Clay & Gravel Sandy	8.00	175.00	
Gravel & Sand W/Cobbles	5.00	180.00	
Gravel & Sand	7.00	187.00	
Clay Gravel Sand	5.00	192.00	
Clay & Gravel	7.00	199.00	
Clay Sand Gravel	3.00	202.00	
Sand & Gravel	9.00	211.00	1
Gravel & Cobbles	7.00	218.00	
Gravel & Clay W/Cobbles	2.00	220.00	]
Gravel & Sand	6.00	226.00	
Sand & Cobbles Coarse	6.00	232.00	
			1
			1
			-
			1
			1
			· .
<u>.</u>		·	<u> </u>
			1
			_
· · · · · · · · · · · · · · · · · · ·			1
	<del></del>		
			·
		······································	1
	<del></del>		
			,
	<del></del>	······································	Contractor Type: Water Well Drilling Contractor Reg No: 0575
			Business Name: KLEIMAN PUMP & WELL DRILLING
			Business Address:
			Water Well Contractor's Certification
·		<del></del>	This well was drilled under my supervision and this report is true to the best of my knowledge and belief.
<del></del>			Into vironicade auto pellez.
		<del></del>	
			Signature of Registered Contractor Date

GEOLOGICAL SURVEY NO WATER WELL AND PUMP RECORD PERMIT NUMBER Schoolciable LOCATION OF WELL Section Number Township Name Fraction Town Number Ranga Number County torch Lake 56 Houghton SWIM SEIM NEW 32 Distance And Direction From Road Intersection 3 OWNER OF WELL: Lynn or and server a more " " " 4" mile SW of "intersect" of \$652 & " day Gay Rd: . Addre: Street Address & City of Well Location Valley Rd., Lake Linden Address Same As Well Location? (X) Yes | No Locate with "X" in Section Below WELL DEPTH: Date Completed New Well Sketch Mao: 11 20 89 Replacement Well 57 ετ. 6 Cable tool X Rotary Driven Dug 🗌 Auger bor wollah barret 🔲 GAYRO 8 USE: XXX omestic Type I Public Type III Public Irrigation Typa lla Public Heat pump Test Well Type lib Public CASING: XSteel Threaded Height: Above/Briow Pisstlo X Welded Surface 1 ft. 6 In. to 54 It. depth DEPTH TO BOYTOM OF STRATUM THICKNESS Weight 18.97 lbs./ft. FORMATION DESCRIPTION 2 OF BUTARTE in. to \_\_\_\_\_ it. depth Grouted Drill Hole Diemeter XI Yes Drive Shoe \_\_\_\_\_ in, to \_\_\_\_\_ ft, depth □ No sand 21 21 in. to \_\_\_\_\_ it, depth 8 SCREEN: Johnson ☐ Not Installed sand, clayey 32 53 Type stainless Diameter 6" Stot/Gauze .010 Length \_ sand 4 57 Set between 54 \_ft. and \_\_57 FITTINGS: K-Packer Leed Packer Bramer Check Blank above screen \_\_\_\_\_ft. Other \_ 9 STATIC WATER LEVEL: 12 ft. below land surface
10 PUMPING LEVEL: below land surface Flow 57 ft. after 1 hrs. pumping at 4 G.P.M. \_\_\_\_ ft. after \_\_\_\_\_ hrs. pumping at \_\_\_\_\_ G.P.M. 11 WELL HEAD Pittess adapter 12' above grade COMPLETION: Basement offset Approved pit 12 WELL GROUTED? X No Yes From \_\_\_\_\_ to \_\_\_ ... Neat cament Bentonite Other\_\_\_ No. of bags of cement \_\_\_\_\_ Additives
13 Nearest source of possible contemination Type Beotic Distance 57 th Direction NW Wall disinfected upon completion? X Yes No Yes □ No Was old well plugged? 14 PUMP: ☐ Not Installed Pump Installation Only Manufacturer's name Myers Model number \$ 352-3511 Re 1 Length of Drop Pipe 52 X Submersible PRESSURE TANK: Manufacturer's name \_\_\_\_ Amtrol Model number #202 USE A 2ND SHEET IF NEEDER 18. WATER WELL CONTRACTOR'S CERTIFICATION: . 15. Remarks, elevation, source of data, etc. This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. Siirtola Well Drilling 1677 Hancock, Mi. REGISTERED BUSINESS NAME Rto 1, Box 17. Rig Operator's Name:

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

D67d 12/86

AUTHORIZED REPRESENTATIVE
Authority:
Completion:
Penalty:

Act 368 PA 1978

Required

Conviotion of a violation

of any provision is a

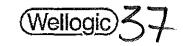
misdameanor,

Date 30NOV89

Paul Ziemnick



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



import ID:

Tax No: 3101218301700 Permit No: W0331024 County: Houghton Township: Schoolcraft Town/Range: Well Status: WSSN: Source ID/Well No: Section: 56N 32W 33 Active Well ID: 31000000777 Distance and Direction from Road Intersection: 1 mile east of S562 (Traprock Valley Road) on Post Road and 650 feet east Elevation: Latitude: 47.205128 Well Owner: ( Well Address: Owner Address: Longitude: -88.37003

Method of Collection: QQQ - Centroid Drilling Method: Cable Tool Pump Installed: Pump Installation Only: Yes Well Depth: 82.00 ft. Well Use: Household Pump Installation Date: 11/30/2003 HP: 0.50 Well Type: New Date Completed: 1/31/2003 Manufacturer: Goulds - Pump Type: Submersible Casing Type: Steel - black Pump Capacity: 10 GPM Height: 2.00 ft. above grade Model Number: 10SB05422 Casing Joint: Welded Drop Pipe Length: 50.00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: 1.25 in. Drilling Record ID: Draw Down Seal Used: No Diameter: 6.00 in, to 78.50 ft, depth Pressure Tank Installed: Pressure Tank Type: Other Manufacturer: Other Model Number: NT-40SS Borehole: 6.00 in, to 82.00 ft, depth Tank Capacity: 1.2 Galions Pressure Relief Valve Installed: Static Water Level: 42.00 ft, Below Grade Depth to Formation Description **Thickness** Bottom Well Yield Test: Yield Test Method: Test pump 1.00 1.00 Pumping level 63.00 ft. after 2.00 hrs. at 15 GPM Topsoil Sand & Gravel 5.00 6,00 Clay Sand Gravel 11.00 17.00 Screen installed: Yes Filter Packed: No Clay Sand Gravel Stoney 6.00 23.00 Clay & Gravel Sandy Screen Diameter: 5.00 in. Blank: 25.00 48.00 Screen Material Type: Stainless steel-wire wrapped Sand Very Fine 5.00 53.00 Clay & Sand Very Fine Set Between 2.00 55.00 Slot Length 61.00 8.00 78.50 ft. and 82.00 ft. Sand Very Fine 6.00 4.00 ft. Clay & Sand Very Fine 67.00 6.00 Clay Sandy 9.00 76.00 Clay & Sand Fine 4.00 80.00 Fittings: Neoprene packer, Bottom plug Sand Fine 2.00 82.00 Grouting Method: Driven/dry grout Well Grouted: Yes Grouting Material Bags Additives Depth 0.00 ft. to 78,50 ft. Bentonite dry granular 5.00 None Geology Remarks: Wellhead Completion: Pitless adapter, 12 inches above grade Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** Ted Keranen Туре Direction Employment: Employee Distance None Contractor Type: Water Well Drilling Contractor Reg No: 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 General Remarks: Other Remarks: Tank Type:In-Well Diaphragm/Bladder tank, Tank Manufacturer:In-Well Technologies, Inc.

FAX NO:  LOCATION OF WELL  COUNTY	MICHIGAN DEPARTN WATER WELL A Township Name	Fraction	IP REC	ORD Section No.	PERMIT NO: W 993 Town No.	Range No.
	SCHOOLCRAFT	ALE 1/4 M	5114 S G114	33	561	1 32 W
Distance and Direction from Acad Int  FIRE # 12.  Street Address & City of Well Location	3 ON POST RU	/A 17	OWNER Of Address     Address Saladress Sa		ation 😾 Yes	
ocale with 'x' in Section Below	Sketch Map		5. Cable T Hollow 6. USE: 7. CASING:	Rod A	21/98 U otary	New Welt Replacement Welt Driven Dug Jetter Dit Type Itt Public Heat Pump pht: Above/Belgw ace:
SANDY CLASANDY CLASANDY CLASANDY CLAS	Y 4 GRAVEL 38 4 GRAVEL 63 3'	BOTTOMOF   10'   48'   77'   140'	Diemeter:  BORE HOL Diameter:  8. SCREEN: Type, 57. SlovGauze Set Between FITTINGS:	Other	ft. depth  ft. depth  ft. depth  ft. depth  Gravel-Pa  Comment	oht: / F, FZ_lbs.  Drive Shoe  Shale Packer  scked  or
-	MESTE		9. STATIC WAR AND AND AND AND AND AND AND AND AND AND	ATER LEVEL:ft. Below Land LEVEL: Below Lft. After/ Bauler D COMPLETION: Adapter	Surface	
USE A 2ND SHEET  5. ABANDONED WELL PLUGGED  Casing Diameterin.	FREDED		13. NEAREST: Type 5 E Type 14. PUMP: Manufacture	SOURCE OF POS  (** *** /* ** /* ** /* ** /* ** /* **  Not Installed rs Name S ***	entonite CAdditives  SSIBLE CONTAMIN tance to fi.  Pump In.	ATION: Direction Sout I Direction stallation Only
PLUGGING MATERIAL:  CemenyBentonlie Slurry No. of Bags  BEMARKS: (Elevation, Source	☐ Neat Cement ☐ Bentonit ☐ Concrete Grout ☐ Bentonit ☐ Casing Removed? ☐ Yes ☐	te Chips	Length of D TYPE: PRESSURE	rop Pips // 3: Submersible TANK:	JERN HP LI Capacity  Jet Othe	//

17. DRILLING MACHINE OPERATOR:

Employee Subcontractor

GIV-2-226 9/03 MASTER LIO

CH.

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 bellef.

Model Number \_\_\_\_\_ V 60 ....

KERAMEN WELL 4 PUMP 31-172 REGISTRATION NO.

Address RIE, 1 130x 238 CNLUMET, MICH.

GECLOGICAL SURVEY COPY

Authority: Act 368 PA 1976 Completion: Required Penalty: Consistion of a violation of any provision is a misdemance.

Capacity 6 Gallons 20



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

Wellogic 39

Failure to comply is a misdemeanor. Import ID: Tax No: Permit No: W0131084 County: Houghton Township: Schoolcraft Town/Range: Well Status: WSSN: Source ID/Well No: Section: 56N 32W 34 Active Well ID: 31000000615 Distance and Direction from Road Intersection: 3/8 MILE WEST OF HILTUNEN X CUT ON GAY ROAD AND 200 FEET SOUTH. Elevation: Latitude: 47.21330852 Well Owner Well Address: Owner Address: Longitude: -88.34333328 Method of Collection: Interpolation-Map Drilling Method: Cable Tool Pump Installation Only: No Pump Installed: Well Depth: 107.00 ft. Well Use: Household Pump Installation Date: HP: 0.50 Well Type: New Date Completed: 6/8/2001 Manufacturer: Sta-Rite Pump Type: Submersible Casing Type: Steel - black Height: 2.00 ft. above grade Pump Capacity: 10 GPM Model Number: 10P4C02304 Casing Joint: Welded Pump Voltage: Drop Pipe Length: 95.00 ft. Casing Fitting: Drive shoe Drop Plpe Diameter: **Drilling Record ID:** Draw Down Seal Used: Diameter: 6.00 in. to 104.00 ft. depth Pressure Tank Installed: Pressure Tank Type: Unknown Manufacturer: Goulds Borehole: 6.00 in. to 107.00 ft. depth Model Number: V-80 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: Static Water Level: 90.00 ft, Below Grade Depth to Formation Description **Thickness** Bottom Well Yield Test: Yield Test Method: Test pump 42.00 Pumping level 101.00 ft. after 1.00 hrs. at 10 GPM Red Clay & Gravel Sandy 42.00 Clay & Gravel Sandy 62.00 104.00 Sand 3.00 107.00 Filter Packed: No Screen Installed: Yes Screen Diameter: 6.00 in. Blank: \*u Screen Material Type: Unknown Slot Length Set Between 10.00 4.00 ft. 104.00 ft. and 107.00 ft. Fittings: Unknown Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Additives Bags Depth Bentonite slurry 4.00 None Geology Remarks: Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: Drilling Machine Operator Name: Direction Туре Distance Employment: Employee Septic tank 120 ft. Southwest Contractor Type: Water Well Drilling Contractor Reg No: 1722 Business Name: Keranen Well & Pump **Business Address:** Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor General Remarks:



Tax No: 31-012-184-006-10

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

Wellogic 40

Township: Schoolcraft

Failure to comply is a misdemeanor.

County: Houghton

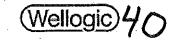
Permit No: W0731017

	•	1	wn/Range:	Section:	Well Status:	IWSSN	:  Sourc	e ID/Well No:
Wall ID: 31000			56N 32W	34	Active n Road Interse	-41		
VVCII 12. 01000	7001020				n Road interse y Road (S641) d		ad (9683) on	pouth elda
Elevation:		1,10	1110 Gast Of 11	aprock valle	y 10au (3041) C	ni Gay ING	ad (3302) on	south side
Latitude: 47.21338		We	Il Owner:					
Longitude: -88.36045	·	<del></del>	II Address:	_	Ō	wner Add	ress:	
		,			•			
Method of Collection: GPS St	d Positioning Svc SA Off							
Drilling Method: Cable Tool	<u> </u>		Pump Inst	alled: Yes		Dump In	stallation On	lv: No
· ·	Vell Use: Household				: 11/30/2006	HP: 0.75		. NO
•	Date Completed: 11/29/20	006	Manufactu				, r <b>pe:</b> Submer	rsible
Casing Type: Steel - black	Height: 2.00 ft. above		~{	nber: 10G			pacity: 10	
Casing Joint: Welded	-	-	Drop Pipe	Length: 1	21.00 ft.	Pump Vo		
Casing Fitting: Drive shoe			Drop Pipe	Diameter:	1.00 in.	Drilling F	Record ID:	
				n Seal Used				
Diameter: 6.00 in. to 164,00 ft. depth	h .			ank Installe				
1			1		Diaphragm/bla	ıdder		
B- 1-1- 0.00 in 1.000.00 in 1.00	_		Manufactu			T. 1.0	11 00 1	0.0-11-
Borehole: 6.00 in. to 168.00 ft. depth	3		1	nber: V60			pacity: 20.0	Gallons
			Pressure i	Relief Valve	Installed: Ye	35		
Static Water Level: 77.50 ft. Below	Grade	·····	<u> </u>					Depth to
Well Yield Test:	Yield Test Method: Te	st pump	ļ	Formation	Description		Thickness	Bottom
Pumping level 101.00 ft. after 3.00 hrs. at 15 GPM			Topsoil				1.00	1.00_
			Clay & Gra	vel Sandy			24.00	25.00
		<del></del> .	Boulders			-	1.00	26.00
	ilter Packed: No		Clay & Gra	vel Sandy			5.00	31,00
	lank: 1.00 ft. Above		Boulders				3.00	34.00
Screen Material Type: Stainless st			Clay	-10 -1-			18.00	52.00
Slot Length   10.00 4.00 ft.	Set Between 164.00 ft, and 168.00 ft.						49.00 2.50	101.00 103.50
7.00 4.00 k.	104.00 ft, all0 100.00 ft,		Clay & Gra				21.50	125.00
							8.00	133.00
Fittings: Neoprene packer, Bottom pl	lua		Sand Clayey Very Fine Clay				16.00	149.00
l and a second a second and a second a second and a second a second and a second and a second a second a second a second a second and a			Clay & Gravel Sandy			10.00	159.00	
Well Grouted: Yes Grouting	Method: Driven/dry grout		Sand Silty				4.00	163.00
	itives Depth				(Continued C	n Page 2)		
Bentonite dry granular 6.00 None	9 0.00 ft. to 1	160.00 ft.	Geology R	emarks:				
			4					-
Wellhead Completion: Pitless adap	oter, 12 inches above grade		ľ					
			-					
Nearest Source of Possible Contam	ination		Drilling Ma	chine Opera	tor Name:	eff Eskola		
Type	Distance Direct	ion		nt: Employe		OII FORUIG		
Septic tank	95 ft. Southe		,	···· =///p/0/			•	
Drainfield/Dry well .	100 ft. Southe	east			(Continued	on page	2)	
					,		•	
General Remarks:								
Other Remarks:								



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

Failure to comply is a misdemeanor.



mport ID:

Permit No: W0731017 Tax No: 31-012-184-006-10 County: Houghton Township: Schoolcraft Source ID/Well No: Town/Range: Section: Well Status: WSSN: 56N 32W 34 Well ID: 31000001920 Distance and Direction from Road Intersection: 1 mile east of Traprock Valley Road (S641) on Gay Road (S562) on south side Elevation: Well Owner: Latitude: 47.21338 Well Address: Owner Address: Longitude: -88,36045 Method of Collection: GPS Std Positioning Svc SA Off

	<del></del>	(Continued	from Page 1)
		Depth to	Hon Fage 1
Formation Description	Thickness	Bottom	
Sand	3.00	166.00	,
Sand & Gravel	2.00	168.00	į
Sand & Glaver	2.00	100.00	
	<del>                                     </del>		
		<del></del>	-
		<u> </u>	· · · · · · · · · · · · · · · · · · ·
	<del>                                     </del>		
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	<del>                                     </del>		·
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			}
·		-	·
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		<del></del>	
			· .
			·
			'
			Contractor Type: Water Well Drilling Contractor Reg No: 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.
	<u>_</u>		Signature of Registered Contractor Date
			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.

Tax No: 31-006-004-003-303	Permit No: W0831117	7 Cc	unty: Houg	hton	To	wnship: F	ranklin	
		To	wn/Range: 55N 33W	1	Well Status:	WSSN:	Source	D/Well No:
Well ID: 3100002059		Di		1 4	Active n Road Intersec	lon:		
VV011 12: 0100		•		,	Road on Electric		on south sid	le .
Elevation:								
Latitude: 47.19849			ell Owner					
Longitude: -88.49771		We	ell Address:		Ow	ner Addre	ss:	
Method of Collection: GPS	Std Positioning Svc SA Off						,	
						<u> </u>		
Drilling Method: Cable Tool	•	••	Pump Inst				allation Onl	y: No
Well Depth: 193.00 ft.	Well Use: Household			allation Date	<del>-</del>	HP: 0.75		
Well Type: New	Date Completed: 9/25/200		<b></b> ∤	rer: Red			e; Submer	
Casing Type: Steel - black Casing Joint: Welded	Height: 2.00 ft. above	grade	-	nber: 75C: Length: 1		Pump Cap Pump Volt	acity: 10 G	∍PIVI
Casing Fitting: Drive shoe				Diameter:		Drilling Re		
- Sing riding.	•			n Seal Used		<b>5</b> ,,,,,,	0014151	
Dlameter: 6.00 in. to 32.00 ft. dep	oth		Pressure T	ank Installe	d: Yes			
					Diaphragm/blac	ider		
	,		1	rer: Gould	<del>-</del>			
Borehole: 6.00 in. to 193.00 ft. de	pth			nber: V60 Relief Valve		•	acity: 20.0	) Gallons
ŧ			Pressure r	Kellet Valve	Installed: Yes	5		
Static Water Level: 11.00 ft. Beld	ow Grade		1			- 1		Depth to
Well Yield Test:	Yield Test Method: Ba	aller		Formation	Description		Thickness	Bottom
Pumping level 190.00 ft. after 1.00	hrs. at 4 GPM		Sand Fine				.00	2.00
			Clay Sandy				.00	10.00
			Clay W/Gra				9.50	29.50
Screen Installed: No	intake: Bedrock Well	107.47	Basalt Soft				.50	32.00
			Basalt			<del></del>	61.00	193.00
					1000 Care			
[ 시 전투의 회교 사회 사람 회원들이 한글로 제공합니다. 1995년 [ 한글로 기계 회 회 기계 회원원을 참 사용되기하기 원론								
			·					
Well Grouted: Yes Grouti	and the fire of a Date of the court	<u> </u>						
1	ng Method: Driven/dry grout dditives Depth	Į.					<del></del>	
l_ ~	one 0.00 ft. to 3	32.00 ft.	Geology R	emarks:			<del></del>	
			",					
Wellhead Completion: Pitless a	dapter, 12 inches above grade	:	1					ı
			-					
Nearest Source of Possible Cont	amination		Drilling Ma	chine Opera	tor Name: Ke	vin Kerane	n	
Type	Distance Direct	ion		nt: Employ		.viii itolalio		
Septic tank	70 ft. Southe							
Drainfield/Dry well	80 ft. Southe	east	Contractor	Type: Wat	er Well Drilling Co	ontractor	Reg No: 2	2413
· 特别的 经基础 (1000年) · 特别的		Marian I.			inen & Eskola We			
· 얼마면 조목보고 말다고 한말을 받아 있다는 그 일이다			Business Address: 30330 Lincoln School Road, Calumet, MI, 49913 Water Well Contractor's Certification					
								4-46-5-4-6
이 가는 그 바람이 얼마를				as drilled und Ige and belie	ler my supervisio: f.	ก สถอ เการ ก	eport is true	IO THE DEST OF
사진 경험을 하는 사용하는 것			1	J				
		· · · · · · · · · · · · · · · · · · ·	Signature	of Roginson	d Contractor		Date	
General Remarks:			poignature t	or tredistele	a contractor		Date	
Other Remarks:								



Wellogic) 42

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

Failure to comply is a misdemeanor. mport ID: Tax No: 31-006-410-012-00 Permit No: W08-31-113 County: Houghton Township: Franklin Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W Well ID: 31000002105 Distance and Direction from Road Intersection: .3 MILE E OF INTERSECT OF US 41 & HIGHWAY LOCATION RD Elevation:

Well Owner: Latitude: 47.192139

Well Address: Owner Address: Longitude: -88.499808

Method of Collection: Section - Centroid Drilling Method: Rotary Pump Installation Only: No Pump Installed: Yes Well Depth: 38.50 ft. Well Use: Household Pump Installation Date: 8/25/2008 HP: 0.50 Date Completed: 8/25/2008 Well Type: Replacement Manufacturer: Red Jacket Pump Type: Submersible Casing Type: PVC plastic Pump Capacity: 10 GPM Helght: Model Number: 50C201CN Casing Joint: Unknown Drop Pipe Length: 30.00 ft. Pump Voltage: . Casing Fitting: None Drop Pipe Diameter: 1.00 in. **Drilling Record ID:** Draw Down Seal Used: No Diameter: 6.00 in. to 35.50 ft. depth Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Amtrol Borehole: 6.00 in, to 38.50 ft, depth Model Number: PT2000 Tank Capacity: 20.0 Gailons Pressure Relief Valve Installed: Static Water Level: 9.00 ft. Below Grade Depth to Formation Description Thickness Bottom Well Yield Test: Yield Test Method: Air 35.00 35.00 Pumping level 38.50 ft. after 1.00 hrs. at 10 GPM Sand & Clay Clayey 38.50 Gravel 3.50 Screen Installed: Yes Filter Packed: No Screen Diameter: 5.00 in. Blank: Screen Material Type: Stainless steel-wire wrapped Slot Length Set Between 15.00 3.00 ft. 35.53 ft. and ? ft. Fittings: Neoprene packer Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Additives Bags Depth Bentonite dry granular 2.00 None 4.00 ft. to 38.50 ft. Geology Remarks: Wellhead Completion: Pitless adapter **Drilling Machine Operator Name:** Nearest Source of Possible Contamination: PAUL LAHTI Distance Direction Employment: Employee Type Pump Installer: ROBERT MANTTA Septic tank 80 ft. South Contractor Type: Water Well Drilling Contractor Reg No: 1677 Business Name: SIIRTOLA WELL DRILLING Abandoned Well Plugged; Yes 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

Other Remarks: EQP-2017 (4/2010)

No. of Bags: 5.00

General Remarks:

Casing Diameter: 24 in.

Plugging Material: Bentonite chips/pellets

Casing Removed: No

Well Depth: 10 ft.



Tax No:

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

**Wellogic** 

Township: Osceola

Failure to comply is a misdemeanor.

County: Houghton

Permit No: W0031032

		n/Range:	Section:	Well Status:	WSSN	: Source	e ID/Well No:
Well ID: 31000000550	-	5N 33W	l 3	Active m Road Interse	ection:		· · · · · · · · · · · · · · · · · · ·
				ECO RD. ON OL		Y RD. AND 50	0' EAST
Elevation:				,			
Latitude: 47.19198847		Owner:					
Longitude: -88.47309084	/Well	Address:		10	wner Add	ress:	
Method of Collection: Interpolation-Map				4			
		D 1 (	-111 >4			. (-11-11 0-1	
Drilling Method: Cable Tool Well Depth: 175.00 ft. Well Use: Household		Pump Inst	alled:     Ye allation Dat		Pump in: HP: 0.50	stallation Oni	y: NO
Well Type: New Date Completed: 11/2/2000		Manufactu				, pe: Submer	sible
Casing Type: Steel - black Height: 2.00 ft. above grad			nber: 10F			apacity: 10 (	
Casing Joint: Welded			Length: 8	30.00 ft.	Pump Vo		-
Casing Fitting: Drive shoe		Drop Pipe			Drilling F	Record ID:	
Diameter: 6.00 in. to 57.00 ft. depth			n Seal Used ank Install				
Diameter. 0.00 in. to 07,00 in. depar				Unknown			
			rer: Amtr				
Borehole: 6.00 in. to 175.00 ft. depth			nber: WF			apacity: 32.0	) Gallons
	·	Pressure F	Relief Valve	Installed: N	0		
Static Water Level: 9.00 ft. Below Grade Well Yield Test Method: Test pu	ımn		Formatio	n Description		Thickness	Depth to Bottom
Pumping level 60,00 ft. after 1.00 hrs. at 20 GPM		Topsoil			<del></del>	1.00	1.00
, <del>-</del>		Clay & San				3.00	4.00
		Clay Sandy		*********		7.00	11.00
Screen installed: No Intake: Bedrock Well		Clay & Grav		ed Fm Hard		46.00 118.00	57.00 175.00
	·	Onwennie	I Consolida	eo riii nalo		110.00	173.00
솔ૂ루트 프립티 성도를 알다고 됐었는데 모르는 마음을							
医囊腺性静脉性 医皮皮质 医肾经性的 经正常证明 医				•			
그렇다는 폭마라 로벌을 잃는 살림으로 그는 네이트로 선							<del> </del> -
Well Grouted: Yes Grouting Method: Unknown							
Grouting Material Bags Additives Depth	Į.						<b></b> .
Bentonite dry granular 6.00 None	ľ	Geology R	emarks:				
Wellhead Completion: Pitless adapter							
· · · · · · · · · · · · · · · · · · ·							
Nearest Source of Possible Contamination:		Drilling Ma	china Onar	ator Name: J	IOE MOOF	, , , , , , , , , , , , , , , , , , ,	
Type Distance Direction		_	nt: Employ		OE MOON	<b>\L</b> .	
Septic tank	L		,				
······································		Contractor	Type: Wa	ter Well Drilling (	Contractor	Reg No:	1722
		Business Name: KERNANEN WELL & PUMP Business Address:					
	;	Jubilless F		Well Contrac	tor's Ca	rtification	
프랑이 말을 가야 봤는데 됐는데 한다는 건물을 다기		This well wa		der my supervisi			to the best of
			lge and beli			•	
		Signature o	of Register	ed Contractor		Date	
General Remarks:				· ·			
Other Remarks:							

NEOLOGICAL BURVEY SAMPLE No.	<u> </u>				
<i>,</i>		WATER \	WELL REC	CORD	MICHIGAN DEPARTMENT
1 LOCATION OF WELL		ACI ZU			PUBLIC HEALTH
Township Township	dano -	<i>(</i>	Fraction	المستداسة بدرام	Sportion Number   Town Number   Rungo Number   S   S   Kale   S   We   S   We   S   We   S   S   S   S   S   S   S   S   S
HOUGHTON OCE Distance And Direction from Road Intersection ABOUT I MILE EA U.S. 4 AT ALGHWI	18	· · · · · · · · · · · · · · · · · · ·	12642	3 OWNER OF W	5 55 MVs. 37 WE/W.
ABOUT IMILE EA	SYO		19		<del>-</del>
U.S. 41 AT HUGHWI	94 20	<i> </i>		Address	
Street address & City of Well Location CA	CUME Shore	7 14	1074	A ment mention	(completed) Date of Completion
	, akaic	. wabi			
				5 Cable too	11. NOV 18, 1976.
				Hollow re	od Jetted - Bared (*)
				6 USEI Domi	
			i	∐irriga ∏Tost	
					eaded Wolded Holght: Abavo/Balow
1 MILE	<del>- Samueles (199</del> 5)	THOUNTAG	PAGEN YO	1	Surface The
2 FORMATION		THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	1	11. Depth Weight P. 45 bs./h.  It. Depth Drive Shoo? Yes (No [])
	***************************************	) OINSTOR		8 SCREEN:	ft, Depth   Drive Shoe? Yes A No
SAND.		8	8	Туре:	Dla.:
SAND RUCKY ORAUE BED-ROCK	~ ,	6	(10)	į.	Langth
NOEKY GRADE	, <del>f</del> ,,,,,,,			Set between Fittings:	ft, andft.
BED-ROCK		39	53		,
				9 STATIC WATE	
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				t, below land surface VEL below land surface
					t, after his, pumping 74 g.p.m.
	<del></del>		<del></del>		
		ļ			t, ofterhrs, pumping g.p.m.
				1	LITY in Parts Per Millions Chlorides (CI)
				)	
				Hardness	Other
				l E	COMPLETION: In Approved Pit
	<del></del>				loss Adapter 12" Aboye Grode
					ment   Bantonite   .
				Depth: From	
1	· • · · · · · · · · · · · · · · · · · ·	<u> </u>	· · · · · · · · · · · · · · · · · · ·		ce of possible contamination  VOLT (biraction JEPT (C Type
			Ì	, -	oted upon completion X Yes No
		1		16 PUMP:	Not installed  B Name MUERS
	•			Manufacture	
			·	Model Numb	op Pipo # 11. capacity G.P.M.
	•			Type: 🔀 S	
				] Je	1
				,	
16 Remarks, elevation, source of data, et	 B.	f	17 WATER	VELL CONTRAC	CTOR'S CERTIFICATION:
1 .			This well		or my jurisdiction and this report is trus
109					NAME REGISTRATION NO.
<i>:</i>					
			Address	RTE /	HAUCUCK MICH
			\$igned (	Viva I	Lie ( ) Date 11 /2 7 /7 ()
067d 100M (Rev. 12-68)	C 1 % 10	7/5	CAR.	AUTHORIZZO REPT	RESERVATIVE



Wellogic 45

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

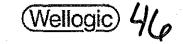
18X No: 31-009-002-013-00   Permit No: VV04-31-371	County: Houghton   Lownship: Osceola						
·	Town/Range: Section: Well Status: WSSN: Source ID/Well No:						
Well ID: 31000001532	55N 33W 2 Active						
Won 1D. 01000001002	Distance and Direction from Road Intersection:  0.1 MILE NORTH OF INTERSECTION OF GOLF COURSE ROAD AND						
Elevation:	HENDRICKSON ROAD						
Latitude: 47.185448	Well Owner:						
· Longitude: -88.447082	Well Address: Owner Address:						
Method of Collection: Interpolation-Map							
Drilling Method: Rotary Well Double, 404 00 ft. Mall Lines, Household	Pump Installed: Yes Pump Installation Only: No						
Well Depth: 401.00 ft. Well Use: Household Well Type: New Date Completed: 12/10/2004	Pump Installation Date: HP: 1.50  Manufacturer: Red Jacket Pump Type: Submersible						
Casing Type: Steel - unknown Height: 1.50 ft. above grad							
Casing Joint: Welded	Drop Pipe Length: 360.00 ft. Pump Voltage:						
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Record ID:						
Diameter; 6.00 in. to 26.00 ft. depth	Draw Down Seal Used: No Pressure Tank Installed: No						
4.00 in. to 381.00 ft. depth	Pressure Relief Valve Installed: No						
100 m to 00 100 m topal	Treadule Notes 74170 Material 150						
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	Depth to						
Well Yield Test: Yield Test Method: Air	Formation Description Thickness Bottom						
Pumping level 401.00 ft. after 1.00 hrs. at 6 GPM	Sand Clayey 2.00 2.00						
	Basalt 308.00 310.00						
Screen Installed: No Intake: Bedrock Well	Sandstone 91,00 401.00						
The second secon							
는 보통하는 것이 되었다. 그런 그는 사람들은 보통 사람들이 되었다. 그는 사람들은 사람들은 사람들은 사람들이 되었다. 사용물에 보통하는 것이 되었다. 보통 기본 사람들은 기본 기본 사람들이 되었다. 그는 것은 사람들이 되었다. 그는 것이 되었다.							
[ 후 발급 : [ [ [ [ [ ] ] [ ] ] [ ] [ ] [ ] [ ] [							
Well Grouted: Yes Grouting Method: Unknown							
Grouting Material Bags Additives Depth Neat cement 10.00 None 4.00 ft. to 26.00	0.4						
Neat cement 10.00 None 4.00 ft. to 26.00	0 ft. Geology Remarks;						
Wellhead Completion: Pitless adapter							
<del></del>							
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL LAHTI						
Type Distance Direction	Employment: Employee						
None							
	Contractor Type: Water Well Drilling Contractor Reg No: 1677						
	Business Name: SIIRTOLA WELL DRILLING Business Address:						
	Water Well Contractor's Certification						
보이면 어떻게 됐다. 맞을 때문이 사람이 이 유범이	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: 31-009-002-005-00

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

County: Houghton



Township: Osceola,

Failure to comply is a misdemeanor. import ID:

Permit No: W1031009

		Town/Range:	1	Well Status:	WSSN:	Source	D/Well No:
Well ID: 3100000	19175	55N 33W	2	Active		<del></del> ــــــــ	
	12175	Distance and D					
Elevation:		0.25 mile east of	Old County	Road on Dover	Road on so	uth side	•
Latitude: 47.192268		Well Owner					
Longitude: -88.457283		Well Address:		0	wner Addre	ess:	
_	1.1			•			
Method of Collection: Section - Cent	1010			<del></del>			· · · · · · · · · · · · · · · · · · ·
Drilling Method: Cable Tool	······································	Pump insta			Pump inst	allation Onl	y: No
	se: Household	1 '		: 11/6/2009	HP: 0.50		
	ompleted: 11/6/2009	Manufactu				e: Submer	
	ght: 2.00 ft. above grade		iber: PEP			acity: 12 G	HM ·
Casing Joint: Welded Casing Fitting: Drive shoe			Drop Pipe Length: 18.00 ft. Pump Voltage: Drop Pipe Diameter: 1.00 in. Drilling Record ID:				:
Casing Fitting: Drive silve			บเลเทยเยา: า Seal Used		Diffilling Ke	coru ib;	
Diameter: 6.00 in. to 25,50 ft. depth			ank Installe				
				Diaphragm/bla	adder		
			rer: Well-				_
Borehole: 9.00 in. to 25,50 ft. depth		Model Num	iber: WM-	6	Tank Cap	acity: 20.0	Gallons
6.00 in. to 47.00 ft. depth		Pressure R	telief Valve	installed: Ye	es	·	
Static Water Level: 8.50 ft. Below Grade			Formation	Description		Thickness	Depth to
	d Test Method: Test pum			· · · · · · · · · · · · · · · · · · ·			Bottom
Pumping level 18.00 ft. after 2.00 hrs. at 15	GPM		vel Clayey V	V/Boulders		4.00	14.00
		Clay & Grav				3.00	17.00
Screen Installed: No	Intake: Bedrock Well	Basalt Brok Basalt	en			3.00 27.00	20.00 47.00
Screen mstalled: No	imake: Deulock Weil	Dasait	<del></del>			27.00	47.00
함께서 가득하다는 그 연기를 받을까지 않다							
					<del></del>		
			··				
보통 경기를 잃었다는 그리고 하는 그를 모르는 것이다.		14/4					
아들은 가족들을 들었다. 그리는 그 그래요 그를							
가 하시고 있다. 경우 중요 있는 사이 있는 것으로 되었다. 그는 사람들이 가득한 이 사람들이 가려왔다. 하수 사람들이 되었다.		等 <u></u>					
The District Agency Bases Date (1992)							
	od: Displacement plug			*****			
Grouting Material Bags Additives Neat cement 6,00 None	Depth 6.00 ft, to 25,50 ft,						L
Neat cement 6.00 None	6.00 II, 10.25,50 II,	Geology Re	emarks:	•			
	•						
Wellhead Completion: Pitless adapter, 12	2 inches above grade	<del></del>				•	
	and a grade						1
Nearest Source of Possible Contamination	n:	Drilling Ma	chine Opera	itor Name: J	ames Eskol	a	
Type Dista		1	nt: Employ		•		
Septic tank 50 ft.			ller: Ted				
Drainfield/Dry well 50 ft.	Northwest			er Well Drilling C		Reg No: 2	413
				nen & Eskola V			
		Business A		0330 Lincoln So			49913
		Th		Vell Contrac			40 4ho h 4 - 1
		my knowled		er my supervisi f	on and this r	epon is true	to the dest of
	and the second s	my kitowied	2- 4110 DOILG				
		<b>.</b>					
		JSignature c	t Registere	d Contractor		Date	
General Remarks:							
Other Remarks:							



County: Houghton

Town/Range: Section: Well Status:



Source ID/Well No:

Township: Schoolcraft

WSSN:

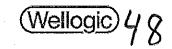
import ID: Tax No:

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

Permit No:

Well ID: 31000001281	55N 33W 1 Active	<u> </u>					
77611 ID. 3100000 1201	Distance and Direction from Road Intersection:  1.5 MILES NORTH OF HUBBELL AND 0.25 MILE EAST OF GO	NE COURSE					
Elevation:	ROAD	DEF GOONSE					
Latitude: 47.188573	Well Owner:						
Longitude: -88.445619	Well Address: Owner Address:						
<u>u</u>							
Method of Collection: Interpolation-Map							
Drilling Method: Cable Tool	Pump Installed: Yes Pump Installation	Only: No					
Well Depth: 175.00 ft. Well Use: Household	Pump Installation Date: HP: 0.50	Olliy. No					
Well Type: Unknown Date Completed: 7/8/1983	Manufacturer: Red Jacket Pump Type: Su	bmersible					
Casing Type: Unknown Height:	Model Number: 50W09BC Pump Capacity:						
Casing Joint: Welded	Drop Pipe Length: 136.00 ft. Pump Voltage:						
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Record II	o:					
	Draw Down Seal Used: No						
Diameter: 6.00 in. to 27,00 ft. depth	Pressure Tank Installed: No						
	Pressure Relief Valve Installed: No						
		and the second second					
Borehole:							
Static Water Level: 26.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknow	Formation Description Thickr	ness Depth to					
Pumping level 140.00 ft. after 1.00 hrs, at 9 GPM	Loam Sandy 1.00	1.00					
Pumping level 115,00 ft. after 4,00 hrs. at 6 GPM	Clay & Gravel Sandy 13.00	14.00					
	See Comments 161.00	175.00					
Well Grouted: Yes Grouting Method: Unknown							
Grouting Material Bags Additives Depth							
Neat coment 0.00 None 0.00 ft. to 25.00	ft. Geology Remarks:						
	JACOBSVILLE SANDSTONE						
		į					
Nellhead Completion: Pitless adapter							
Vearest Source of Possible Contamination:	Drilling Machine Operator Name:						
Type Distance Direction Animal yard/Feedlot 150 ft. Southeast	Employment: Unknown						
ulimai yaro/reediot 150 tt. Sodireast	Contractor Type: Water Well Drilling Contractor Reg	No: 1778					
Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor Reg No: 1778  Business Name: VALLEY WELL & PUMP						
	Business Address:						
Reason Not Plugged:	Water Well Contractor's Certificat	ion					
		This well was drilled under my supervision and this report is true to the best of					
	Signature of Registered Contractor D	ate					
General Remarks: Other Remarks:							
OD 2017 (4/2010) Page 1 of 1	State of Michigan	9/44/2004 2-26 DM					





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

Tax No:	Permit No:	County: Houg	<u>hton</u>		ownship:	Schoolcraft			
	·	Town/Range: 55N 33W	Section:	Well Status:	WSSN	: Source	e ID/Well No:		
Well ID:	31000001282	Distance and Direction from Road Intersection: 1.5 MILES NORTH OF HUBBELL AND 0.25 MILE EAST OF GOLF COURSE							
	0,0000								
Elevation:		ROAD	_						
Latitude: 47.1885		Well Owner Well Address:							
Longitude: -88.4		Well Audi 600.		1-	Milei Ver	1622.			
Method of Collect	tion: Interpolation-Map		<del></del>						
Drilling Method: Cal	ble Tool	Pump Inst	talled: Ye		Pump In	stallation Onl	lv: No		
Well Depth: 150.00 ft	t. Well Use: Household	Pump Inst	tallation Dat		HP: 0.50	0	-		
Well Type: Unknown		Manufactu		Jacket		ype: Submer:			
Casing Type: Unknot Casing Joint: Welded			mber: 50V Length: 1		Pump Ca Pump Vo	apacity: 6 Gl	PM .		
Casing Joint: Weide			e Lengtn; e Diameter:	130.00 11.		onage: Record ID:			
V4011.5 12-	, 0.100		vn Seal Used	d: No					
Diameter: 6.00 in. to	27.00 ft. depth		Tank Installe						
		Pressure	Relief Valve	Installed: N	lo				
Borehole:									
Static Water Level: 2	26.00 ft. Below Grade Yield Test Method: Unknown		Formatio	n Description		Thickness	Depth to Bottom		
	ft. after 1.00 hrs. at 9 GPM	Loam Sand	dv			1.00	1.00		
, , ,	ft. after 4.00 hrs. at 6 GPM	Clay & Gra	avel Sandy			13.00	14.00		
	-	See Comm				136.00	150.00		
Screen Installed: No	Intake: Bedrock Well			<u> </u>		<u> </u>	ļ		
	취임적인 종류점류 가는 집 반 이 반화설명		<del></del>			<del>                                     </del>	-		
						<del> </del>			
	공항하다 발로 무루하다 경우는 그렇게								
							<del> </del>		
	관련 목가 시작하면 관련되는 남자					-			
Well Grouted: Yes	Grouting Method: Unknown				<del></del>	<del></del>			
Grouting Material	Bags Additives Depth								
Neat cement	0.00 None 0.00 ft. to 25.00 ft.						<del></del>		
		JACOBSVI	ILLE SANDS	TONE					
Wellhead Completion	• Ottlace adapter								
Weilhead Completion	: Filess avapter								
						<u> </u>	<u> </u>		
	ssible Contamination:		achine Oper						
Type Animal yard/Feedlot	Distance Direction 150 ft. Southeast	Employme	ent: Unknov	Νn					
Алітаі уагил есою	100 II. Goutteast	Contracto	r Type: Wa	ter Well Drilling	Contractor	Reg No: 1	1778		
Abandoned Well Plug	iged: No			LLEY WELL & P		,,,,,	11.70		
	•	Business	Address:				·		
Reason Not Plugged:				Well Contrac					
			vas drilled und edge and belie	der my supervisi ef.	ion and this	s report is true	to the best or		
<u> </u>		Signature	of Register	ed Contractor		Date			
General Remarks:									
Other Remarks:									



### Water Well And Pump Record

Wellogic 49

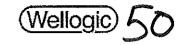
Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor. Import ID: Permit No: W0131136 Tax No: County: Houghton Township: Schoolcraft Town/Range: Well Status: WSSN: Source ID/Well No: Section: 55N 32W 5 Active Well ID: 31000000670 Distance and Direction from Road Intersection: 1/2 MILE NORTH OF BOOT JACK RD ON GIOCOLETTO RD AND 200' SOUTH Elevation: Latitude: 47.19290713 Well Owne Well Address: Owner Address: Longitude: -88.3852477 Method of Collection: Interpolation-Map Drilling Method: Cable Tool Pump Installed: Pump Installation Only: No Well Depth: 242.00 ft. Well Use: Household Pump Installation Date: Well Type: New Date Completed: 12/4/2001 Manufacturer: Goulds Pump Type: Submersible Casing Type: Steel - black Height: 2.00 ft. above grade Model Number: Pump Capacity: 10 GPM Casing Joint: Welded Drop Pipe Length: 200.00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: **Drilling Record ID:** Draw Down Seal Used: Diameter: 6.00 in, to 97.00 ft. depth Pressure Tank Installed: Pressure Tank Type: Unknown Manufacturer: Goulds Borehole: 6,00 in. to 242.00 ft. depth Model Number: V60 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: Static Water Level: 52.00 ft. Below Grade Depth to Formation Description Thickness Well Yield Test: Yield Test Method: Test pump Bottom Pumping level 150.00 ft. after 1.00 hrs. at 6 GPM Topsoil 1.00 1.00 Sand 1.00 2.00 Clay & Sand W/Gravel 16.00 18,00 Screen Installed: No Intake: Unknown Clay & Sand W/Gravel Sandy 75.00 93.00 97.00 Sandstone Soft 4.00 Sandstone 145.00 242.00 Well Grouted: Yes Grouting Method: Unknown Additives **Grouting Material** Bags Depth Bentonite slurry 5.00 Geology Remarks: None Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: Drilling Machine Operator Name: TED KERANEN Distance Direction Employment: Employee Туре Septic tank East Contractor Type: Water Well Drilling Contractor Reg No: 1722 Business Name: KERANEN 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 General Remarks:



Tax No:

## Water Well And Pump Record



Source ID/Well No:

Township: Schoolcraft

WSSN:

Well Status:

Active

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

County: Houghton

Section:

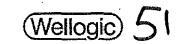
Town/Range:

55N 32W

Permit No: W02-31-019

	Distance and Direction from Road Intersection:  1 MILE EAST OF M-26 ON BOOTJACK AND 100' NORTH							
<u></u>	Maril Ourners							
	Well Owner: Well Address: Owner A	Address:						
Method of Collection: Interpolation-Map	· · · · · · · · · · · · · · · · · · ·							
Drilling Method: Cable Tool	Pump installed; Yes Pump	Installation Only: No						
Well Depth: 72.00 ft. Well Use: Household	Pump Installation Date: HP:	0.50						
Well Type: New Date Completed: 12/12/2001	<del></del>	Type: Submersible						
Casing Type: Steel - black Helght: 2.00 ft. above grade		Capacity: 10 GPM						
Casing Joint: Welded	<u> </u>	Voltage:						
Casing Fitting: Drive shoe	1	ng Record ID:						
Discussion C 00 in to 00 00 ft doubt	Draw Down Seal Used: No Pressure Tank Installed: Yes							
Diameter: 6.00 in. to 68.00 ft. depth	Pressure Tank Installed: Yes Pressure Tank Type: Unknown							
	Manufacturer: Amtrol							
Borehole: 6.00 in. to 72.00 ft. depth		Canacity: 20.0 Gallone						
Botenole, 6.00 hr. to 72.00 hr. depair	Pressure Relief Valve Installed: No							
	Tresearch terror transcription (	<u> </u>						
Static Water Level: Above Grade (Flowing) Well Yield Test: Yield Test Method: Test pump	Formation Description	Thickness Depth to Bottom						
Pumping level 65.00 ft. after 1.00 hrs. at 10 GPM	Gravel	1.00 1.00						
	Black Topsoil	4.00 5.00						
	Sand	16.00 21.00						
Unrestricted Flow Rate:	Clay Sandy	7.00 28.00						
Screen Installed: Yes Filter Packed: No	Clay & Gravel Sandy	31.00 59.00						
Screen Diameter: 6.00 in. Blank:	Clay Sandy	9.00 68.00						
Screen Material Type: Stainless steel-wire wrapped	Sand	4.00 72.00						
Slot Length Set Between								
12.00 4.00 ft. 68.00 ft. and 72.00 ft.								
Fittings: Neoprene packer								
Tanigot Noopiono paonoi	- Indianalities in the Control of th							
Well Grouted: Yes Grouting Method: Unknown								
Brouting Material Bags Additives Depth	Geology Remarks:							
Bentonite dry granular 4.00 None								
		· ·						
		1						
Vellhead Completion: Pitless adapter								
learest Source of Possible Contamination:	Drilling Machine Operator Name: TED KE	RANEN						
Type Distance Direction	Employment: Employee	( V U V ( V						
Septic tank 55 ft. West	Zimpioymonti Zimpioyee							
opio tam vion	Contractor Type: Water Well Drilling Contract	ctor Reg No: 1722						
	Business Name: KERANEN WELL & PUMP	,						
그는 경찰 그림 바다는 모양적 이 등 수를 근갖했다.	Business Address:							
	Water Well Contractor's	Certification						
	This well was drilled under my supervision and my knowledge and belief.	this report is true to the best of						
	Signature of Registered Contractor	Date						
Seneral Remarks:	1 - grinters or riogiotorou vortanotor							
Whor Romarks								





Tax No: Permit No:	Coun	ty: Hough	nton	To	wnship:	Schoolcraft	·		
Well ID: 21000001250		/Range: 5N 32W	Section: 4	Well Status: Active	WSSN:	Source	e ID/Well No:		
Well ID: 3100001250		Distance and Direction from Road Intersection:  0.4 MILE EAST OF INTERSECT OF S641 AND GIACOLETTO ROAD							
	ļ								
Latitude: 47.195721		Well Owner:							
Longitude: -88.382384	Well A	Address:	-	lon	vner Addr	ess:			
Method of Collection: Interpolation-Map									
Drilling Method: Rotary	I I	ump Insta				taliation Onl	y: No		
Well Depth: 262.00 ft. Well Use: Household	1		allation Date		HP: 0.75	O			
Well Type: New Date Completed: 9/15/1995 Casing Type: Steel - unknown Height: 1.50 ft. above gr		Manufactu Model Nur	rer: r.E.; aber: PEF			oe: Submer pacity: 10.0			
Casing Joint: Welded			Length: 1		Pump Vol		3C W		
Casing Fitting: Drive shoe	1	Orop Pipe	_		Drilling Re	_			
			า Seal Used		_ mmg				
Diameter: 6.00 in. to 113.50 ft. depth			ank installe			···	<del> </del>		
·	ļF	ressure T	ank Type:	Unknown			•		
	Į N	//////////////////////////////////////	rer: Amtro	ol			•		
Borehole:	1	iodel Nun			Tank Cap	pacity: 30.0	) Gallons		
	<b> </b> P	Pressure R	Relief Valve	Installed: No	•				
Static Water Level: 65.00 ft. Below Grade Well Yield Test: Yield Test Method: Unk	nown		Formation	Description		Thickness	Depth to Bottom		
Pumping level 162.00 ft, after 1.00 hrs, at 10 GPM		Sand Claye	У		1	52.00	52.00		
Pumping level 262.00 ft. after 1.00 hrs. at 20 GPM		Sand				3.00	60.00		
	s	Sand & Gra	vel Clayey			42.00	102.00		
Screen Installed: No Intake: Bedrock Well		Sravel Clay	ey	- <del></del>		11.50	113.50		
	<u> </u>	Sandstone				148.50	262.00		
	+ + + L						ļ		
사람들은 경우 1916년 1일 전 시민들은 아는 사람들은 사람들은 사람들은 사람들은 사람들이 되었다. 				·					
[ 중 본 경험: 12 12 12 12 12 12 12 12 12 12 12 12 12					<del></del> }-		<u> </u>		
, 불통한 도행복원 등록 상략하면 상황 등 경험은 이 경면 열차 등학	<b>-</b>						<del> </del>		
. 일본 등 프로젝트의 회사 프로젝트 (1922년 1922년 ) - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				****	<del></del>	····	-		
[물병하면도에게 먹다는 절보기 전투통원 특별사 학생 하는 기업 보다는 주	· -			<del>-</del>		-			
Well Grouted: Yes Grouting Method: Unknown									
Grouting Material Bags Additives Depth									
Bentonite slurry 0.00 None	G	Seology Re	emarks:		•				
Mr. Ob and Complete and Complet		-		•					
Wellhead Completion: Pittess adapter	[						f		
Nearest Source of Possible Contamination:	D	rilling Mad	chine Opera	ator Name: PA	AUL ZIEMI	√ICK			
Type Distance Directio			nt: Unknow						
Septic tank 100 ft. Northea:									
				er Well Drilling Co		Reg No: 1	1677		
法的基础证券 医乳毒性神经鞘 建高斯阿比尔斯斯氏菌	5. 1. 5			TOLA WELL DR	ILLING				
그리면 마시네이 작가는 얼마에 들어 걸었다. 그는 그리고 모	벁	lusiness A		AZ-11 O		(15) (1			
는 사람에 함께 많은 문학의 의학생들은 이 하늘만 한 것을 받는 것이다. 그는 것은 사람이 있는 	_	Indo according		Well Contract			te the best of		
			is onlied und ge and belie	ler my supervisio f	n and this	report is true	to the pest of		
그리고 그는 네글로 얼로 됐게 못 하시는 일반이다	Till	.,	J- Lile 00110	**					
		laneti	f Danister-	d Cantus -t		D-4-	ļ		
General Remarks:	[S	ignature c	n Kegistere	d Contractor	-	Date			
Other Remarks:									



Tax No: 310012-054-003-00



Source ID/Well No:

Township: Schoolcraft

WSSN:

Well Status:

Active

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

County: Houghton

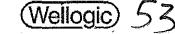
Section:

Town/Range:

55N 32W

1	Distance and Direction from Road Intersection:								
Elevation:	0.5 MI E OF INTERSECT OF BOOTJACK R	D & GREGOIRE RD							
Latitude: 47.19422	Well Owner:								
		wner Address:							
Longitude: -88.38267	<u>†</u>								
Method of Collection: GPS Std Positioning Svc SA Off									
Drilling Method: Rotary	Pump Installed: Yes	Pump Installation Only	: No						
Well Depth: 262,00 ft. Well Use: Household	Pump Installation Date:	HP: 0.75							
Well Type: New Date Completed: 9/19/2008	Manufacturer: Red Jacket	Pump Type: Submers							
Casing Type: Steel - black Height: 1.50 ft. above grade	Model Number: 75C211CNS1	Pump Capacity: 10 G	PM						
Casing Joint: Welded	Drop Pipe Length: 180.00 ft.	Pump Voltage:							
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in.	Drilling Record ID:	ł						
Diameters COO in the C7 EO ft doubt	Draw Down Seal Used: No Pressure Tank Installed: Yes								
Dlameter: 6.00 in. to 87,50 ft. depth	•	ddar							
·	Pressure Tank Type: Diaphragm/bla Manufacturer: Amtrol	iduel							
Borehole: 6.00 in. to 262.00 ft. depth	Model Number: WX202	Tank Canacity: 20.0	Gallons						
201010101 0.00 M. to 202.00 M. dop.m									
Static Water Level: 56.00 ft. Below Grade			Da-45 4a						
Well Yield Test: Yield Test Method: Alr	Formation Description	Thickness	Depth to Bottom						
Pumping level 262.00 ft, after 1.00 hrs. at 15 GPM	Sand Clayey	51.00	51. <u>00</u>						
	Clay	8.00	59.00						
	Sand & Gravel Clayey		87.50						
Screen Installed: No Intake: Bedrock Well	Sandstone Jacobsville Ss	174.50	262.00						
물론 프로토 등 승규가 그는 일까게 소설하는 건 없는데									
in 1864 de Reeg Elding Berlingsteine in de state alle 1908 auguste in de stein in de la teleparte. In 1864 Berling in de la State de Salanda de Salanda de Salanda de la teleparte in de la companyation de la co									
B '프로젝트는 '는 ' 글로 프로그램 프로젝트를 맞는 '로 있는 그 그 없.									
- 목표는 게 그리를 갖고 있는데 다른데, 등으로 함께 함께 등면 다른데 다른데 다른데 다른데 다른데 다른데 다른데 다른데 다른데 다른데									
공사 시대통하는 동안이 고양한 경기의 교육을 받았다.									
Well Grouted: Yes Grouting Method: Unknown									
Grouting Material Bags Additives Depth									
Bentonite dry granular 3.00 None 4.00 ft. to 87.50 ft.	Geology Remarks:		-						
Wellhead Completion: Pitless adapter									
Weintead Completion. Thiess adapter									
Nearest Source of Possible Contamination:	,	AUL LAHTI							
Type Distance Direction	Employment: Employee								
Septic tank 148 ft. Southwest	Pump Installer: ROBERT MANTTA Contractor Type: Water Well Drilling C	Contractor Reg No: 10	277						
	Business Name: SHRTOLA WELL DE	omacioi keg NO; ii	UI I						
	Business Address:	VICTIMO							
그리고면 하는 사람들을 보고 하는데 그들은 함마다.	Water Well Contract	tor's Certification							
	This well was drilled under my supervision		o the best of						
化磺基化物 医乳腺 医静脉性 基础 医二十二氏病	my knowledge and belief.	7.2 2.1 2.5 Extra # # # # #							
	Signature of Registered Contractor	Date							
General Remarks:	1 - Giataro o Cograterea contractor	Date							
Other Remarks:									



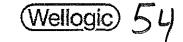


Tan Mar	Dawii Na	C		100	[+	en a la la com	· latt-		
Tax No:	Permit No:	Town/R	: Hough		Well Status:	wnship: Fran		e iD/Weil No:	
347 11 15 0400		1	33W	9	Active	110011	Journ	o ib, item ite.	
l Well ID: 3100	10001286				n Road Intersect	lon:	<u></u>		
Florestina	-				BOSTON ROAD A	ND US 41; W	ALTER	TERVO	
Elevation:			IDE PAR	gK .	_				
Latitude: 47.173646		Well Ow Well Ad				ner Address:			
Longitude: -88.510179	•	Mell Wil	laress.		low.	Ner Aduress. -	•		
Method of Collection: Interp	polation-Map						_		
n no . Man de Datas		In	luada	Tinal. No.					
Drilling Method: Rotary Well Depth: 102.00 ft.	Well Use: Type III public	<del>}</del>	mp insta	illed: No ank installe	d: No	<del></del>		<del></del>	
Well Type: Unknown	Date Completed: 10/1/1980	1		elief Valve				!	
Casing Type: Unknown	Height: 2.50 ft. above grade								
Casing Joint: Threaded & couple	ed								
Casing Fitting: Drive shoe							TATE OF SERVICE		
71	. It.	1:3							
Diameter: 4.00 in. to 29.00 ft. dep	ı <b>th</b>								
Sorehole:	,	1.5							
							ir naiste		
Static Water Level: 7.00 ft. Below Well Yield Test:	w Grade Yield Test Method: Unknow	<u>,,  </u>		Formation	Description	Thi	ickness	Depth to Bottom	
Pumpling level 35.00 ft. after 0.00 h			v Sandy	W/Boulders		27.00	0	27.00	
	not at 7 27		e Comme			75.00		102.00	
Screen Installed: No	Intake: Bedrock Well						<u> </u>		
								<del> </del>	
	- 클럽 15일 12일 12일 12일 12일 12일 12일 - 클릭 15일 12일 12일 12일 12일 12일 12일 12일 12일 12일 12	^						<del>                                     </del>	
소문하다. 이 기술로 가장된 경기 최근로 기술로 기술로 되었다. 이 기소로 기술로 가지 않는 기술을 가장 기술로 되었다.								<del></del>	
	- 일하는 것이 되었다는 사람들은 사이에 가는 것이다. 기계를 참고되었다.								
					<del></del>				
14. U O								<u> </u>	
Well Grouted: No									
		Geo	ology Re	marks:		<u> </u>		<u> </u>	
· 독대한당 구 / 기급점 발표된				A SERIES					
orani di Addini di di Agranga.	AND PRESENT THE PARTY OF THE PARTY OF THE								
Wellhead Completion: Unknown	1						•		
Nearest Source of Possible Conta			Ilina Mar	chine Opera	tor Name:				
туре	Distance Direction			it: Unknow					
Outhouse/Privy	125 ft. Northeast	<u> </u>							
		Cor	ntractor	Type: Wate	er Well Drilling Co	ntractor R	teg No:	1215	
Abandoned Well Plugged: No					I DEPT STATE H	łighways		-	
Passan Not Bluegod		Dus	siness A		Vell Contracto	o-la Cartifia	cotion		
Reason Not Plugged:		Thic	e well ura		er my supervision			to the heet of	
	·촉 제설화 소비 연료(달의			ge and belie		I driu uno ropo	H IO H GO	(O into book or	
				-				-	
		Siar	nature o	f Registere	d Contractor		Date		
General Remarks: WELL PERMIT	r NO. W-80-52-5001	1 9	11414		M			· · ·	
Other Demarket									



Tax No: 31-006-009-003-00

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



Township: Franklin

Failure to comply is a misdemeanor.

County: Houghton

		n/Range: 5N 33W	Section:	Well Status: Active	WSSN	Sourc	e ID/Well No:		
Well ID: 31000001987				n Road Interse	ection:				
,	Ł	0.4 mile southwest of Highway Road (F19) on Hwy US-41 on southeast side							
Elevation:									
Latitude: 47.18303		Owner:							
Longitude: -88,49793	Well	Address:		ļo	wner Add	ress:			
Method of Collection: GPS Std Positioning Svc SA Off	ı								
Drilling Method: Cable Tool		Pump Inst			-	staliation On	ly: No		
Well Depth: 207.00 ft. Well Use: Household	,	•		: 1/16/2008	HP: 0.75				
Well Type: New Date Completed: 1/15/2008		Manufactu				pe: Submer			
Casing Type: Steel - black Height: 2.00 ft. above grad Casing Joint: Welded			nber: 75C: Length: 1		Pump Ca	ipacity: 10	GPIM :		
Casing Fitting: Drive shoe			Diameter:			Record ID:			
and thing. Dive since			1 Seal Used		Draining i	todoja ibi			
Diameter: 6.00 in. to 25.00 ft. depth			ank Installe						
	[]	Pressure R	Relief Valve	installed: N	Ö				
Borehole: 6.00 in. to 207.00 ft. depth									
Static Water Level: 7.00 ft. Below Grade Well Yield Test: Yield Test Method: Bailer			Formation	Description		Thickness	Depth to Bottom		
Pumping level 200.00 ft. after 1.00 hrs. at 5 GPM		Clay & Boul	ders Sandy			25.00	25.00		
•	1	Basalt				182.00	207.00		
Screen Installed: No Intake: Bedrock Weil			<del></del>	·			<u> </u>		
Well Grouted: Yes Grouting Method: Driven/dry grout									
Grouting Material Bags Additives Depth									
Bentonite dry granular 8.00 None 0.00 ft. to 25.00	) ft.	Geology Re	emarks:				1		
	1								
Wellhead Completion: Pittess adapter, 12 inches above grade							1		
remede completion   moss desper, 12 mones above grade	-				•		İ		
Nearest Source of Possible Contamination:	1		chine Opera		Kevin Kerar	nen			
Type Distance Direction	E	Employme	nt: Employe	ee					
Septic tank 80 ft. South	-	- Contractor	Turnet 147 1		<u> </u>	- U	0440		
Drainfield/Dry well 100 ft. South				er Well Drilling ( inen & Eskola V		Reg No:	2413		
				0330 Lincoln Sc			49913		
	1	This well wa ny knowled	Water Vas drilled und ge and belie	Vell Contraction of the Mell C	ctor's Ce	rtification			
General Remarks:		- Hintolo (	rwgiatale		<del></del>	Date			
Other Remarks:									



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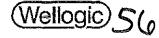
Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

Tax No:	Permit No:	WU131020	County: Houg	non	[10	wnsnip; C	zceoia				
		Town/Range: Section: Well Status: WSSN: Source ID/Well No:									
Well ID: 310	00000055	52	55N 33W 10 Active Distance and Direction from Road Intersection:								
			1 MILE EAST OF US-41 ON ONECO RD. AND 100' SOUTH								
Elevation:			·								
Latitude: 47.1829021			Well Owne								
Longitude: -88,4731329	99	I	Well Address:	Nell Address: Owner Address:							
Method of Collection:	nterpolation-Map			•							
Delition - Martina de Califa Tana				- N - d - V -		D		M.			
Drilling Method: Cable Too Well Depth: 75.00 ft.	Welf Use: Hous	sehold	Pump Inst	alled: Ye allation Dat		Pump Insta HP: 0.50	Illation Onl	y: No			
Well Type: New	Date Completed			rer: Red			e: Submer	sible			
Casing Type: Steel - black		00 ft. above grade		Model Number: 50F311-CN5 Pump Capacity: 10 GPM							
Casing Joint: Welded				Length: 4		Pump Volta	-				
Casing Fitting: Drive shoe			Drop Pipe			Drilling Re	cord ID:				
Diameter: 6.00 in. to 25.00 ft	denth			n Seal Used fank Installe							
Diameter. 0.00 iii. to 20.00 ii					Unknown						
			I	rer: Amtr							
Borehole: 9.00 in. to 25.00 ft	•		Model Nur			Tank Capa	acity: 20.0	Gailons			
6.00 in. to 75.00 ft	. depth		Pressure f	Relief Valve	Installed: No	_					
Static Water Level: 10,00 ft.	Below Grade		<del></del>					Depth to			
Well Yield Test:		ethod: Test pump	, [	Formation	n Description		Thickness	Bottom			
Pumping level 30.00 ft. after 1	.00 hrs. at 20 GPM		Clay & Gra			7	6.00	16.00			
•			Unidentified	d Consolidat	ed Fm Hard	5	9.00	75.00			
Screen Installed: No	Intake: B	edrock Well									
		얼마를 만질하다									
				·		—— <u> </u>					
				,							
	outing Method: Unki		<u> </u>				·				
Frouting Material Bags Veat cement 5.00	Additives None	Depth	Geology R	emarks:				L			
	110110		occiogy ic	cinai noi			•	l			
Vellhead Completion: Pitle	ss adapter		1				•	1			
		NA CONTRACTOR			-						
learest Source of Possible C			Drilling Ma	chine Oper	ator Name; JO	E MOORE					
уре	Distance	Direction		nt: Employ		-					
Septic tank	85 ft.	Southwest		<u></u>							
			Contractor	Type: Wat	er Well Drilling Co RANEN WELL & P	ontractor	Reg No: 1	1722			
			Business A		KANEN WELL & P	UMP	-				
					Well Contract	or's Cert	ification				
				as drilled und	der my supervision			to the best of			
			my knowled	lge and belie	ef.						
								1			
	1.51	· · · · · · · · · · · · · · · · · · ·	Signature of	of Registere	d Contractor		Date				
eneral Remarks: ther Remarks:						· · · · · · · · · · · · · · · · · · ·					
wier Weiligins:								3			



### Water Well And Pump Record

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



Import ID: Tax No:

Elevation:

Failure to comply is a misdemeanor. Permit No: W0331009 County: Houghton Township: Osceola Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W 10 Active Well ID: 31000000886 Distance and Direction from Road Intersection: 0.5 mile southeast on Oneco Road (O19) from Old County Road or Pit Road and then 300 feet southwest

Latitude: 47.18148 Well Owner Well Address: Owner Address: Longitude: -88.47237 Method of Collection: GPS Std Positioning Svc SA Off

Drilling Method: Cable Tool Pump Installed: Pump Installation Only: No Yes Well Depth: 115,00 ft. Well Use: Household Pump installation Date: 10/28/2003 HP: 0.50 Well Type: New Date Completed: 10/22/2003 Manufacturer: McDermott Pump Type: Submersible Casing Type: Steel - black Height: 2.00 ft. above grade Model Number: PEP3W52BA Pump Capacity: 12 GPM Casing Joint: Welded Drop Pipe Length: 100.00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: 1.00 in. Drilling Record ID: Draw Down Seal Used: No Diameter: 6.00 in. to 28.50 ft. depth Pressure Tank Installed: Yes Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Borehole: 9.00 in. to 28.50 ft. depth Model Number: V60 Tank Capacity: 20.0 Gallons 6.00 in, to 115.00 ft, depth Pressure Relief Valve Installed: No Static Water Level: 18.50 ft. Below Grade Depth to Formation Description **Thickness** Bottom Well Yield Test: Yield Test Method: Test pump Pumping level 85.00 ft. after 1.00 hrs. at 7 GPM Topsoil 1.00 1.00 Sand & Gravel Clayey 8.00 7.00 Basalt Broken 9.00 1.00 Screen Installed: No Intake: Bedrock Well Basalt 106.00 115.00 Well Grouted: Yes Grouting Method: Displacement plug **Grouting Material** Bags Additives Depth Neat cement 6.00 0.00 ft. to 28.50 ft. None Geology Remarks: Wellhead Completion: Pitiess adapter, 12 inches above grade **Drilling Machine Operator Name:** Nearest Source of Possible Contamination: Type Distance Direction Employment: Employee Septic tank Southwest Contractor Type: Water Well Drilling Contractor Drainfield/Dry well 55 ft. Southwest Reg No: 2413 Business Name: Keranen Well and Pump Business Address: 31005 Township Park Road, Calumet, Ml, 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 General Remarks:

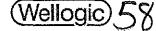


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Tax No:	Permit No:	County: Ho			Township:	Osceola			
		Town/Range 55N 33W	Section:	Well Status: Active	wssn:	: Source	e ID/Well No:		
Well ID: 31000	001214	Distance and Direction from Road Intersection:							
Elevation:		SOTHEAST (	ORNER OF I	NTERSECT OF	DOVER R	OAD AND 019	)		
Latitude: 47.170999		Well Owner.	•				·- ·		
Longitude: -88.4566		Well Address	S:	10	Owner Add	ress:			
	ation-Map	,		r					
		<u> </u>							
Drilling Method: Rotary Well Depth: 417.00 ft. W	Vell Use: Household	Pump Ir	stalled: Ye stallation Dat		Pump ins HP: 1.00	stallation Onl	y: No		
1 -	ate Completed: 10/18/1996	, .	turer: F.E.			vpe: Submer	sible		
Casing Type: Steel - unknown	Height: 2.00 ft. above grade		umber: PEl			apacity: 10 (	3PM		
Casing Joint: Welded Casing Fitting: Drive shoe		,	e Length: 2 oe Diameter:	245.00 ft.	Pump Vo	oltage: Record ID:			
odoling i talling.			wn Seal Used	l: No	Prining r				
Diameter: 6.00 in. to 26.00 ft. depth			Tank Install						
			Tank Type: turer: Amtr						
Borehole: 10.00 in. to 26.00 ft. depth	t .	Model N	umber: 250		Tank Ca	apacity: 60.0	) Gallons		
	Presșur	Relief Valve	Installed: N	VO .					
Static Water Level: 4.00 ft. Below G	irade		Formation	- Description	<u> </u>	Thickness	Depth to		
Well Yleid Test:	Yield Test Method: Unknown		<del></del>	n Description			Bottom		
Pumping level 220.00 ft. after 1.00 hrs	s. at 15 GPM	Gravel C Sandsto		2.30171.0M T-		9.00 408.00	9.00 417.00		
		Canadio				100.00			
Screen Installed: No	Intake: Bedrock Well								
<b>[注号: 12] [注: [注: [注: [注: [注: [</b>			<del></del>						
							<u> </u>		
민준은 불통 본 독생회를 하기됐다		·							
		And							
Well Grouted: Yes Grouting	Method: Unknown								
Grouting Material Bags Addi						·			
Neat cement 9.00 None	5.00 ft. to 26,00 ft	Geology	Remarks:						
					•				
Wellhead Completion: Pitless adap	ter								
anger in the state of the state	<u> </u>								
Nearest Source of Possible Contami	ination:	Drilling	Machine Oper	ator Name:	PAUL ZIEM	INICK			
Туре	Distance Direction	Employ	nent: Unknov	vn			,		
Septic tank	180 ft. East	Contrac	or Type: Wei	ter Well Drilling	Contractor	Reg No:	1677		
				RTOLA WELL D		1108 1101	, , ,		
		Busines	s Address:			4504			
		This wall		Well Contra der my supervis			to the best of		
			edge and belie		AUT OFFU THIS	s report to a ne	to the nest of		
	· · · · · · · · · · · · · · · · · · ·								
		Signatur	e of Registere	ed Contractor		Date			
General Remarks:  Other Remarks:									



### Water Well And Pump Record



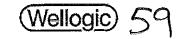
Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor. mport ID: Tax No: Permit No: County: Houghton Township: Osceola Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W 11 Active Well ID: 31000001290 Distance and Direction from Road Intersection: 0.5 MILE NORTH OF COUNTRY ROAD 019; 80 FEET EAST OF DOVER ROAD Elevation: Well Owner: Latitude: 47,178888 Well Address: Owner Address: Longitude: -88.45603 Method of Collection: Interpolation-Map Drilling Method: Cable Tool Pump Installed: Yes Pump Installation Only: No Well Depth: 122,00 ft. Well Use: Household Pump Installation Date: HP: 0.50 Well Type: Unknown Date Completed: 9/2/1977 Manufacturer: Burks Pump Type: Submersible Casing Type: Unknown Height: 2.00 ft. above grade Model Number: 5SN8B Pump Capacity: 7 GPM Casing Joint: Welded Drop Pipe Length: 115.00 ft. Pump Voltage: Casing Fitting: Drive shoe Drop Pipe Diameter: Drilling Record ID: Draw Down Seal Used: No Diameter: 5.00 ln. to 26.00 ft. depth Pressure Tank Installed: Pressure Relief Valve Installed: No Borehole: Static Water Level: 15.00 ft. Below Grade Depth to Formation Description Thickness Bottom Well Yield Test: Yield Test Method: Unknown 11,00 11.00 Pumping level 115.00 ft. after 1.00 hrs. at 6 GPM Clay Sandy Unidentified Consolidated Fm 111.00 122.00 Screen Installed: No intake: Bedrock Well Well Grouted: Yes Grouting Method: Unknown **Grouting Material** Additives Bags Depth Neat cement 0,00 Unknown 0.00 ft. to 26.00 ft. Geology Remarks: Wellhead Completion: Pitless adapter Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** Туре Distance Direction Employment: Unknown Septic tank 70 ft. East Contractor Type: Water Well Drilling Contractor Reg No: 1014 Business Name: VALLEY PLBG & HTG INC Abandoned Well Plugged: **Business Address:** Reason Not Plugged: Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor General Remarks:



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

### Water Well And Pump Record



Source ID/Well No:

Township: Torch Lake

WSSN:

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

County: Houghton

Town/Range: Section: Well Status:

W-IIID. 24000004722							
Well ID: 31000001722	Distance and Direction from Road Intersection:						
Classifications	0.75 mile northwest on Hendrickson Road or 21st Street from Hwy M-26 on						
Elevation:	southwest side						
Latitude: 47.18338	Well Owner:						
Longitude: -88,43544	Well Address: Owner Address:						
Method of Collection: GPS Std Positioning Svc SA Off							
Drilling Method: Cable Tool	Pump Installed: Yes Pump Installation Only: No						
Well Depth: 95.00 ft. Well Use: Household	Pump Installation Date: 10/22/2005 HP: 0.50						
Well Type: New Date Completed: 9/23/2005	Manufacturer: Goulds Pump Type: Submersible						
Casing Type: Steel - black Height: 2.00 ft. above grad							
Casing Joint: Welded	Drop Pipe Length: 81.00 ft. Pump Voltage:						
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in. Drilling Record ID:						
Di	Draw Down Seal Used; No						
Diameter: 6.00 in. to 27.00 ft. depth	Pressure Tank Installed: Yes						
	Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds						
Borehole: 9.00 in. to 27.00 ft. depth	Model Number: V60 Tank Capacity: 20.0 Gallons						
6.00 in. to 95.00 ft. depth	Pressure Relief Valve Installed: Yes						
0.00 112 (0.00.00 12 0.002)	10000000 100000 10000000000000000000000						
Static Water Level: 16.00 ft. Below Grade	Formation Deportation Thickness Depth to						
Well Yield Test: Yield Test Method: Baller							
Pumping level 95.00 ft. after 1.00 hrs. at 10 GPM	Sand & Stones 7.00 7.00						
Pumping level 70.00 ft. after 1.00 hrs. at 8 GPM	Sandstone Soft Broken 2.00 9.00						
Pumping level 60.00 ft, after 1.00 hrs. at 6 GPM	Sandstone Jacobsville Ss 86.00 95.00						
Screen Installed: No Intake: Bedrock Well							
그들고 하는 사람들이 그렇게 하루를 보고 되었다.							
<u> (불용도) : </u>							
- 전호 전면 이루바로 기타로 보고 전투 바이트 중요 () - 호텔 라마다							
- "소리는 이 이 전에 대한 시간에 되었다" 이 경우는 것이 되었다. 							
그들은 사람들 소설을 받는 수가 가끔하는 것 같아요. 그 나라고 살아							
그렇게 되는 경기 시기 있었습니다 가지 그 얼마나요?							
· 是記·基·罗·里尔 人类 把影音 PR 第二十二年 PR 下下下降。							
Well Grouted: Yes Grouting Method: Displacement plug							
Grouting Material Bags Additives Depth							
Neat cement 6.00 None 4.00 ft. to 27.00	00 ft. Geology Remarks:						
Wellhead Completion: Pitless adapter, 12 inches above grade	·						
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Jeff Eskola						
Type Distance Direction	·						
Fuel tank 65 ft. West	Employment Employee						
Septic tank 85 ft. West	Contractor Type: Water Well Drilling Contractor Reg No: 2413						
	Business Name: Keranen & Eskola Well Drilling						
로선링 (통리 인리 EE) 약을 리노트 스포트인	Business Address: 55961 Lake Linden Avenue, Laurium, MI, 49913						
海塞斯 医免疫性 医皮肤 医皮肤 医多种氏线	Water Well Contractor's Certification						
그런 선생님 아이는 전에 살았다. 살아 아니는 그를 가는 뜻했다. 네	This well was drilled under my supervision and this report is true to the best of						
	my knowledge and belief.						
살 회장들을 고급하다 사실한 병원들의 그리는 것이다.							
	Signature of Registered Contractor Date						
General Remarks:							
Ithar Romarke	4						

TAX NO:				UBLIC HEALTH PERMIT NO:	
1. LOCATION OF WELL	WATERW	/ELLA	יוטף סוי	PRECORD W 42 3/	0159
County	Township Name	9	Fraction	Section No. Town No.	Range No.
HOUGHTON	TORCH LA	KE	SE 1/4N	SIANENA IT 55N	33W
Distance and Direction from Road Int				3. OWNER OF WELL	
1/3 NILLE WE	ST OF MAL	RTH		Address	
LAKEVIEW AT	יטא יז כד עו	0771		***	<del>-</del>
Streat Address & City of Well Location	<u>n</u>			Address Same as Well Location 😾 Yes	□ No
Locate with 'x' in Section Below	\_X	Sketch Map		4. WELL DEPTH: Date Completed   X   192 II.   11795	New Well Replacement Well
	J KAR			S. X Cable Tool Rotary Dt	Odven Dug Isted Dug
	ST XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			6. USE: WHousehold Type I Public To Irrigation Type II a Public L Test Well Type II a Public L	
11.0	1 1/1/40			7. CASING: X Steel Threaded Help	hi: Above/Below
2. FORMATION DESCRIPTION		THICKHESS	DEPTH TO BOTTOM OF STRATUR	Plastic Welded Surf	ace: 2 t
SANDU CLAV		14'	STRATUM	Diameter: 6 in. to 2.5 ft. depth Wei	-
SANDY CLAY SANDSTONE		178	192	Dlametor: 8 in. to 25 ft. depth	Orive Shoe shale Packer
		•			
			<del> </del>	6. SCREEN: Not Installed Gravel-Pa	
				Type Diamet SlopGauze Length	
				Set Betweenit, and	
				FITTINGS: K-Packer Bremer C  Blank Above Screen (t. Other	heck
				9. STATIC WATER LEVEL:	flowing
212 1 35 38 december 11				1 d. PUMPING LEVEL: Below Land Surface  / SC ft. Alter / hrs. Pumping Plunger Bailer Alr	at 7 G.P.M.
				11; WELL HEAD COMPLETION:    Magnetic Pipess Adapter	4
					n <u>O</u> to 25 ft. Diher
	:			13. NEAREST SOURCE OF POSSIBLE CONTAMIN	ATION:
				Type S E PTIC Distance 90 ft.	
USE A 2ND SHEET			<u> </u>	14. PUMP: Not Installed Pump in	stallation Only
15. ABANDONED WELL PLUGGED Casing Diameter In.			•••	Manufacturer's Name STA - RITE	
PLUGGING MATERIAL:	Neat Cement	☐ Bentonite	Slurry	Model Number 10P4 Do27-02 HP Length of Drop Pipe 180 It. Capacit	V Volls 2 20 V (O G.P. M.
Cement/Bentonite Sturry No. of Bags	Concrete Grout	Bentonite Yes	Chips	TYPE: Submersible Jet Oth	
16. REMARKS: (Elevation, Source	Casing Removed?	188 LJ	ikn	PRESSURE TANK: Manufacturer's Name AMTROL	
19. DEBM mo: (Elakabett 2001ca	or Dala, Glo.)			Model Number 302 Capacity	6allons 20
		This we	ii was drilled	ACTOR'S CERTIFICATION: nder my jurisdiction and this report is true to the l	est of my
17. DRILLING MACHINE OPERATO		1	ige and belie ろんにん	WELL + PUMP 31-	1722
Employee Subcontract					172 2. REGISTRATION NO.
Name G, KERANE	YTANKITA	Address	RTE.	BOX 238 CALUMET, N	
M-2-228 923	1006	Signed	AUTHOR	Date 3	-14-96!



Tax No:

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



Township: Torch Lake

Failure to comply is a misdemeanor.

County: Houghton

		j	Fown/Range: 55N 32W	Section:	Well Status:	WSSN	: Source	e ID/Well No:			
Well ID: 3100	0001256	5 h	Distance and I	<del></del>		ection:	<u> </u>				
	000.200		0.5 MILE SOUT				EN TAILINGS	;			
Elevation:		L			=						
Latitude: 47.177593			Well Owner.								
Longitude: -88.421104		1	Vell Address:	,	Ι'	Owner Add	ress:				
Method of Collection: Interpo	olation-Map										
Drilling Method: Cable Tool			Pump inst		_		stallation Onl	y: No			
1 •	Well Use: Irrigatio			Pump Installation Date: HP: 1.00							
Well Type: Unknown	Date Completed:		_	urer: Red			/pe: Submer				
Casing Type: Unknown Height: 4.00 ft. above grade Casing Joint: Threaded & coupled				mber: 8C0 Length: 1		Pump Vo	apacity: 20 (	3PW			
Casing Fitting: Drive shoe				Diameter:	0,0.00 11.		Record ID:	•			
Diameter: 5.00 in. to 169.00 ft. depth				n Seal Used	l: No						
			Pressure	Tank Installe	ed: No						
			Pressure	Relief Valve	Installed:	No		_			
			ning Lucio muses	er of the term (Hi	r 44 india Helider Tetalytigta	A KE TAMPETS	nen sueune	en en en en en en en en en en en en en e			
Borehole:							15 At 3111311 - 15 44 4 5 5 5				
	•										
Static Water Level: 16.00 ft. Below	v Grade Yield Test Meth	nod: Hoknown		Formation	Description		Thickness	Depth to Bottom			
Pumping level 57,00 ft. after 2.00 hr		iou, otherothy	See Comm	nents			130.00	130.00			
			Red Clay S				14.00	144.00			
			Sand Clay				17.00	161.00			
	Filter Packed: No		Clay Sand	Grave!			5.00	166.00			
	Blank: *u		Clay				3.00	169.00			
Screen Material Type: Stainless:			Sand Fine	Water Bearir	19		3.00	172.00			
Slot Length 12.00 3.00 ft.	Set Between 169.00 ft, and 1	72 AA #					<del>                                     </del>	<del> </del>			
. 0.0016	100.00 1. 8110 1	72.00 It.				<u>-</u>	<del>                                     </del>				
		•									
Fittings: Unknown											
				··				, , , , , , , , , , , , , , , , , , ,			
Well Grouted: No		그림으로 그림 50	· · · · · · · · · · · · · · · · · · ·	·							
			Geology R	lamasikas			<u> </u>	L			
[본 ] 목록을 올라 있는 그리는 그루말				emarks: PER ORE TA	JLINGS						
선생 [ [ 12 12 12 12 12 12 12 12 12 12 12 12 12											
Wellhead Completion: Pitless add	apter				-						
	• 1 •		- In			<u> </u>					
Nearest Source of Possible Contai	mination: Distance	Direction	-	achine Opera ent: Unknov							
Type Lagoon	60 ft.	East	Employme	ent. Onknov	711						
	50 II.	_451	Contracto	r Type: Wat	er Well Drilling	Contractor	Reg No:	722 -			
Abandoned Well Plugged: No			Business	Name: VAL	LEY PLBG & F	HTG INC	,				
			Business	Address:							
Reason Not Plugged:	<del></del>		<b>⊣</b>		Nell Contra						
				as drilled und dge and belie	der my supervi: if.	sion and this	s report is true	to the best of			
		the state of the s	Signature	of Registere	d Contractor		Date				
General Remarks:		<del></del>									
Other Remarks:											



Tax No:

## Water Well And Pump Record

Wellogic 62

Source ID/Well No:

Township: Schoolcraft

WSSN:

Well Status:

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

County: Houghton

Section:

Town/Range:

Wall ID: 24000000046	<del> </del>	55N 32W	8	Active	<u></u>			
Well ID: 31000002046		Distance and Direction from Road Intersection:						
Elevation:		10.4 MILES NORTH OF INTERSECTION OF BOOTJACK ROAD AND RICE LAKE ROAD						
Latitude: 47.177364	<del></del>	Vell Owner:   Owner Address:						
Longitude: -88.390626	LAVE	ton Addiess; Owlet Addiess;						
Method of Collection: GPS Std Positioning Svc SA Off	ļ			.				
		1-						
Drilling Method: Rotary		Pump Insta			•	stallation Only	y: .No	
Well Depth: 73.00 ft. Well Use: Household Well Type: New Date Completed: 10/29/198	2.4	Pump Installation Date: 10/29/1984 HP: 0.50  Manufacturer: F.E. Myers Pump Type: Submersible						
Casing Type: Steel - black Height:	24	Model Number: SJ52-558 Pump Capacity: 8 GPM						
Casing Joint: Welded		Drop Pipe L			Pump Vo			
Casing Fitting: Drive shoe		Drop Pipe D				Record ID:		
		Draw Down		No				
Diameter: 6.00 in, to 69.50 ft, depth		Pressure Ta	nk Installed	i: Yes				
		Pressure Ta						
		Manufactur		te Signature				
Borehole: 6.00 in, to 73.00 ft, depth		Model Num				pacity: 42.0	Gallons	
		Pressure Re	illet valve li	nstalled: No			-	
Static Water Level: 0.00 ft. Above Grade (Flowing)		<del>                                     </del>					Depth to	
Well Yield Test: Yield Test Method: Unk	nown	1	Formation	Description	-	Thickness	Bottom	
Pumping level 73.00 ft. after 1.00 hrs. at 8 GPM		Sand				18.00	18.00	
-		Clay				38.00	56.00	
· !		Clay Sandy				12.00	68.00	
Unrestricted Flow Rate:		Sand				5.00	73.00	
Screen Installed: Yes Filter Packed: No		<u> </u>						
Screen Diameter: 6.00 in. Blank: Screen Material Type: Other				•.				
Slot Length Set Between		<del> </del>						
6.00 4.00 ft. 69.00 ft. and 73.00 ft.								
							·	
Fittings: Other		<u> </u>						
Well Grouted: No		1		<del>.</del>				
Yven Grouted: No		Geology Re	marke:					
그리다 이 교육들은 "걸 이름은 프라틴 어렸다	1 A.	Ceology Ne	iidi Ka,					
하는 어느 이 노에 가장되었다. 이 화일이 그녀가 무셨다		1						
		_		•				
Wellhead Completion: Pitless adapter								
10 10 11 0		B 100 57			317			
Nearest Source of Possible Contamination:  Type Distance Direction	\n	Drilling Mac Employmen	•		√K			
Type Distance Direction Septic tank 55 ft. North	751	Employmen	i. Oliknowi	1 -				
oop to the Holds		Contractor	ype: Wate	r Well Drilling Co	ontractor	Reg No: 1	677	
		Business Na	me: SIIRT	OLA WELL DR	ILLING	_		
				FE 1 BOX 386C,		CK, MI, 49930		
	**		Water W	ell Contract	or's Ce	rtification		
		This well was	drilled unde	er my supervisio	n and this	report is true	to the best of	
	•	my knowledg	e and belief					
	· .						,	
		Signature of	Registered	Contractor		Date		
General Remarks:	F101	EAD DEOVED						
Other Remarks: Screen Material: JOHNSON STAINLESS, Screen	_⊦ittings:Ll	EAD PACKER						

MICHIGAN DEPARTMENT OF PUBLIC HEALTH GEOLOGICAL SURVEY NO. WATER WELL AND PUMP RECORD PERMIT NUMBER LOCATION OF WELL Township Name Fraction Section Number County Town Number Range Number 55 N/S Houghton Sch
Distance And Direction From Road Intersection NE 4NH 14 NE14 Schoolcraft E/W 3 OWNER OF WELL: NE corner of intersect of 5641 and Drake Rd. Address Street Address & City of Well Location Bootjack Rd. Address Same As Well Location? Tyes X No. 4 WELL DEPTH: Date Completed No. 1 DAY | YEAR | New Well Locate with "X" in Section Below Sketch Map. 10 28 90 | Replacement Well 222 FT. 5 Cable tool N Rolary Daven Dug Hollow red neguA [\_] Jetted 6 USE X Domestic Type I Public Type III Public 1 Irrigation Type IIa Public Heat pump Test Well Type lib Public DRAKE RO CASING. Steet Threaded Plastic Welded Height, Above/8)(10/10) Surface 1.5 ft. 6 in to 119 is depth THICKNESS DEPTH TO BOTTOM OF Weight 18. 97hs./ft. 2 FORMATION DESCRIPTION OF STRATUM \_\_\_\_ in. to \_\_\_\_ \_\_\_ ft. depth MUTARTS Grouted Drill Hole Diameter X Yes Drive Shoe \_\_ in to \_\_\_\_\_ it depth O No Sand & Gravel 8 SCREEN: Not installed Sand Diameter \_ Type \_\_ Length \_\_\_\_\_ 74 8.7 Sand, Clayey ft. and \_\_\_\_\_\_ fi FITTINGS: K-Packer Lead Packer Bremer Check 93 Blank above screen \_\_\_\_\_\_ ft. Other \_\_\_\_ Sand & Gravel, Clayey 9 STATIC WATER LEVEL Flow 3 1t below land surface 10 PUMPING LEVEL: below land surface 26 119 Clay Sandstone 103 222 222 II. alter 1 hrs. pumping at 10 G.P.M. tt. after \_\_\_\_\_\_ hrs. numping as \_\_\_\_\_ G.P.M. 11 WELL HEAD Pitless adapter 12" above grade COMPLETION: Basement offset In beyordad 12 WELL GROUTED? No Yes From \_\_\_\_\_ to \_\_\_\_\_ 11 Neat cement Bentonite Other \_\_\_ No. of bags of cement \_ \_ Additives \_ 13 Nearest source of possible contamination Type 980 tic Distance 55 It Direction Well disinfected upon completion? X Yos No Yes No Was old well plugged? 14 PUMP: Not Installed Pump Installation Only Manufacturer's name Myers Model number \$2,372 HP 3/4 Volts 230 Length of Drop Pipe 189 ft. capacity 11 G.P.M. X Submersible Jet \_\_\_\_ TYPE: PRESSURE TANK: Manufacturor's name Amtrol \_\_ Capacity \_\_\_\_\_\_Gallons Model number 202 USE A 2ND SHEET IF HEEDED 16. WATER WELL CONTRACTOR'S CERTIFICATION: 15. Remarks, elevation, source of data, etc. This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. Sirtola Well Drilling Inc. 1677
REGISTERED BUSINESS NAME REGISTRATION NO. 17. Rig Operator's Name: Address Rte. 1, Box 386C, Hancock MI 49930

AUTHORIZED REPRESENTATIVE
AUTHORIZED REPRESENTATIVE
Completion:
Panalty:

Act \$88 PA 1978
Required
Conviction of a violation
of any provision is a
misdameanor.

\_ Date \_ 6.NOV.9.0

Paul Ziemnick

O67d 2/89



Tax No:

## Water Well And Pump Record

Wellogic 64

Township: Schoolcraft

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

County: Houghton

	Town/Range: Section: Well Status: WSS 55N 32W 9 Active	N:  Source ID/Well No:
l Well ID: 31000001260	Distance and Direction from Road Intersection:	
Elevation:	2 MILES ALONG BOOTJACK ROAD FROM LAKE L	INDEN; THEN 1 MILE EAST
	ALONG RICE LAKE ROAD	·
Latitude: 47.171117	Well Address: Owner Ac	dragge
Longitude: -88.372242	Well Address:   Owner Ad	iaress:
Method of Collection: Interpolation-Map		<u> </u>
Drilling Method: Cable Tool	Pump Installed: Yes Pump	installation Only: No
Well Depth: 80.00 ft. Well Use: Household	Pump Installation Date: HP: 0.	50
Well Type: Unknown Date Completed: 10/15/1976		Type: Submersible
Casing Type: Unknown Height: 2.00 ft. above grade	·	Capacity:
Casing Joint: Threaded & coupled Casing Fitting: Drive shoe		Voltage: ¡ Record ID:
Casing Fitting. Drive slice	Draw Down Seal Used: No	Record io:
Diameter: 6.00 in. to 32.00 ft. depth	Pressure Tank Installed: No	
,	Pressure Relief Valve Installed: No	
Borehole:		
Static Water Level: 20.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown	Formation Description	Thickness Depth to Bottom
Pumping level 38.00 ft. after 1.00 hrs. at 12 GPM	Sand Clayey	12.00 12.00
	Clay	4.00 16.00
Screen Installed: No Intake: Bedrock Well	Sandstone	64.00 80.00
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 65 ft. East	Zimple y mental Cymrie min	·
Abandoned Well Plugged: No	Contractor Type: Water Well Drilling Contractor Business Name: SIIRTOLA WELL DRILLING	or Reg No: 0154
Reason Not Plugged:	Business Address:	ortification
reason for Flugger.	Water Well Contractor's C This well was drilled under my supervision and the my knowledge and belief.	
	Signature of Registered Contractor	Date
General Remarks:	11-31-31-31-31-31-31-31-31-31-31-31-31-3	
Other Remarks:		



Wellogic 65

import ID:			Failure to con	nply is a misder	meanor.				
Tax No:		Permit	No: W0831095	County: Houg	hton	<u> </u>	Township:	Schoolcraft	
	-	1		Town/Range:	Section:	Well Status:	WSSN		e ID/Well No:
Well ID: 3	10	1000000	120	55N 32W	9	Active			
AAGII ID. S	)   (	000020	123	Distance and Distance and Distance		m Road Inters	ection:		
Elevation: 719 ft.				29030 meaun it	J.				
Latitude: 47.17687				Well Owner:					
Longitude: -88.38	177			Well Address:	•	10	Owner Add	ress:	
Method of Collection		PS Std Positioning	Svc SA Off						
Drilling Method: Rota	у			, ,	talled: Ye		-	stallation Onl	y: No
Well Depth: 200.00 ft.	_1	Well Use: 1		, ,		te: 8/12/2008	HP: 0.50		-15-1-
Well Type: Replaceme Casing Type: Steel - b			ated: 8/6/2008 1,00 ft. above grade	<del></del>	ırer: McD mber: pep			pe: Submer pacity: 12 (	
Casing Joint: Welded	ack	Height	1.00 it. above grade		Length:		Pump Vo		JI 141
Casing Fitting: Drive s	hoe, C	entralizer	•		Dlameter:			Record ID:	
_					n Seal Use				
Diameter: 6.00 in. to 39	.00 ft.	depth		1	Tank Install				
				1		Diaphragm/b	ladder		
Daniel III 40 00 fr. 1. 0	0 00 ±	.1 £1			ırer: Amtı nber: wx-		T1- 0-		Oallana
Borehole: 10.00 in. to 3 6.00 in. to 20			•		noer: wx- Relief Valve		rank ca 'es	pacity: 32.0	Gallons
0.00 m. to 20	0.00 11	depar		riessure	Iteliet Autac	insianea.			
Static Water Level: 82	00 ft. I	Below Grade			Eormatia	n Description		Thickness	Depth to
Well Yield Test:			t Method: Test pum	·		n bescription			Bottom
Pumping level 17.50 ft. a	fter 1.0	00 hrs. at 14 GPM		Silt & Sand				4.00	4.00
			•	Clay & Silt Silt Sand G		********		6.00 5.00	10.00 15.00
Screen Installed: No		Intake	: Bedrock Well	Clay Grave				11.00	26.00
		[목.밥 먹이다]		Sandstone				174.00	200,00
				} · .					
	0.6								<u> </u>
Well Grouted: Yes	Gro	uting Method: C	Grout pipe outside casi	ng					
•	ags	Additives	Depth						
Neat cement 1	1.00	None	3.00 ft. to 39.00 ft.	Geology R	lemarks:			•	
Wellhead Completion:	Pities	s adapter 12 inch	es above grade						
monitorial completions.	, 11100		oo abo to grado			<b>&gt;</b> -			
		a te la latina	<u> </u>						
Nearest Source of Poss	ible Co	ontamination:		-	•		Steven Lars	son	
Type		Distance	Direction	Employme	ent: Subco	ntractor			
Septic tank		150 ft.	West.	Contractor	Type: Mr	ter Well Drilling	Contractor	Reg No:	1770
Abandoned Well Plugge	d: V	es				ter vveti Drilling son Well Drilling		Reg No:	1118
	- I	-				18034 second s		d, L'Anse. Ml.	49946
						Well Contra			
					as drilled un	der my supervis			to the best of
Casing Diameter: 6 in.		-	moved: No	my knowled	dge and beli	ef.			,
Pluooino Material: Nea	t ceme	inf		i					j

General Remarks:

No. of Bags: 30.00

Well Depth: 180 ft.

Signature of Registered Contractor



Tax No: 31-012-060-017-30

EQP-2017 (4/2010)

Page 1 of 1

### Water Well And Pump Record

Wellogic 66

Source ID/Well No:

8/5/2005 7:20 PM

Contractor

Township: Schoolcraft

WSSN:

Well Status:

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

County: Houghton

Town/Range: Section:

Well ID: 31000001683	55N 32W 10	Active		
Well ID. 31000001003	Distance and Direction from		400 for all man	_bla
Elevation:	0.1 mile west of Post Road or	n Rice Lake Road (523) and	400 feet not	tun
Latitude: 47.1721	Well Owner.			
	Well Address:	Owner Addres	ee'	
Longitude: -88.34528	i ton Address.	John Charles	,,,	
Method of Collection: GPS Std Positioning Svc SA Off		•		
Drilling Method: Cable Tool	Pump Installed: No	·		
Well Depth: 148.00 ft. Well Use: Household	Pressure Tank Installe	d: No		
Well Type: Replacement Date Completed: 6/7/2005	Pressure Relief Valve I	***		
Casing Type: Steel - black Height: 2.00 ft. above grade				
Casing Joint: Welded			医甲基氏	
Casing Fitting: Drive shoe			n Parku	
		arko legilikan ede		
Diameter: 6.00 in. to 25.00 ft. depth	[			
•				
Borehole: 9.00 in. to 25.00 ft. depth				
6.00 in. to 148.00 ft. depth				
Static Water Level: 42.00 ft. Below Grade	7 T. T. T. T. T. T. T. T. T. T. T. T. T.	, a ray, a sa r r ray , as a	1	Depth to
Well Yield Test: Yield Test Method: Bailer	Formation	Description	Thickness	Bottom
Pumping level 146.00 ft. after 1.00 hrs. at 0 GPM	Topsoil	2	.00	2.00
	Clay	8.		10.00
•	Clay & Gravel Sandy	3.	.00	13.00
Screen installed: No Intake: Bedrock Well	Clay	2.	.00	15.00
	Sandstone Soft			16.50
	Sandstone	1:	31.50	148.00
불명보다는 얼룩한 속작으밖으로 덕분물 원호 같은 얼마는 어떤 그림	# Page			
병생을 하는 복었는 병사들이 하는 이름을 보냈다는 생각이 없을 때				
아ું 사람이 살아왔다면 아이들이 아니는 얼마면				
<u> 기록 맞고 있다. 그렇게 싶다는 네 그 모든 이 보고 하는 것 같다.</u>		+		
Well Grouted: Yes Grouting Method: Displacement plug				
Grouting Material Bags Additives Depth				
Neat cement 4.00 None 4.00 ft. to 25.00 ft.	Geology Remarks:	.1		
	seeding, recommend			
	ļ			1
Wellhead Completion: 12 inches above grade				}
				7
	·			
Nearest Source of Possible Contamination:	Drilling Machine Opera		-	
Type Distance Direction	Employment: Employe	ee		
Orainfield/Dry well 140 ft. East-Southea			<del></del>	
Septic tank 140 ft. East-Southea		er Well Drilling Contractor	Reg No: 2	413
Abandoned Well Plugged: No		nen & Eskola Well Drilling	andrea Mil	40043
Reason Not Plugged: Well still in use for non-drinking water purpose		5961 Lake Linden Avenue, L Vell Contractor's Cert		48813
	1	er my supervision and this re		to the best of
	my knowledge and belief		pholitis find 1	io ilie pesi Oi
in the state of th	Olaratura of Books		<b>b</b> - t -	l
Concret Demortes, Molt produces 10 cellans was hour	Signature of Registered	Contractor	Date	
Seneral Remarks: Well produces 12 gallons per hour Other Remarks:	<del>.</del>			
THE THEOLOGICAL				L L



Tax No: 31-012-060-016-50

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

County: Houghton

Section:

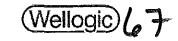
10

Well Status:

Active

Town/Range:

55N 32W



Source ID/Well No:

Township: Schoolcraft

WSSN:

Failure to comply is a misdemeanor.

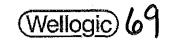
vveii id: 3	100000198		Distance and Direction from Road Intersection:				
Elevation:		.	0.3 mile west of Post Road on Rice Lake Ro	oad (S23) o	n north side	-	
Latitude: 47.17145		h.	Well Owner:	<u> </u>			
Longitude: -88.347	782			Owner Add	ress:		
1		- 04 0#			-		
Wethod of Collection	n: GPS Std Positioning S	/c sa on					
Drilling Method: Cable	Tool	<del></del>	Pump Installed; Yes	Pump In	stallation Only	y: No	
Well Depth: 175.00 ft.	Well Use: Hou	sehold	Pump Installation Date: 11/23/2007	HP: 0.75	· ,		
Well Type: New	Date Completed		Manufacturer: Red Jacket	7 -	<b>pe:</b> Submers		
Casing Type: Steel - bl	ack Height: 2.	00 ft. above grade	Model Number: 75C21112G1	-	apacity: 10 G	BPM	
Casing Joint: Welded			Drop Pipe Length: 161.00 ft.	Pump Vo			
Casing Fitting: Drive s	noe		Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No	Drilling I	Record ID:		
Diameter: 6.00 in. to 27.	50 ft denth		Pressure Tank Installed: Yes		·	<del></del>	
Diditioter. 0.00 iii. to 21	oo it. dopiii		Pressure Tank Type: Diaphragm/bl	ladder			
			Manufacturer: Goulds	4000,			
Borehole: 9.00 in. to 27,	.50 ft. depth		Model Number: V60	Tank Ca	pacity: 20.0	Gallons	
6.00 in. to 17	5.00 ft, depth		Pressure Relief Valve Installed: Y	'es			
Static Water Level: 60. Well Yield Test:		lethod: Bailer	Formation Description	-	Thickness	Depth to Bottom	
Pumping level 170.00 ft.	after 1.00 hrs. at 10 GPM		Topsoil		1.00	1.00	
			Red Clay Sandy		6.00	7.00	
O In t H - I - No	lutalia. F	-11-384-31	Sandstone Soft		3,00	10.00	
Screen Installed: No	Intake: E	edrock Well	Sandstone Jacobsville Ss		165.00	175.00	
						<del></del>	
			· · · · · · · · · · · · · · · · · · ·				
Well Grouted: Yes	Grouting Method: Disp	locomont plus					
	ags Additives	Depth					
	00 None	5.00 ft. to 27.50 ft.	Geology Remarks:		L		
Wellhead Completion:	Pitiess adapter, 12 inches a	above grade					
	<u> </u>						
Nearest Source of Possi	ble Contamination		Drilling Machine Operator Name:	Jeff Eskola			
Type	Distance	Direction	Employment: Employee	JOH ESKUIĞ			
Septic tank	65 ft.	West	Pump Installer: Ted Keranen			Ì	
Drainfield/Dry well	70 ft.	West	Contractor Type: Water Well Drilling	Contractor	Reg No: 2	413	
		. East a second	Business Name: Keranen & Eskola \	Well Drilling		1	
			Business Address: 30330 Lincoln S			49913	
			Water Well Contract				
			This well was drilled under my supervis my knowledge and belief.	ion and this	report is true	to the best of	
			wy knomede and belief.				
		•					
^anoral Danieri			Signature of Registered Contractor		Date		
General Remarks: Other Remarks:							
OD 2047 (4/2040)	Decree 4 of 4				-1 400	2000 0-05 414	



Import ID:		Failure to con	nply is a misder	meanor.				
Tax No:	Permit No:		County: Houg	hton	T	ownship:	Schoolcraft	
) A ( )	(000004404		Town/Range: 55N 32W	Section:	Well Status: Active	WSSN:	Source	e ID/Well No:
Well ID: 31	1000001198	3	Distance and D		n Road Interse	ection:		
Flavotia			NORTHEAST C	ORNER OF	INTERSECT O	F POST RC	AD AND RIC	E LAKE
Elevation:	-		ROAD					·
Latitude: 47.171282			Well Owner:		·T-			
Longitude: -88.34043	33		Well Address:		lo	wner Addr	ess:	
Method of Collection:	Interpolation-Map							
Drilling Method: Rotary	Man III.		Pump inst				tallation Onl	y: No
Well Depth: 222.00 ft. Well Type: New	Well Use: House Date Completed:		1 7	tallation Date urer: F.E. I		HP: 0.50	oe: Submer	nibla
Casing Type: Steel - unkr		ft. above grade		mber: r.⊏.⊪ mber: 2J52	*		pe: Submer pacity: 12 (	
Casing Joint: Welded	town reight, 1.00	n, above grace	_	Length: 1		Pump Voi		21 143
Casing Fitting: Drive sho	е .	-		Diameter:		Drilling R	•	
				n Seal Used	: No			
Diameter: 6.00 in. to 29.50	) ft. depth			Tank Installe				
				Tank Type:				
			I	urer: Amtro	oi	-		
Borehole:				mber: 202			pacity: 30.0	) Gallons
			Pressure	Relief Valve	Installed: N	0		
Static Water Level: 12.00				Formation	Description		Thickness	Depth to
Well Yield Test:		hod: Unknown	f		· · · · · · · · · · · · · · · · · · ·			Bottom
Pumping level 222,00 ft. aft	er 1.00 hrs. at 2 GPM		Clay Sandy				29.50 192.50	29.50 222.00
	•		Sandstone				192.50	222.00
Screen Installed: No	Intake: Bed	rock Well						<del>                                     </del>
				<u> </u>				
		i differencia (m. 1916). In filosofi In filosofia (m. 1916). In filosofia						ļ
LET 架構工作			<u> </u>				4	<del> </del>
			<u> </u>					<del> </del>
			· · · · · · · · · · · · · · · · · · ·			_		<del></del>
Well Grouted: No		s valta 1955					•	
			Geology R	lemarks:				-
			:					
Wellhead Completion: Pi	itless adapter							
Mennead Completion, 17	niess adapter		ſ					
				· · · · · ·				
Nearest Source of Possible				achine Opera		PAUL ZIEM	VICK	
Туре	Distance	Direction	Employme	ent: Unknow	'n			
Septic tank	110 ft.	South	Contracta	r Types 144 f	an Marit Davida	O-pl 1:	Dan Maria	1077
					er Well Drilling ( TOLA WELL DI		Reg No:	1077
		1 40	Business	Address:	I OLA VYELL DI	MELING		
					Vell Contrac	ctor's Cer	rtification	
			This well w		ler my supervisi			to the best of
				dge and belie			•	
			1					
· · · · · · · · · · · · · · · · · · ·			Signature	of Registere	d Contractor		Date	
General Remarks:								
Other Remarks:						*		1



Tax No: 31-012-061-002-00



Township: Schoolcraft

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

County: Houghton

			-		Section:	Well Status:	WSSN	:  Sour	ce ID/Well No:
Well ID:	310	000001	908 -	55N 32W Distance and D	irection fro	Market Active	l		
	<b>O</b>			0.5 mile south of				side	
Elevation:									
Latitude: 47.184	182			Well Owner:			. 4 .1 1		
Longitude: -88.	.33557			Well Address:		lo	wner Add	ress:	
Method of Collec	ction:	GPS Std Positionir	ng Svc SA Off	<b>,</b>	_				
Drilling Method: Ca	able Too	1		Pump Inst	alled; Ye	s	Pump in	stallation Or	ılv: No
Well Depth: 64.00 ft		Well Use:	Household			e: 10/31/2006	HP: 0.50		
Well Type: New			leted: 10/31/2006	Manufactu				<b>/pe:</b> Subme	
Casing Type: Steel		Height:	1.50 ft. above grade	1	ber: 10S			apacity: 10	GPM
Casing Joint: Welde Casing Fitting: Driv				Drop Pipe Drop Pipe			Pump Vo	Record ID:	
ousing Fitting. One	70 31100			Draw Down			Draining :	record in.	
Diameter: 6.00 in. to	25.00 ft	. depth		Pressure T	ank Install	ed: No			
				Pressure F	Relief Valve	Installed: N	٥		
Borehole: 9.00 in. to	25 00 ft	denth				garagang george	11-5-5-5	g waran.	25 M 1244
6,00 in. to		•							
Static Water Level:	12.00 ft	Relow Grade		<u>, 6 ts.</u>	\$1.700.00 T		1 1111		Depth to
Well Yield Test:	12.00 11.		st Method: Baller	)	Formation	n Description		Thickness	Bottom
Pumping level 53.00 f	ft. after 1	.00 hrs. at 10 GPN	1	Topsoil				1.00	1.00
				Red Clay	0 6 111101			8.00	9.00
Screen Installed: No			e: Bedrock Well	Sandstone Sandstone				4.00 51.00	13.00 64.00
screen installed. Inc	•	llitar	e. bediock yyen	Sanusione	Jacobsville	<u> </u>		51.00	104.00
									<del>                                     </del>
				- i					
			시험성 속이다	<u>:</u>				<u> </u>	<del>                                     </del>
78 % TO 11 (4.1)						··			
Well Grouted: Yes	Gr		Displacement plug						
Grouting Material	Bags	Additives	Depth		<del></del>				
Neat cement	6.00	None ·	4.00 ft. to 25.00 ft.	Geology R	emarks:				
			•						
Wellhead Completion	n: Pitle	ss adapter, 12 inc	nes above grade						į
				_					ì
Nearest Source of Po	esible (	Contamination		Drilling Ma	chine Oner	ator Name: K	evin Kerar	nen	
Type	AGINIO C	Distance	Direction	Employmen	-		OTHE INGIGE	,011	
Septic tank		100 ft.	Southeast						
Drainfield/Dry well		110 ft.	Southeast			er Well Drilling C		Reg No:	2413 .
						anen & Eskola W			10010
				Business A		5961 Lake Linde			
				This wall we		Well Contraction of the Mell C			
· 1 .:		* # 17		my knowled			VIT CITTO 18 113	, robore to a ne	o to the nest of
	1.			1				*	į
				Signature o	f Registere	d Contractor		Date	-
General Remarks:					4				
Other Remarks:									



Township: Osceola

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

County: Houghton

		n/Range: 55N 33W	Section:	Active	WSSN.	Source	S ID/AAGII MO:
Well ID: 31000001211				m Road Inters	section:		
	500	FEET SOU	TH OF SUN	ELU ROAD			
Elevation:							
Latitude: 47.17002		Owner:			0 111	<u> </u>	
Longitude: -88.472852	Aveir	Address:		. [	Owner Add	ress:	
Method of Collection: Interpolation-Map	1			!			
Day 1.4. A. O. H. T		D	allad. Va		December 1	-4-11-41 01	No
Drilling Method: Cable Tool Well Depth: 90.00 ft. Well Use: Household		Pump Inst	alled: Ye allation Dat		HP: 0.50	stallation Onl	y: 140
Well Type: New Date Completed: 12/4/1999		Manufactu		Rite		pe: Submer	sible
Casing Type: Steel - unknown Height: 2.00 ft. above graden	de		nber: LO			pacity: 10 0	
Casing Joint: Welded		Drop Pipe	Length: 8	30.00 ft.	Pump Vo		
Casing Fitting: Drive shoe	İ	Drop Pipe			Drilling F	Record ID:	
D	.		n Seal Used				
Diameter: 6.00 in. to 25.00 ft. depth			Fank Instali Fank Typer	ed: Yes · Unknown			·
			rer: A.O.		•		
Borehole: 9.00 in. to 25.00 ft. depth	ļ		nber; V-8		Tank Ca	pacity: 8.0	Gallons
6.00 in. to 90.00 ft. depth	}	Pressure F	Relief Valve	Installed:	No		
			··			· · · · · ·	T =
Static Water Level: 8.00 ft. Below Grade  Well Yield Test: Yield Test Method: Test of	vimo.		Formatio	n Description		Thickness	Depth to Bottom
Pumping level 80.00 ft, after 1.00 hrs. at 12 GPM	٠,	Clay & Stor	nes			4.00	4.00
		Clay Sandy				3.00	7.00
	[	Sandstone	Soft Hard	· .		1.00	8.00
Screen Installed: No Intake: Bedrock Well	eje sangra	Hardpan				82.00	90.00
				<del></del>			<b></b>
							<del> </del> -
				****			
			· · · · · · · · · · · · · · · · · · ·				
Well Grouted: Yes Grouting Method: Unknown	*1		<del></del>				<del></del> -
Grouting Material Bags Additives Depth	ŀ						
Neat cement 5.00 None 0.00 ft. to 25.0	00 ft.	Geology R	emarks:			<u> </u>	
	ļ						
Wellhead Completion: Pitless adapter	- 1						
= upresent a Particular grade production of the same of	7: 2 7 7						
Nearest Source of Possible Contamination:		Drilling Ma	chine Oper	ator Name:	JEFF ESKO	DLA	
Type Distance Direction	I	Employme	nt: Employ	yee			
Septic tank 53 ft. North							
Septic tank 50 ft. West				ter Well Drilling		Reg No:	1722
는 이 보는 것이 하는 것이 되는 것으로 함께 되는 것이 되었다. 		Business /		RANEN WELL	& PUIVIP		
- 1945년 - 1945년 - 1947년 - 1945년 - 1945년 - 1945년 - 1945년 - 1945년 - 1945년 - 1945년 - 1945년 - 1945년 - 1945년 - 1945 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947년 - 1947		Daoiness,		Well Contra	actor's Co	rtification	
		This well w		der my supervi			to the best of
		my knowled	ige and beli	ef.		-	
· 中国基础的发表。1984年1984年1984年1989年1989年1989年1989年1989年	1	Signature	of Register	ed Contractor		Date	
General Remarks:							
Other Remarks:							



Tax No: 31-009-014-014-10

### Water Well And Pump Record

Source ID/Well No:

Township: Osceola

WSSN:

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

County: Houghton

Section:

14

Well Status:

Active

Town/Range:

55N 33W

Well ID: 31000001940	55N 33W 14 Active Distance and Direction from Road Intersection:	
	0.3 mile southwest of Tamarack Hill Road/Oneco Road	(018) on Amygdaloid Street
Elevation:	on northwest (uphill) side	
Latitude: 47.16149	Well Owner Well Address: Owner Address	'0cc'
Longitude: -88.44908	Well Address.	¢33,
Method of Collection: GPS Std Positioning Svc SA Off		
Orilling Method: Cable Tool	Pump Installed; Yes Pump Ins	stallation Only: No
Well Use: Household	Pump Installation Date: 6/18/2007 HP: 0.75	
Well Type: New Date Completed: 6/12/2007	, ,	pe: Submersible
Casing Type: Steel - black Height: 2.00 ft. above grade		pacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 154.00 ft. Pump Vo	
Casing Fitting: Drive shoe	Drop Pipe Diameter: 1.00 in. Drilling R Draw Down Seal Used: No	lecord ID:
Diameter: 6.00 in. to 25.00 ft. depth	Pressure Tank Installed: Yes	
Stationary C.O. III. to 20.00 tt. dopar	Pressure Tank Type: Diaphragm/bladder -	
	Manufacturer: Goulds	
Borehole: 9.00 in. to 25.00 ft. depth	Model Number: V100 Tank Ca	pacity: 32.0 Gallons
6.00 in. to 170.00 ft. depth	Pressure Relief Valve Installed: Yes	•
Static Water Level: 73.00 ft. Below Grade Vell Yield Test: Yield Test Method: Bailer	Formation Description	Thickness Depth to Bottom
Pumping level 150,00 ft, after 1.00 hrs. at 11 GPM	Topsoil	2.00 2.00
, •	Clay & Gravel	6.00 8.00
	Sandstone	162.00 170.00
Screen installed: No Intake: Bedrock Well		
BRAN :		
그렇은 말을 그리고 말했다. 중하는 그를 게 하고 또 그리		
	(4.1) (4.4)	· ·
그리다 그리 어린을 끝나겠다는 어머니 이 때 그 그를		
그는 회를만 하는 사람들이 얼굴들은 그는 그들은 사이라고 먹는다.		
	· ·	·
Vell Grouted: Yes Grouting Method: Displacement plug Srouting Material Bags Additives Depth		
Brouting Material Bags Additives Depth leat cement 6.00 None 3.00 ft. to 25.00 ft.	Geology Remarks:	
, , , , , , , , , , , , , , , , , , , ,	Joseph Market	
Veilhead Completion: Pitless adapter, 12 inches above grade		
learest Source of Possible Contamination:	Drilling Machine Operator Name: Kevin Keran	.00
ype Distance Direction	Employment: Employee	1011
rainfield/Dry well 150 ft. South-Southw		
	Contractor Type: Water Well Drilling Contractor	Reg No: 2413
	Business Name: Keranen & Eskola Well Drilling	
	Business Address: 30330 Lincoln School Road	
	Water Well Contractor's Ce	J.
	This well was drilled under my supervision and this my knowledge and belief.	report is true to the best of
	My Miomoogo and pellet.	
	Signature of Bouleters & Contractor	Doto
aporal Pomarke	Signature of Registered Contractor	Date

OCOLOGICAL CHIQUES NO	ARTMENT OF PUBLIC HEALTH
WATER WE	LL AND PUMP RECORD PERMIT NUMBER
1 LOCATION OF WELL County Township Name	Fraction Section Number Town Number Renne Number
Houghton Franklin	Fraction Section Number Town Number Range Number NW4 SW4 NW4 1 4 55 N/S 3 18 E/W
11/2 miles off U.S. 41 on	PONTIUC -
Ad., 1/2 m. 12 off Pontia. Street Address & City of Well Location ahe Anne C	G Rd, Or Address
	1099 WT Address Same As Well Location? Yes WNo
Locate with 'X' in Section Below Sketch M	1 MO. 1 DAY 1 YEAR 1 LET (VOW YVBI)
X Crosscut	Hollow rad Auger Jetted
I Lake	6 USE: Domestic Type I Public Type III Public   krigation Type IIa Public Differ pump
It-t-t-time man	Tost Well Type lib Public
VS	7 CASING: Steel Threaded Height: Above/Below
THICK	INESS DEPTH TO 12 in to 12 if. doubth Weight 18:9 lbs./it.
2 FORMATION DESCRIPTION O STRA	TUM STRAYUMIII. toIII. depth
Sandy Clay 5.1+ Bolders 1	in. to It. depth   Drive Shoe Lar Yes
Jangy Diag 11119 Dollars	in, to 1t. depth STREEN:
Grave Sand Clay 1	7 3/ Type Telescoping Diameter 6
50001 / F 20) 9	46 Slot/Gauze Longth 3
I.	Set between
	Blank above screen (t. Other
	STATIC WATER LEVEL:
	10 PUMPING LEVEL: below land surface
	36 It. after 21 hrs. pumping at 10 G.P.M.
·	ft. after hrs. pumping at G.P.M.
	11 WELL HEAD COMPLETION: Pilless adapter 412 above grade
	Basement offset Approved pit
	No Karyes From to 11.
	Nest cement Bentonite Other
	No. of bags of coment Additives  13 Nearest source of possible contamination
	Type Distanceft_ Direction
and the state begge	Well disInfected upon completion?
	14 PUMP: [] Not installed [] Pump installation Only
211	Manufacturer's name
	Model number HP Volts
	tongth of Drop Pipe It. capacity G.P.M.  TYPE: Submersible Jet
	PRESSURE TANK: Manufacturer's name
USE A 2ND SHEET IF NEEDED	Model numberCapacityGailons
15. Remarks, elevation, source of data, etc.	16, WATER WELL-CONTRACTOR'S CERTIFICATION:
DIST	This well was drilled under my jurisdiction and this report is true to the bast of my knowledge and belief
3 31/12/23/2	REGISTERED BUSINESS NAME REGISTERED BUSINESS NAME REGISTERATION NO.
17. Rig Operator's Name: General Harvakita FEE	4 m 1
Stephen Karvahino	Signor Signor Dala 120-92
0676 2/88	AUTHORIZED REGRESENTATIVE Authority( Aut 368 PA 1978
· · · · · · · · · · · · · · · · · · ·	Completion Required Penalty: Conviotion of a violation to any provision is a
GEOLO	GICAL SURVEY COPY OI any provision is a misdemeanor.

GEOLOGICAL SURVEY SA	MPLE NO.	
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	7
	ļ

1 1 CONTION OF HELL	ACT 29	4 PA 196	15		PUBLIC HEAL	7
1 LOCATION OF WELL. County Township Name	چې نومې پولا کا الاستان د	Fraction		Section Number	Town Number	
HOUGHTON OSCEOLA  Distance And Direction from Boad Intersections	٧	NE 14	SWNSW N	13	55 N/S.	33 ₽/w.
1/4 MILE SW OF M-26 ON THE TATLINGS.	AMARACK		Address	Nier I v		-
Street address & City of Well Location	.,	1 ° -, -, -, -, -, -, -, -, -, -, -, -, -,				
Locate with "X" in socilar halow Sketc	ь Млр:				Data of Campletian	•
M·Z (	4		5 X Cable to	ool [] Rota	_6/29/79_	
		***	Hollow i		<del></del>	Dug
X X X X X X X X X X X X X X X X X X X	FAMALANCI THE FAULE		6 USE: X Down	public Publication Air of Wolf Publication	ic Supply [	
I Mile	مختنننس	is in this Website was	Oram.		Height: Abo	ft,
2 FORMATION	THICKNESS OF	DEPTH TO BOTTOM OF	5in. to	205_ft, Dept	h . Woight 144.	₿ lbs,/ft,
- Competition	STRATUM	STRATUM	in, to	ti, Dept	h   Drive Shou?	Aee K No
FINE GRAY TAILING	130	130	i .			
DARK BROWN CLAY	6	136	Stot/Gauza	12 SLOT	Din.:5" TEL Langth 36"	<u>,</u>
			Fintings:	<u> 208.</u> ft, and _ ALL BOTTO	om, Lead F	ACKER
KED STICKY CLAY	4	140				
FINE CLAYEY SAND	64	204	9 STATIC WAT	ft. below land su	rface	
FINE SAND	1	205	10 PUMPING L	EVEL below land	surface pumping 15	0. p. m.
				The second second	,	di pitti
PEDIUM SAND	3	208	11 WATER QUA	ft. afterhra. ALITY in Parts Par	Million: UNKN	g.p.m.
RED CLAY	1	209 -	Iron (Fe)	Chlo	rides (CI)	IOAN
			Hardness _	Otho	r	
,					In Approved Pi	
		.,			12" Ahove Gra	du
·				od? [] Yus [] No emont [] Benton		
			7	omft.		
			14 Nenrest Sou	irce of possible c	ontamination	
•	}.		1	EAST Direct		Туре
			15 PUMP:		tion XYes N	3
				L] Name <u>RE</u> t	tot installed	•
			Model Num		HP 1_ Volts	480
			1		. capacity 20 G.	
			Typu: 💢	eldieremduß	•	
			] []	Jet (	] Acciprocating	
USE A 2NO SHEET IF HEEDED						
16 Romarks, elevation, source of data, etc.				CTOR'S CERTIFI		
		to the be	oat of my knowle	iletted and paliet.	on and this rapart i	6 truo
		VALLE	Y PLBG &	HAME	REGISTRA	722-31 TION NO.
		Address			VR BAY, MI	
			200	Darlino	-1/,	1/79
D67d 100M (Rev. 12-68) A1 (C 2 7 107		\$igned <b>(</b>	AUTHORIZED KES	PRESENTATIVE	Dato // C	7 //



Failure to comply is a misdemeanor.

County: Houghton



Township: Torch Lake

Import ID: Tax No:

·	Town/Range: Section: Well Status: WSSN: Source ID/Well No:
Well ID: 31000001253	55N 32W 18 Active Distance and Direction from Road Intersection:
VVOII 1D. 01000001200	0.3 MILE NORTH OF INTERSECT OF MUD LAKE ROAD AND BOOTJACK
Elevation:	ROAD; THEN 0.5 MILE WEST
Latitude: 47.156547	Well Owner:
Longitude: -88.405495	Well Address: Owner Address:
Method of Collection: Interpolation-Map	
Drilling Method: Rotary	Pump Installed: Yes Pump Installation Only: No
Well Depth: 182.00 ft. Well Use: Household	Pump Installation Date: HP: 0.50
Well Type: New Date Completed: 7/22/1996 Casing Type: Steel - unknown Height: 2.00 ft. above grade	Manufacturer: Red Jacket Pump Type: Submersible Model Number: CN59BC 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:
	Draw Down Seal Used: No
Diameter: 6.00 in. to 136.00 ft. depth	Pressure Tank installed: Yes
•	Pressure Tank Type: Unknown
Borehole:	Manufacturer; Amtrol Model Number: 202 Tank Capacity: 30.0 Gallons
sofeliole.	Pressure Relief Valve Installed: No
Static Water Level: Above Grade (Flowing) Nell Yield Test: Yield Test Method: Unknown	Formation Description Thickness Bottom
Pumping level 182.00 ft. after 1.00 hrs. at 5 GPM	Sand 10.00 10.00
	Sand Clayey 120.00 130.00
Unrestricted Flow Rate:	Sand & Gravel Clayey         6.00         136.00           Sandstone         46.00         182.00
Screen Installed: No Intake: Bedrock Well	Sandstone 46.00 182.00
이를 보고 말할 몇대를 하고 있습니다. 얼마 얼마 얼마를 보고 있다.	
그는 이 사는 사람이 가득을 살아가 보고 말았습니다. 그는 100일을 가는 것이 없다. 그리고 있는 사람들은 사람들은 사람들은 기를 받는 것이 되었다.	
소리하는 연극물을 하는 것은 그들은 가장 보는 것이 없었다.	·
- 불쾌활 호리를 본통 화중 - 중 경반병 등을 살려면 사용 호시	
<u> </u>	
Vell Grouted: Yes Grouting Method: Unknown	
Grouting Material Bags Additives Depth	Geology Remarks:
Sentonite slurry 0.00 None	
•	·
Vellhead Completion: Pitless adapter	
earest Source of Possible Contamination:	Drilling Machine Operator Name: PAUL ZIEMNICK
ype Distance Direction	Employment: Unknown
eptic tank 60 ft. Northwest	Contractor Type: Water Well Drilling Contractor Reg No: 1677
and the state of the season of the season of the	Business Name: SIIRTOLA WELL DRILLING
####################################	Business Address:
표를 통과 옷이 앞돌 말은 만들다는 어디는 그네.	Water Well Contractor's Certification
조기막의 문에 불꽃이 되었다. 그 사람은 사람	This well was drilled under my supervision and this report is true to the best of
	my knowledge and belief.
and Demontor	Signature of Registered Contractor Date
eneral Remarks: ther Remarks:	
and committee	



## Water Well And Pump Record

Wellogic 75

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

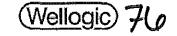
Tax No:	Permit No: 2704	County	: Hough	iton	l <sub>T</sub>	ownship	Torch Lake	
Tax Hol	Ţ. e.m., (0, 2, e.			Section:	Well Status:	WSSN		e ID/Well No:
W IIID OAO	00004074		1 32W	18	Active	1	1	_
Well ID: 310	00001271	Distanc	ce and D	irection fro	m Road Interse	ection:		· · · · · · · · · · · · · · · · · · ·
Elevation:					LINDEN ON E	BOOTJACK	(ROAD; 0.6 M	IILE WEST OI
		<u> </u>		AND 0.1 MI	EL NORTH			
Latitude: 47.156654		Well Ov						
Longitude: -88.405164		Well Ad	ddress:		1C	wner Add	ress:	
Method of Collection: Int	erpolation-Map				•			
Drilling Method: Cable Tool			ımn İnst	alled: Ye		Bump In	stallation Onl	hu Ma
Well Depth: 150.00 ft.	Well Use: Household					HP: 0.50		iy. INO
Well Type: New	Date Completed: 10/17/1994		'			Type: Submersible		
Casing Type: Steel - unknown				ber: 10P	_		apacity: 10	
Casing Joint: Welded		ſ		Length: 6		Pump Vo	•	
Casing Fitting: Drive shoe		Dre	op Pipe l	Diameter:		Drilling F	Record ID:	-
		Dra	aw Dowr	Seal Used	: No			
Diameter: 6.00 in. to 138.00 ft.	depth	,		ank Installe				
				ank Type:				
		I		rer: Amtr	ol			
Borehole: 6.00 in. to 150.00 ft.	depth	j		ber: 203			apacity: 12.0	) Gallons
	·	Pre	essure R	elief Valve	Installed: N	0		
Static Water Level: Above Gr	ade (Flowing)			Earmatia	Description		Thickness	Depth to
Well Yield Test:	Yield Test Method: Test pu	ımp 📙		Tomation	Description			Bottom
Pumping level 47,00 ft. after 1.0	0 hrs. at 15 GPM	Sai					10.00	10.00
				el Sandy		· · · · · · · · · · · · · · · · · · ·	30.00	40.00
			ay & Sand				9.00	49.00
Unrestricted Flow Rate: Screen Installed: No	Sudada - Pada ala SAZ-11		ay Sandy				23.00	72.00
Screen installed: No	Intake: Bedrock Well			el Sandy			21.00 7.00	93.00
	병통물통으로 불었는 생각 내회 기름은		ay Sand ( ay Sandy			<del></del>	10.00	110.00
				el Sandy			27.00	137.00
	기업 기업 등 회사를 보냈다. 사람들은 보고 등 사람들이 되고 있는 것이 되었다. 기업 기업 (14) 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		ndstone :				1.00	138.00
	보는 이 경쟁 불러 없는 기를 보고했다는데		e Comme				12.00	150.00
	그는 이 분류를 가입하는 그를 가냈다. 수							
MPROPERTY OF THE PROPERTY OF T								
	uting Method: Unknown Additives Depth		-l D-					<u> </u>
	Additives Depth None		ology Re	inarks: LE SANDS'	TONE			
grandar 1.50	Notic		0000112	() 11100	, OILL			
	•	1						
Wellhead Completion: Pitless	adapter							
Nearest Source of Possible Co	ntamination:	Dell'	Illing Mar	chino Onor	ator Name: (	GEORGE K	ERANEN	
Type	Distance Direction			nt: Unknov		JEONGE P	7-1 7-1 4-14	•
Septic tank	64 ft. East	~""	المدار فاح.	Cindiot				
		Coi	ntractor	Type: Wat	er Well Drillina (	Contractor	Reg No:	1722
		Bus	Contractor Type: Water Well Drilling Contractor Reg No: 1722 Business Name: KERANEN WELL & PUMP					
			siness A					
				Water \	Vell Contrac	ctor's Ce	rtification	
					ier my supervisi	ion and this	report is true	to the best of
	<b>经支票的数据设施的基本数据</b>	my	knowledg	ge and belie	f.			
	원육인의 회사회인 그는 기계 등	·						
<u> </u>		Sig	<u>ı</u> nature o	f Registere	d Contractor		Date	
General Remarks:								
Other Remarks:					·			



Method of Collection: GPS Std Positioning Svc SA Off

### Water Well And Pump Record

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



Fallure to comply is a misdemeanor. Import ID: Permit No: W0431130 Tax No: 31-014-317-001-10 County: Houghton Township: Torch Lake Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 32W 17 Well ID: 31000001466 Distance and Direction from Road Intersection: 0.5 mile south of Rice Lake Road (\$23) on Bootjack Road (T641) on west (lake) Elevation:

Well Owner: Latitude: 47.16686 Well Address: Owner Address: Longitude: -88.39797

Drilling Method: Cable Tool Pump Installed: Yes Pump installation Only: No Well Depth: 38,00 ft. Well Use: Household Pump Installation Date: 9/3/2004 Well Type: New Date Completed: 9/3/2004 Manufacturer: Sta-Rite Pump Type: Submersible Casing Type: Steel - black Height: 2.00 ft. above grade Model Number: 10P4C02J04 Pump Capacity: 10 GPM Casing Joint: Welded Drop Pipe Length: 27.00 ft. Pump Voltage: **Drilling Record ID:** Casing Fitting: Drive shoe Drop Pipe Diameter: 1.00 in. Draw Down Seal Used: No Diameter: 6.00 in. to 34.00 ft. depth Pressure Tank Installed: Pressure Tank Type: Diaphragm/bladder Manufacturer: Other Model Number: BN4202 Tank Capacity: 20.0 Gallons Borehole: 6.00 in. to 38.00 ft. depth Pressure Relief Valve Installed:

Static Water Level: 1.00 ft. Below Grade Depth to Formation Description Thickness **Bottom** Well Yield Test: Yield Test Method: Test pump Pumping level 30.00 ft. after 1.50 hrs. at 7 GPM Topsoil 1.00 1.00 Sand & Stones Silty 9.00 10.00 5.00 Clay & Gravel Sandy 15.00 Screen Installed: Yes Filter Packed: No 8.00 23.00 Clay

Clay & Gravel Sandy 9.00 32.00 Screen Diameter: 5.00 in. Blank: 1.00 ft. Above Sand & Gravel 37.50 Screen Material Type: Stainless steel-wire wrapped 5.50 Clay & Gravel 0.50 38.00 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 Geology Remarks:

Wellhead Completion: Pitless adapter, 12 inches above grade

Nearest Source of Possible Contamination: Drilling Machine Operator Name: Ted Keranen Distance Direction Employment: Employee Type

Drainfield/Dry well 55 ft. East-Northeast Contractor Type: Water Well Drilling Contractor Drainfield/Dry well 70 ft. West-Southwest Reg No: 2413 Business Name: Keranen & Eskola Well Drilling

Business Address: 55961 Lake Linden Avenue, Laurium, Ml, 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 General Remarks:



Tax No:

## Water Well And Pump Record



Township: Torch Lake

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

County: Houghton

		_		Well Status:	WSSN:	Source	D/Well No:
Well ID: 31000000603		N 32W	17	Active			
Well ID. 31000000003				m Road Interse		or	•
Elevation:	LOI #3	3 OH Bluev	vater Drive C	off of the Bootjac	x roau, #201	30	
Latitude: 47.160396	Well C	Owne:					
Longitude: -88.3996324		Address:		0	wner Addres	s:	
. <del>-</del>	,			.]			
Method of Collection: Address Matching-Street Centerline							
Drilling Method: Cable Tool	Τp	ump Insta	alled: Yes	3	Pump Insta	llation Onl	v: No
Well Use: Household		•		: 7/2/2002	HP: 0.50		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Well Type: New Date Completed: 7/2/2002		1anufactui			Pump Type	: Submer	sible
Casing Type: Steel - black Height: 2.00 ft. above grad	le N	iodel Nun	nber: 10SI	B05412L	Pump Capa	city; 10 (	SPM .
Casing Joint: Welded	D	rop Pipe	Length: 9	1.00 ft.	Pump Volta	ge:	•
Casing Fitting: Drive shoe	] [	rop Pipe i	Diameter:	1.00 In.	Drilling Rec	ord ID:	
			າ Seal Used				
Diameter: 6.00 in, to 93,00 ft. depth			ank Installe	•			
				Diaphragm/bla	adder		
	I	ianufactui					÷ 11
Borehole: 6.00 in, to 97.00 ft, depth	1		iber; CA 4		Tank Capa	city: 20.0	Gallons
	"	ressure R	telief Valve	installed: No	0		
Static Water Level: 5.00 ft. Below Grade							Depth to
Well Yield Test; Yield Test Method: Test pu	umo J	,	Formation	Description	ד ן	hickness	Bottom
Pumping level 90.00 ft. after 2.00 hrs. at 3 GPM	. —	opsoil			1.0	00	1.00
. •		lay & Sand	d		2.0	00	3.00
-	C	lay Sandy			14	.00	17.00
Screen Installed: Yes Filter Packed: No	G	ravel & Bo	oulders		8.0		25.00
Screen Diameter: 5.00 in. Blank:		lay & Grav				.00	83.00
Screen Material Type: Stainless steel-wire wrapped	<u> s</u>	and & Gra	vel		14	.00_	97.00
Slot Length Set Between	<b>-</b>						
12.00 4.00 ft, 93.00 ft. and 97.00 ft.							
	·						
Fittings: Neoprene packer	<u></u>						
mings. Neopiette packer	-						
Well Grouted: Yes Grouting Method: Driven/dry grout							
Grouting Material Bags Additives Depth							
Bentonite dry granular 5.00 None 0.00 ft. to 93.00	oft. G	eology Re	emarks:			<del></del>	
	1						ļ
Nellhead Completion: Pitless adapter, 12 inches above grade							*
in the control of the	<del> -</del>	w1111m 1# -	obline O	stor Novers	ed Keranen		
Nearest Source of Possible Contamination:  Type Direction			chine Opera nt: Employe		eu Keranen		
Type Distance Direction Septic tank 60 ft. Northeast	-	mpioymen	ur: Ettiblok	e <b>e</b>			
peptic latik oo it. Nottieast	lc	ontractor	Type: Wate	er Well Drilling C	Contractor	Reg No:	722
				nen Well & Pun		.108 1101	
要集的 机可塞蛋片 心囊及肾虚功的 医克达尔				1005 Township		alumet	
		*		Vell Contrac			
그렇게 하고 하고요요? 이번 동안들은 그 그의 모임인	TI TI	his well wa		ler my supervisi			to the best of
			ge and belie		,		
그 바이는 사람이 일찍병 기록을 가고 있는 것이다.							
	s	iαnature o	f Realstere	d Contractor		Date	
Seneral Remarks:	17.	***************************************					





Import ID:

ax No:	Permit No: W9831028A	County: Houghton Township: Torch Lake			ch Lake	
	<del>.</del>	Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No:
W-II ID. 0400	00004405	55N 32W	16	Active		
Well ID: 3100	10001195	Distance and D	irection fro	m Road Intersed	ction:	
Elevation:	-	1.25 MILES EAS SOUTH	ST OF BOO	TJACK ROAD OF	N RICE LAKE F	ROAD AND 150 FEET
Latitude: 47.170405		Well Owner.		_		
Longitude: -88.368155	÷ .	Well Address:		[O <sub>1</sub>	vner Address:	
Method of Collection: Inte	rpolation-Map					,

Drilling Method: Rotary	· · · · · · · · · · · · · · · · · · ·		Pump Installed: Yes Pump	Installation Onl	y: No
Well Depth: 80.00 ft.	Well Use: Hou	usehold	Pump Installation Date: HP: 0	.50	
Well Type: New	Date Complete			Type: Submer	
Casing Type: Steel - unknow	<i>i</i> n Helght: 2.	.00 ft, above grade		Capacity: 10 C	SPM
Casing Joint: Welded			, , ,	Voltage:	
Casing Fitting: Drive shoe	•	•	, · · ·	g Record ID:	
Diameter 0.00 in to 05.00 ft	.1 46_		Draw Down Seal Used: No	<del></del>	
Diameter: 6.00 in. to 25.00 ft.	, deptn		Pressure Tank Installed: Yes		
			Pressure Tank Type: Unknown Manufacturer: A.O. Smith		
Borehole: 8.00 in. to 25.00 ft. depth			Capacity: 6.0	Gallone	
6.00 in. to 80.00 ft.	•	•	Pressure Relief Valve Installed: No	Capacity: O.O	Calloris
Static Water Level: 7.00 ft. E	Below Grade		Formation Description	Thickness	Depth to
Well Yield Test:		Method: Test pump			Bottom
Pumping level 75.00 ft, after 1.	.00 hrs. at 5 GPM		Topsoil	2.00	2.00
			Red Clay Sandy Sandstone	10.00 68.00	12.00 80.00
Screen Installed: No	Intako: I	Bedrock Well	Sanosione	08.00	80.00
ocreen metalled. No	mane, L	Dedicer Areli		<del></del>	
[ 이불 빨갛는 토르를 하고싶다.					
[복 등 원리] 이 아니라 보는 호텔 다					
- 불편설레 크로그 스테리얼리				<del>                                     </del>	
				<b>—</b>	
[ 경역 병원보호폭발함: 공항기 공원					
Well Grouted: Yes Gr	outing Method: Unk	(nowe			
Grouting Material Bags	Additives	Depth		<del></del>	
Neat cement 4.00	None	0.00 ft. to 25.00 ft.	Geology Remarks:		
	110110		Coolegy Homerica		
Wellhead Completion: Pitter	ss adapter		· ·		
		de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la			
Nearest Source of Possible C			Drilling Machine Operator Name: JEFF ES	KOLA .	·
Туре	Distance	Direction	Employment: Employee		
Septic tank	55 ft.	Northeast	0 1 1 T		·
			Contractor Type: Water Well Drilling Contract	or Reg No: 1	1722 .
		님 그 그렇다	Business Name: KERANEN WELL & PUMP Business Address:		
			Water Well Contractor's	Cortification	
	addin on the estimate of the second of the s		This well was drilled under my supervision and		to the boot of
			my knowledge and belief.	THE REPORT IS RIVE	10 B10 D821 OF
			Simulations of Devictors of October 1	<b>B</b> - 4	
Ganaral Pamarkas			Signature of Registered Contractor	. Date	
General Remarks: Other Remarks:					



Tax No:

### Water Well And Pump Record

Source ID/Well No:

Township: Torch Lake

WSSN:

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

County: Houghton

Section:

16

Well Status:

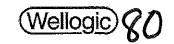
Active

Town/Range:

55N 32W

W-ILID, 04000004400	55N 32W 16 Active				
Well ID: 31000001196	Distance and Direction from Road Intersection:				
j <del>po</del> t (1	0.75 MILE EAST OF BOOTJACK ROAD ON RICE LAKE R	OAD AND 0.5 MILE			
Elevation:	SOUTH				
1	Well Owner:				
Longitude: -88.378615	Well Address: Owner Address	:			
Method of Collection: Interpolation-Map					
Drilling Method: Cable Tool	Pump Installed: Yes Pump Installe	ation Only: No			
Well Depth: 116.00 ft. Well Use: Household	Pump Installation Date: HP: 0.50	ation Only. No			
Well Type: New Date Completed: 7/15/1998	Manufacturer: Goulds Pump Type:	Suhmersihle			
Casing Type: Steel - unknown Height: 2.00 ft. above grade					
Casing Joint: Welded	Model Number: 10SB05-412 Pump Capacity: 10 GPM Drop Pipe Length: 100.00 ft. Pump Voltage:				
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Reco				
Caling Fining, Diffe one	Draw Down Seal Used: No	14.21			
Diameter: 6.00 in. to 28.00 ft. depth	Pressure Tank Installed: Yes				
Plantotor 0.00 III. to 20.00 ii. dopai	Pressure Tank Type: Unknown				
	Manufacturer: Amtrol				
Borehole: 6.00 in. to 116.00 ft. depth		ity: 6.0 Gallons			
and the state of t	Pressure Relief Valve Installed: No				
Static Water Level: 29.00 ft. Below Grade		Depth to			
Well Yield Test: Yield Test Method: Test pump	Formation Description Th	nickness Bottom			
Pumping level 110,00 ft. after 1.00 hrs. at 10 GPM	Topsoil 2.00	2.00			
	Clay & Gravel Sandy 20.0				
	Red Clay & Gravel 6.00				
Screen Installed: No Intake: Bedrock Well	Sandstone 88.0				
- 물리들은 경기를 받는 옷이 모든 할 것 같습니다. 그는 것으로 모르는 글로그를					
그 발문을 살으면 하는 동안 동안 되는 말통을 하는 않으면 얼굴 모르겠다. 동일 나를					
골골 되는 송이 밥으로 이 그 눈을 잃는 바다 됐다. 그는 그 사람들이 나를 되다.					
	· · ·				
Well Grouted: Yes Grouting Method: Unknown					
Grouting Material Bags Additives Depth					
Bentonite dry granular 3.00 None	Geology Remarks:	•			
•					
Wellhead Completion: Pitiess adapter					
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: JEFF ESKOLA	ł			
Type Distance Direction	Employment: Employee				
Septic tank 100 ft. East					
		Reg No: 1722			
그는 먹는 그는 그는 그릇들이 목어 불특별 레스터를 통해보다는 모든 그	Business Name: KERANEN WELL & PUMP				
	Business Address:				
	Water Well Contractor's Certifi				
	This well was drilled under my supervision and this repo	ort is true to the best of			
이 시작으로 가장 같은 호텔은 처럼 하시다면 하는데 되었다.	my knowledge and belief.				
	Signature of Registered Contractor	Date			
General Remarks:					
Other Remarks:					

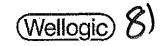




Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

Tax No: Permit No: Per	County: Houghton   Township:	TOTCH Lake	
	Town/Range: Section: Well Status: WSSN		all No:
Well ID: 31000001263	55N 32W 15 Active Distance and Direction from Road Intersection:		
	1.8 MILES EAST OF INTERSECT OF RICE LAKE RO	AD AND BOOTJACK	ROAL
Elevation:			
Latitude: 47.170684	Well Owner:		
Longitude: -88.36177	Well Address: Owner Add	iress:	
Method of Collection: Interpolation-Map			
Drilling Method: Rotary	Pump Installed: No		
Well Use: Household	Pressure Tank Installed: No		
Well Type: Unknown Date Completed: 12/8/1982	Pressure Relief Valve installed: No		
Casing Type: Unknown Height:	,因为此此的经营基础,是实验的人类的规划,在国际效应,实现是实现的。	문문의 1 - 연설 등장, 역사 수도.	3.3
Casing Joint: Welded Casing Fitting: Drive shoe			
Jasing Fitting. Drive snoe			
Diameter: 6.00 in. to 25.00 ft. depth			
Parahala			
Borehole:			
Static Water Level: 8.00 ft. Below Grade	Formation Description		th to
Well Yield Test: Yield Test Method: Unknown	n	Bot	ttom
Pumping level 60.00 ft, after 1.00 hrs. at 12 GPM	Clay Sandy Sandstone	12.00 12.00 50.00 62.00	
	Candstone	100.00	
- 현존 기학 속이 시간 전통 목표하면 화는 생활을 보여 전원했다면 불론	- 43 - 13 <u></u>		
		<del> </del>	
Well Grouted: Yes Grouting Method: Unknown			
Grouting Material Bags Additives Depth			
	ft. Geology Remarks:		
Grouting Material Bags Additives Depth	Geology Remarks:	-	
Grouting Material Bags Additives Depth	ft. Geology Remarks:		
Grouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft	ft. Geology Remarks:	-	
Grouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft  Wellhead Completion: 12 inches above grade			
Grouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft  Wellhead Completion: 12 inches above grade  Nearest Source of Possible Contamination:	Drilling Machine Operator Name:		
Grouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft  Wellhead Completion: 12 inches above grade  Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Employment: Unknown		
Orouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft  Wellhead Completion: 12 inches above grade  Nearest Source of Possible Contamination: Type Distance Direction Septic tank 60 ft. North	Drilling Machine Operator Name: Employment: Unknown Contractor Type: Water Well Drilling Contractor	Reg No: 0154	
Grouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft  Wellhead Completion: 12 inches above grade  Nearest Source of Possible Contamination: Type Distance Direction	Drilling Machine Operator Name: Employment: Unknown  Contractor Type: Water Well Drilling Contractor Business Name: SIIRTOLA WELL DRILLING	Reg No: 0154	
Grouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft  Wellhead Completion: 12 inches above grade  Nearest Source of Possible Contamination: Type Distance Direction Geptic tank 60 ft. North	Drilling Machine Operator Name: Employment: Unknown  Contractor Type: Water Well Drilling Contractor Business Name: SIIRTOLA WELL DRILLING Business Address:		
Orouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft  Wellhead Completion: 12 inches above grade  Nearest Source of Possible Contamination: Type Distance Direction Septic tank 60 ft. North	Drilling Machine Operator Name: Employment: Unknown  Contractor Type: Water Well Drilling Contractor Business Name: SIIRTOLA WELL DRILLING	ertification	est o
Grouting Material Bags Additives Depth Neat cement 0.00 None 3.00 ft. to 25.00 ft  Wellhead Completion: 12 inches above grade  Nearest Source of Possible Contamination: Type Distance Direction Geptic tank 60 ft. North	Drilling Machine Operator Name: Employment: Unknown  Contractor Type: Water Well Drilling Contractor Business Name: SIIRTOLA WELL DRILLING Business Address:  Water Well Contractor's Co	ertification	pest of

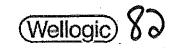




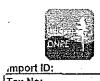
Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

Tax No: Permit No: W9831137		p: Torch Lake
	Town/Range: Section: Well Status: WSS 55N 32W 15 Active	SN: Source ID/Well No:
Well ID: 31000001266	Distance and Direction from Road Intersection:	
Elevation:	FIRE #R10B ON RICE LAKE ROAD	
Latitude: 47.169922	Well Owner:	
Longitude: -88,345432	Well Address: Owner Ad	dress:
_	·	
Method of Collection: Interpolation-Map	<u> </u>	
Drilling Method: Cable Tool	Pump Installed: Yes Pump	Installation Only: No
Well Depth: 218.00 ft. Well Use: Household	Pump Installation Date: HP: 0.	
Well Type: New Date Completed: 8/21/1998		Type: Submersible
Casing Type: Steel - unknown Height: 2.00 ft. above grade Casing Joint: Welded		Capacity: 10 GPM Voltage:
Casing Fitting: Drive shoe		y Record ID:
	Draw Down Seal Used: No	
Diameter: 6.00 in. to 34.00 ft. depth	Pressure Tank Installed: Yes	
	Pressure Tank Type: Unknown	
Borehole: 6.00 in. to 218.00 ft. depth	Manufacturer: Well-Rite-Flexcon  Model Number: WR60 Tank	Capacity: 6.0 Gallons
borenoie. 0.00 in. to 210.00 it. depth	Pressure Relief Valve Installed: No	Capacity. 0.0 Gallons
Static Water Level: 57.00 ft. Below Grade	Formation Description	Thickness Depth to
Well Yield Test: Yield Test Method: Test pum	1p	15.00 Bottom
Pumping level 200.00 ft. after 1.00 hrs. at 4 GPM	Clay & Stones Clay & Gravel	10,00 25.00
	Red Clay	9.00 34.00
Screen Installed: No Intake: Bedrock Well	See Comments	184.00 218.00
	#	
[		+
		<del>                                     </del>
마는 경기는 것이 되었다. 그는 사용을 발표하는 것이 하고 하면 하는 글로벌인 것이 하지만 없다. 1 하는 것으로 하는 것이 나타를 불고하는 것이 없는 것이 되었다. 그런 것이 되었다. 그런 것이 없는 것이 없는 것이 없다.		
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Maria de la Maria del Maria de la Maria de la Maria del Maria de la Maria del Maria de la Maria de la Maria de la Maria de la Maria de la Maria del Maria de la Maria de la Maria de la Maria de la Maria del Maria de la Maria de la Maria del Maria		
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth		<del></del>
Bentonite dry granular 3.00 None	Geology Remarks:	<del></del>
	JACOBSVILLE SANDSTONE	
Wellhead Completion: Pitless adapter	-	
	<del></del>	
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: JEFF ES	KOLA
Type Distance Direction	Employment: Employee	•
Septic tank 55 ft. Northeast		
	Contractor Type: Water Well Drilling Contractor Business Name: KERANEN WELL & PUMP	or Reg No: 1722
- 홍호, 불인 - 호롱말 건 회 물로 제 하는 1 - 1 - 1	Business Address:	
는 그는 물리 보이 되는 수 없을 것 같아. 그는 사람들 그리고 하는데 그 그 것 같은 그는 사람들로 가는 모든 것이 되는 것이다.	Water Well Contractor's (	Certification
아이네일은 사람이 얼마를 가는 것이 없다.	This well was drilled under my supervision and to	his report is true to the best of
그리고 없는 이번 내용 기록 회장에는 기계를 중심하는 것이다.	my knowledge and belief.	
그 어머니 왜 제가 생각하다고 생각했습니다.		!
0	Signature of Registered Contractor	Date
General Remarks: Other Remarks:		
1		





import ib;	nply is a misdemeanor.
Tax No: Permit No:	County: Houghton Township: Franklin
	Town/Range: Section: Well Status: WSSN: Source ID/Well No
Well ID: 31000001212	55N 33W
Well ID. 3 100000 12 12	Distance and Direction from Road Intersection:  0.4 MILE EAST OF INTERSECT OF ARCADIAN ROAD AND MASON CROSSCI
Elevation:	10.4 WILL EAST OF INTERSECT OF ARCADIAN ROAD AND WASON CHOSSE
Latitude: 47.149166	Well Owner:
	Well Address: Owner Address:
	' }
Method of Collection: Interpolation-Map	
Drilling Method: Rotary	Pump Installed: Yes Pump Installation Only: No
Well Depth: 300.00 ft. Well Use: Household	Pump Installation Date: HP: 0.75
Well Type: Unknown Date Completed: 8/2/1983	Manufacturer: F.E. Myers Pump Type: Submersible
Casing Type: Steel - unknown Height:	Model Number: SJ72J711 Pump Capacity: 10 GPM
Casing Joint: Welded	Drop Pipe Length: 752.00 ft. Pump Voltage:
Casing Fitting: Drive shoe	Drop Pipe Diameter: Drilling Record ID:
D1	Draw Down Seal Used: No
Diameter: 6.00 in. to 25.00 ft. depth	Pressure Tank Installed: Yes Pressure Tank Type: Unknown
	Manufacturer: Well-X-Trol
Borehole: 8.00 in. to 25.00 ft. depth	Model Number: 202 Tank Capacity: 42.0 Gallons
, , , , , , , , , , , , , , , , , , ,	Pressure Relief Valve Installed: No
Static Water Level: 180.00 ft. Below Grade	Formation Description Thickness Depth to
Well Yield Test: Yield Test Method: Unknown	Bottom
Pumping level 300.00 ft. after 1.00 hrs. at 3 GPM	Sand Clayey         14.00         14.00           Sandstone         286.00         300.00
	Sandstone 286.00 300.00
Screen Installed: No Intake: Bedrock Well	
HT :	
[종일 이용]이 보여 항통이 된 홍토를 되어 밝혀왔다는 것 같는데;	
L#보기 = 하고 : 마이 [발발문학 및 물로 발리 - 보일이면 :   보일한 편	
Well Grouted: Yes Grouting Method: Unknown	
Grouting Material Bags Additives Depth	
Neat cement 3.00 None 3.00 ft. to 25.00 ft.	Geology Remarks:
Wellhead Completion: Pitless adapter	
Nearest Source of Possible Contamination:	Drilling Machine Operator Name:
Type Distance Direction	Employment: Unknown
Septic tank 50 ft. North	
N. Art Tiple	Contractor Type: Water Well Drilling Contractor Reg No: 0154
Abandoned Well Plugged: No	Business Name: SIIRTOLA WELL DRILLING
Panaan Nat Diversadi	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
그 유로 아님 그들지 뿐 회원성 그는 데 지역을 다	my knowledge and belief.
그 왕이는 글을 돌살했을 때 나는 이 기계하다.	② 1
그 그렇다 하다 하다는 중요한 요. 그는 그는 나는	Signature of Registered Contractor Date
General Remarks:	Toriginature of fregiotered contractor
Other Remarks:	



1ax No: [Permit No:		ip: Franklin
		SN: Source ID/Well No:
Well ID: 31000001299	55N 33W 21 Active	<u>-</u>
Well 1D. 5 100000 1205	Distance and Direction from Road Intersection: 1.25 MILES WEST OF MASON ON MASON-CONG	YORD ROAD
Elevation:	THE WHILE THE TOTAL PROPERTY OF THE POST OF THE	ACT TO TO
Latitude: 47.14547	Well Owner	
Longitude: -88.495633	Well Address: Owner A	Address:
Method of Collection: Interpolation-Map		
monod of Condition interpolation (viet		· <del></del>
Drilling Method: Rotary		Installation Only: No
Well Depth: 315.00 ft. Well Use: Household	Pump Installation Date: HP:	
Well Type: Unknown Date Completed: 6/10/1976		Type: Submersible
Casing Type: Unknown Height: Casing Joint: Threaded & coupled	· •	o Capacity: 5 GPM o Voltage:
Casing Fitting: Drive shoe		ng Record ID:
The state of the s	Draw Down Seal Used: No	18 7.000.4 15.
Diameter: 6.00 in. to 33.00 ft. depth	Pressure Tank Installed: No	
	Pressure Relief Valve Installed: No	!
	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la companya de la companya de la companya de la companya de la companya de la companya de la co
Borehole:		
•		
Static Water Level: 223,00 ft. Below Grade		Depth to
Well Yield Test: Yield Test Method: Unknown	Formation Description	Thickness Bottom
Pumping level 265.00 ft. after 1.00 hrs. at 10 GPM	Clay & Stones	8.00 8.00
	Clay & Gravel	4.00 12.00
No. of the Art Man	Clay W/Sandstone Broken	4.00 16.00
Screen Installed; No Intake: Bedrock Well	Sandstone Broken Sandstone	12.00 28.00 287.00 315.00
	Salusione	287.00 313.00
에 가장 하는 경우 경우 하는 것이 되었다. 그는 것이 되었다. 그를 보고 있는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는 것이 되었다. 그는		
는 보고 있는 사람들에 보고 있다는 것이다. 전로 전에 무슨 생각이 되는 사람들이 되었는데 보고 되었다. 그는 것이 되는 것이 되었다. - 1994년 - 1985년 - 1985년 - 1987년 - 1985년 - 1985년 - 1985년 - 1985년 - 1985년 - 1985년 - 1985년 - 1985년 - 1985년 - 1985년		
도로 강경되는 김 희망을 걸려졌다 등이면서 그는 경험으로		
Malf Counts 5. Van Counts Matter J. Habitania		
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth		<del>                                     </del>
Neat cement 0.00 None 12.00 ft. to 32.00 ft	Geology Remarks:	
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-		
Wellhead Completion: Pitless adapter	}	
	<b>_</b>	
Mograph Course of Describe Contomination	Delling Mochine Organia Name	
Nearest Source of Possible Contamination: Type Direction	Drilling Machine Operator Name: Employment: Unknown	
None Distance Distance	Employment Officiows	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Contractor Type: Water Well Drilling Contract	tor Reg No: 0081
Abandoned Well Plugged: No	Business Name: KOYKKA WELL DRILLING	
	Business Address:	
Reason Not Plugged:	Water Well Contractor's	
	This well was drilled under my supervision and	this report is true to the best of
	my knowledge and belief.	,
	<u>_</u>	
Coursel Domesto	Signature of Registered Contractor	Date
General Remarks:  Other Remarks:		
SHOW HOUNDERD.		

MICHIGAN DEPARTMENT OF PUBLIC HEALTH GEOLOGICAL SURVEY NO

MALATED	SAZELL	ABID	DIBAR	PEAAND
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1 LOCATION OF WELL County HOMGHTON TORCH LAKE	<i>-</i>	Fraction	dW. era.	Section Number	Town Number	Ranga Num	
	<del>-</del> 	N ASVAI	WW. SEW		55 N/S	33	8/\/
Distance And Direction From Road Intersection 4.1 NIILES SOUTH OF DR	FANIL	4 /V D	3 OWNER OF	MELT.			
4.1 MILES 30011 01 00	17/2/17 /	4 N12					
HUTEL ON BOOTJACK R	UN W 7		Address				
200 FEET EAST Street Address & City of Well Location					, D., 10	1	
Street Address & City of Well Location  Locate with 'X' in Section Bolow S	keich Map		Address Su	me As Well Locatio			
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		7.	7 CASING Diameter			o (Balaus	
1 MILE		~	Diameter 🔼	Plastic X Welder			
	THICKNESS	DEPTH TO		198 ft. depth	Weight 18		
2 FORMATION DESCRIPTION	STRATUM	BOTTOM OF STRATUM		ft dopth	Adeidut V CV	ZZ IUS III	
-		m/		Hala Diameter D	Drive Shoe	Yes	
GRAVEL & RUCKS	3'	3'		it depth	-	☐ No	
Street in the street in the street in		20'	8 SCREEN	•	Not In:	stallod	
RED ELAY & RUCKS	17'	20	Type ST/	INLESS		<b>-</b> -	
	1	m , /		12			
SANDY CLAY	11'	31'				···	
	140'	1001		K-Packer			
SANDY CLAY + GRAVEL	140	171	1	ove screenf		· · · · · · · · · · · · · · · · · · ·	
13 D	7-7	166	9 STATIC WATE	R LEVEL			
CLAY SAND & GRAVEL	27'	198	4	ft below land		Flow	·
SAND + GRAVEL	13'	201	10 PUMPING LE	VEL below land su	rlace		
STIND & GRAVEL	ريا		170	lt. after hrs.	овтріпо at <u>9</u>	G.P.M.	
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			Manufacture	r's name / \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	86. 1/2	23	0
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15. Remarks, elevation, source of data, etc.		16. WATER	<del></del>	ACTOR'S CERTIFIC			
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17. Rig Operator's Name:	14.7%			0X338 CM			
GKERANFN & JEFF ESRUL	71		Q2				~~~~
67d 2/89	003	\$igned.	ALITHERIZ	PED REPRESENTATIVE	Date 2	- <del> </del>	Z.Ž.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH	J.

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This document paid for with State funds

	WATER V			A	MICHIGAN DEPA OF	ARTMENT /
1 LOCATION OF WELL	,,,,,,	************			PUBLIC HEA	LTH 1
County Township Namu		Fraction		Section Number	1	Range Number
HOUGHTON SOHOOL CRAFT Distance And Direction from Road Intersections	<del></del>	LSWMN	J ASW A		55 N/\$	33 5/W.
14 MILES WEST OF MASON AND 10 NORTH OF COUNTY RD. 020.	001	·	Address			
Street address & City of Well Location  Locate with "X" in section below Skutch	Mnp:	<del></del>	4 WELL DEPTH	: (beretqmon) ' [	Date of Completio 1/11/80	n
УX 1000 ТАМІ — X 10000 ТАМІ — X 1000 ТАМІ — X 1000 ТАМІ — X 1000 ТАМІ — X 1000 ТАМІ —		•	5 💢 Cable 10	el Rota	ry 🔲 Drive	
X OZO COUNTY	MASO	<i>)</i>	705	yetlon' Air (	Conditioning [	
1 Mile			7 CASING: 78 Diam,	rended Welder	Holght: Ab Surface 2	1
2 FORMATION	THICKRESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	in. 10	25 ft. Dopt	h Welgin 48 h Drive Shoe	_Olbs./ft. ? Yas Ø No ☐
HARD RED CLAY & SMALL STONES	. 10	(10)	8 SCREEN:	None	Dia.:	· · · · · · · · · · · · · · · · · · ·
JACOBSVILLE SANDSTONE	130	140	1	ft. and		·····
AND THE PROPERTY OF THE PROPER	,		Fittings:		-	
·			9 STATIC WAT		rface	-
			10 PUMPING 1 130	ft, below land su EVEL below land ft, after 1 hrs.	surfaco pumplno 7	g.p.m.
_			132	ft. atter 2 hre.	numalna 4.	G.D.M.
			11 WATER QUA	ALITY In Pacts Por	Million: UNK	NOWN
				Otho		
			Pi	COMPLETION:	12" Above Gr	
			13 Wals Groute	ad?///Yes   No ement   Bentor	ita 🔲	
			14 Noornst So	om SURFACE ures of possible c	noitamination	
			Wall disinfo	N. Directi	tion Yes 🔲	
			15 PUMP: Manufactur	er's Name	hellatani tol	····
			l .	bar		
			· -	Submersible	Reciprocating	
USE A 2NO SHEET IF NEEDED						
16 Remarks, elevation, source of data, etc.		This wol	l was drilled u	CTOR'S CERTIFIED of the my jurisdiction and baller, https://example.com/decample.co	on and this report	is teuà 778 Arlon no,
				3, DOLLAR	BAY, MI	49922
D67d 100M (Rev. 12-68) NOV 2 4 198	RN	- Signod	AUTHORIZED RE	PRESENTATIVE	Date 11/	12/80



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

Failure to comply is a misdemeanor.

Import ID:		Failure to con	iply is a misder	meanor.				
Tax No:	Permit No:	W9931045	County: Houg	hton		Township:	Torch Lake	
			Town/Range:	Section:	Well Status:	: WSSN:	Source	e ID/Well No:
Well ID: 310	0000045	$\cap$	55N 33W	23	Active			
	0000043	U	Distance and I					
Elevation:			.75 MILE NW O	F INTERSEC	OT OF BAULN	IAN RD. & N	IGHTINGALE	DRIVE
			Well Owner:			· · · · · · · · · · · · · · · · · · ·		
Latitude: 47.1421343			Well Address:			Owner Add	roce:	
Longitude: -88.44738772	2		Trell Additions.			Office Add	.033.	
Method of Collection: In	nterpolation-Map		MI					
			I			<u> </u>		
Drilling Method: Rotary	Manager 11.		Pump Inst		-	-	stallation Onl	y: No
Well Depth: 162.00 ft.	Well Use: Hous Date Completed		Manufacti	tallation Date	e: Jacket	HP: 0.50	pe: Submer	oiblo
Well Type: New Casing Type: Steel - black		0 ft. above grade		mber: 50C			pe: Submer pacity: 10 (	
Casing Joint: Welded	Florgati 1.0	o ii. above grade	I	Length: 1		Pump Vo		21 111
Casing Fitting: Drive shoe				Dlameter:			Record ID:	
<b>5</b>			,	n Seal Used				<u> </u>
Diameter: 6,00 in. to 26,00 ft.	depth			Tank Installe				
			I	Tank Type:				
			Manufactu			2		
Borehole: 10.00 in. to 26.00 ft	. depth		I	mber: 202			pacity: 20.0	) Gallons
			Pressure	Relief Valve	installed:	No		
Static Water Level: 18.00 ft.	Below Grade			_				Depth to
Well Yield Test:		ethod: Unknown		Formation	1 Description		Thickness	Bottom
Pumping level 162.00 ft. after 1	i.00 hrs. at 15 GPM		Clay Sand	у			8.00	8.00
Pumping level 100.00 ft. after 1	.00 hrs. at 10 GPM		Clay				8.00	16.00
			Sandstone	<u> </u>			146.00	162.00
Screen Installed: No	Intake: Be	edrock Well	ya				·	
						****		
					* .			<u> </u>
					7-6	•		
		Vii al shi ma sai Lina wa ili	hui.					
		hapelin dish (palan)						
	outing Method: Unkr		ļ					
Grouting Material Bags	Additives	Depth 0.00 ft. to 26.00 ft.			<del> </del>			l
Bentonite slurry 10.00	None	0.00 II. 10 26.00 II.	Geology R	kemarks:				
			-					
Wellhead Completion: Pitles	s adapter							
Tromoda completion 1 has	o asapto.		[					
gaetice of plants to be		t to see a constant						
Nearest Source of Possible C	ontamination:	-		achine Opera		PAUL LAH	ri -	
Type	Distance	Direction	Employme	ent: Unknov	vn			
Septic tank	76 ft.	Southwest	0 - 4 - 4 -	- T			<u> </u>	
			Contractor	r Type; Wat	er Well Drilling	g Contractor	Reg No: 1	1677
			Business		RTOLA WELL	DRILLING IN	Ю	
그는 전쟁에 가입하다면 다른 경우			Business	7	Mail Contr	actor's Co	rtification	
하게 하는 경독로 전략으로 가득하면 교육으로 크리스 10 기업을 다시하는 10 기업을 다시하는			This well w				report is true	to the best of
ing the second s				dge and belie				200.01
	Alberta Balangara (1929) Alberta Balangara							. ]
			Signature	of Registere	d Contractor		Date	
General Remarks:			13	3,0,0,0				
Other Remarks: Tank Manufac	cturer:AMTROL				,			

GE DOCAL SURVEY SAMPLE No.		. (	> T	
		WATER WE		
1 LOCATION OF WELL		ACT 294	PA 1965	: OF PUBLIC HEALTH
T	·p.		Fraction	Section No. Town Range
Distance And Difection from Road Inte	TUNCH L	AKE	WWW	W. NHV 23 55 M/s. 33 he/w.
34 WEST O	N Boor &	WNER No	040	3 OWNER OF WELL
3M WEST &	DADTUTE	九多百年	7100	Address
Street oddress & City of Well Location	LAKE LI	THICKNESS	MICA DEPTH TO	4 WELL DEPTH: (completed) Date of Completion
2 FORMATION		OF STRATUM	BOTTOM OF	84 11. JUNE 18, 1974
ر <u>بر خون</u>	^	1_		5 S Cable tool Ratary Driven Dug
51 N	<u>.</u>	6	<u> </u>	6 USE: Domestic Public Supply Industry
CLLY		36	42	Itrigation Atr Conditioning Commercial
CAMEL, SAND	m Aum		47	7 CASING: 174
CHART JANO	CARYEY			7 CASING: Threaded Welded Heights Above/Below Lain. to SOIt, Depth surface 2.4.
SAND ALA	184	22	69	Weight / Wha/ff.
JAWD	•	8	7 -	B SCREEN: JOHNSON
_				Type: STAINLESS Diant
SAND COUR	13E	7	84	Slot/Gauxe 015 Length 4
				Set between 80 ft. and 8 4 ft.
1				1
		<del></del>		3/TANUARIS
l.				9 STATIC WATER LEVEL
				10 PUMPING LEYEL below land surface
<u></u>				12 11, after hrs. pumping 6 g.m.
				ft. afterhrs. pumplng
•				11 WATER QUALITY In Parts Per Million:
				Iron (Fe)Chlorides (CI)
·				Hardness
•	, <b>`</b>	. '		12 WELL HEAD COMPLETION: In Approved Pit Pities Adopter 12" Above Grade
			<del></del>	13 GROUTING:
				Well Grouted? Yes No Moterial: Newt Coment
				Depth: Fromft.
A CONTRACTOR OF THE PARTY OF TH				14 SANITARY:
				Nearest Source of possible contamination
May 2 12 - Margan Baraban May		1		Well disinfected upon completion 🖺 Yes 🗋 No
· · · · · · · · · · · · · · · · · · ·				15 PUMP: Manufacturer's Name M WE AS
	<del></del>			Manufacturer's Name 77 46 45 HP Madel Number 50 52 - 58 HP
Andrea . 151 cycles and an annual and an annual and an annual and an annual and an annual and an annual and an an annual and an an annual and an an annual and an an an an an an an an an an an an an				Length of Drop Pipe 2 4 ft. capacity G.P.M.
				Type: A Submersible
16 Remarks elevation source of data,	etc.			WELL CONTRACTOR'S CERTIFICATION:
				li was drilled under my jurisdiction and this repolt is true set of my knowledge and belief.
				W. FILETOWN OCS4
			H	ESSISTENCE BUSINESS NAME REGISTRATION NO.
			Address	PAUTE I HAWCUEL TO
		:	Signed	AUTHORIZED REPRESERTATIVE
D679 1994 8-66				



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

Tax No: 31-014-374-001-00	Permit No	: W05-31-082	County: Houg	hton		Township:	Torch Lake	
\\\.\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0000400		Town/Range: 55N 33W	Section: 24	Well Status: Active	WSSN	: Sourc	e ID/Well No:
Well ID: 310	0000168	39	Distance and D	irection fro	n Road Inters	ection:		
Elevation:	,		Nearest Road is	Nightengale	Drive Lot 24			
			Mail Ourses					
Latitude: 47.14341			Well Owner: Well Address:			Owner Add	rocet	
Longitude: -88,443925			Well Address.		ľ	Owner Add	11005.	!
Method of Collection: QC	QQ - Centroid		·					
Dulling Mathods Batons			Dumn Ingt	alled: Ye		Duma la	otalistian Oni	u No
Drilling Method: Rotary Well Depth: 160.00 ft.	Well Use: Hou	sehold	2		s: 8/17/2005	HP: 0.50	staliation Oni า	y: 140
Well Type: New	Date Complete		1 '	rer: McD			vpe: Submer	sible
Casing Type: Steel - black	Héight: 1.	00 ft. above grade	Model Nur	nber: PEF	2W52BA	Pump C	apacity: 12 (	3PM
Casing Joint: Welded				Length: 1		Pump Vo		1
Casing Fitting: Drive shoe				Diameter:		Drilling i	Record ID:	
Diameters 8 00 in to 04 00 ft d	a = 11a			<u>n Seal Used</u> Fank Installe				· <del>······</del> ···
Diameter: 6.00 in. to 31.00 ft. d	ерш		1	rank installe Relief Valve		Yo		
Borehole: 9.00 in. to 31.00 ft. d 6.00 in. to 160.00 ft.	•							
Static Water Level: 5.80 ft. Be		Nethod: Air		Formation	Description		Thickness	Depth to Bottom
1.00 hrs. at 12 GPM			Silt Sand G	ravel			2.00	2.00
			Silt & Sand	Clayey			8.00	10.00
			Sandstone				150.00	160.00
Screen Installed: No	Intake: E	Bedrock Well	<u> </u>				1	
			76 d	····	····		<del> </del>	
				<del></del>	· · · · · · · · · · · · · · · · · · ·			
					•			
[불자기 얼마 그리 시 그렇게 되었다]								
[ ### ###   # + + + +   #### ####								
Well Grouted: Yes Grou	ting Mothod: Gro	ut pipe outside casir					<del> </del>	<del> </del>
	Additives	Depth	' <sup>9</sup>	<u></u>			<del> </del>	<del> </del>
	None	4.00 ft. to 31.00 ft.	Geology R	emarks:			<u> </u>	
	· · · · · · · · · · · · · · · · · · ·		_					
Wellhead Completion: Pitless	adapter, 12 inches	above grade	1					
Nearest Source of Possible Co	ntamination		Drilling Ma	chine Opera	tor Name:	Steve Larse	on	
Type	Distance	Direction		nt: Employ		City Cuito		
Septic tank	50 ft.	North		aller: Curt				
<u></u>			Contractor	Type: Wat	er Well Drilling		Reg No:	0315
					ert A. Larson V			
			Business		CR01 Box 188			
			This well w				ertification s report is true	In the best of
				as unled und dge and belie		JOH SHU IIII	o roporrio ii uc	™ #IO DG91 OI
그렇게 얼마 얼마를 하고 없는 것			. ; [ *					
			Signature	of Registers	d Contractor		Date	
General Remarks:			Torandida	registere	- 00111140101			
Other Remarks:								



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

Import ID:

Failure to comply is a misdemeanor. Tax No: Permit No: W05-31-148 County: Houghton Township: Torch Lake Town/Range: Well Status: Section: WSSN: Source ID/Well No: 55N 33W 24 Active Well ID: 31000001768 Distance and Direction from Road Intersection: 1.9 MI NE OF BAULMAN RD & NIGHTINGALE DR Elevation: Well Owner: Latitude: 47.14341 Well Address: Owner Address: Longitude: -88.443925

Method of Collection: QQQ - Centroid	М1	ı					
Drilling Method: Rotary Well Depth: 141.00 ft. Well Use: Household Well Type: New Date Completed: 12/28/20 Casing Type: Steel - unknown Casing Joint: Welded Casing Fitting: Drive shoe  Diameter: 6.00 in. to 26.00 ft. depth  Borehole: 10.00 in. to 141.00 ft. depth		Pump Installed: Yes Pump Installation Date: HP: 0.50 Manufacturer: Red Jacket Model Number: Prop Pipe Length: 120.00 ft. Drop Pipe Diameter: Draw Down Seal Used: No Pressure Tank Installed: Yes Pressure Tank Type: Unknown Manufacturer: Amtrol Model Number: BN4202 Pressure Relief Valve Installed: No  Pump Installation Only: No HP: 0.50 Pump Type: Submersible Pump Capacity: 10 GPM Pump Voltage: Drilling Record ID: Drilling Record ID: Draw Capacity: 20.0 Gallons Pressure Relief Valve Installed: No					
Static Water Level: 25.00 ft. Below Grade  Well Yield Test: Yield Test Method: Air		Formation Description		Thickness	Depth to Bottom		
Pumping level 141.00 ft. after 1.00 hrs. at 20 GPM		Topsoil		3.00	3.00		
, , , , , , , , , , , , , , , , , , , ,		Sand		3.00	6.00		
		Sand Clayey		4.00	10.00		
Screen Installed: No Intake: Bedrock Well		Hardpan		4.00	14.00		
Well Grouted: Yes Grouting Method: Unknown Grouting Material Bags Additives Depth Neat cement 10.00 None 3.00 ft. to 20	6.00 ft.	Geology Remarks:					
Wellhead Completion: Pitless adapter							
Nearest Source of Possible Contamination:  Type Distance Direction  Septic tank 100 ft. West	on	Drilling Machine Operator Name: Employment: Employee	PAUL LAH	П			
		Contractor Type: Water Well Drilling Business Name: SIIRTOLA WELL I Business Address: Water Well Contra	ORLG	ertification			
		This well was drilled under my supervimy knowledge and belief.  Signature of Registered Contractor	SIUN ANG INIS	s report is true	io ine destot		
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.

Tax No:	Permit No: W04-31-065	County: Hough	nton		Township	: Torch Lake	
		Town/Range:	Section:	Well Status:	WSS	N: Source	e ID/Well No:
Wall ID: 24000	001401	55N 32W 19 Active					
Well ID: 31000	100.1491	Distance and D	irection from	n Road Inters	ection:		
Claustian		1.8 MILES NOR	TH INTERSI	ECTION OF B	aulman i	ROAD AND REI	D BARN
Elevation:		ROAD					
Latitude: 47.154241		Well Owner	_				
Longitude: -88.417213	!	Well Address:		Į.	Owner Ad	dress:	
Method of Collection: Interpola	ation-Man ··						
metriod of Conection.		МІ					
Drilling Method: Rotary		Pump Inst	alled: Yes		Pump I	nstallation Onl	v: No
, -	Vell Use: Household	1 .	allation Date		HP: 0.5		y
•	ate Completed: 7/30/2004		rer: Grund			r <b>vpe:</b> Submer	sible
Casing Type: Steel - unknown	Helght: 1.50 ft. above grade		nber: GRU		•	Capacity: 5 G	
Casing Joint: Welded	mes in above grade	i i	Length: 1	= -		/oltage:	
Casing Fitting: Drive shoe		Drop Pipe	_	.0.00 11.		Record ID:	
January Manage Sinto Chico			n Seal Used	: No	Drining	recoord is:	
Diameter: 6.00 in. to 122.50 ft. depth	1		ank Installe				
	•	1	ank Type:			•	
		1	rer: Amtro				
Borehole: 6.00 in. to 201.00 ft. depth	1	1	nber: BN4		Tank (	Capacity: 20.0	) Gallons
			Relief Valve		No	Jupuoliji Loi	
Static Water Level: 14,00 ft. Below	Grade			<b>.</b>			Depth to
Well Yield Test:	Yleld Test Method: Air	İ	Formation	Description		Thickness	Bottom
Pumping level 201.00 ft. after 1.00 hrs	s. at 12 GPM	Sand				15.00	15.00
		Sand & Gra	vel			25.00	40.00
	<u> </u>	Clay				20.00	60.00
Screen Installed: No	Intake: Bedrock Well	Sand & Gra	vel Clayey			7.00	67.00
한 불발대 맛한 된 회기의 불통 먹하다		Clay				28.00	95.00
		Gravel & Cl	ay			27.50	122.50
그 남화하다 교통하는 걸 그는 때 복하고 있다	중앙의 회사를 보고 음식을 받는 경찰으로 .	Sandstone				78.50	201.00
	를 붙여기 보는 경험 경험 경험을 보냈다.						
그 불빛을 다 맞았다. 김희리 프랑프	보프 이 집에서는 그를 하는데 불렀다.	N.A.J					
그 말을 불러한 불통하다 살라고는 모양을							
그리얼을 보다 등 회장 공항 중 결과 방법을							
Well Grouted: Yes Grouting	Method: Unknown						
Grouting Material Bags Addi	tives Depth						
Bentonite slurry 1.00 None		Geology R	emarks:				
Wellhead Completion: Pitiess adap	ter						ļ
							1
orași de la care de la care de la care de la care de la care de la care de la care de la care de la care de la		<u> </u>					
Nearest Source of Possible Contami	nation:	Drilling Ma	chine Opera	itor Name:	PAUL LAF	ITI .	
Туре	Distance Direction	Employme	nt: Employe	96			ł
Septic tank	1020 ft. West						
				er Well Drilling		r Reg No:	1677
				TOLA WELL D	RILLING		
된 환호 지역, 일본 살아보기 연락된	호롱스티 보고 안 되는 선생님의	Business A					
그 살림 하시 얼마 얼마 화물을 하뿐?			Water V	Vell Contra	ctor's C	ertification	]
그 이렇게 있는 노동은 이렇는 중 본 적물을 맞은데 하고 이 호로이렇다.			as drilled und	er my supervis		is report is true	to the best of
그리 수 있으로 사회를 만들고 없었다.	총 호롱 그는 걸 건물을 보는		ge and belie				
	[취임] : : : : : : : : : : : : : : : : : : :	.					
		Signature	of Registers	d Contractor		Date	
General Remarks:		Torgitature C	. INCUISIBLE	a Jonataviol		Date	
Other Demarks							

		T			$\Box$
D.		ЛСН	IGAN DEPA	RTMENT	
			OF UBLIC HEA		19
	Soction Number				
SWN	Average to the second	ン	5 N/6.	94 E	/W,
WNER OF V	MEL I 1				٠
ldrosa					.
ELL DEPTH	l: (completed) C	nta c	of Completion	,	
150		- 1	24/81		1
Cable to	ool Rote		Driva	, П	Dug '
] Hollow r	red 🔲 Jette	ıd	Borod		
SE://Don		ic Su		Industry	
Hirde		onál	tioning [	Convencia	1
Птов		<i>3</i> —,			
ASING: Th am.	roadod Wolder				-
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N	IONE .	01-			1
	ft, and				
ttings:					1
_					
ATIC WAT	ER LEVEL				
· (- <del>[</del> -	ft, below land sur	(ace	·- · · · · · · · · · · · · · · · · · ·		
-,					
110	ft, after 2 hrs, p	iqmu	ng <u>12</u>	0.0.0.	1
VATER OIL	it, niter brs. ;	idini)i istiki	001	g.p.in.	
imian WUi	ALITY In Parts Par	Milit.	"" Unki	AOMM.	
(U)] (F8)	G1101	ពេបន	(U)		I

1 LOCATION OF WELL		WATER V				VICHIGAN DEPA OF PUBLIC HEA	
County	Township Name		Fraction		Soction Number	Town Number	Range Number
Ноиситом	SCHOOLCRAFT		NE NN	E MSW M		55 N/6.	
Distance And Direction from Road		<del>······</del> ·		3 OWNER OF	VFI):	***************************************	
1 6/10 MILES NO	RTH OF THE BI	MEMAN	Ro.	Address			
Street address & City of Well Loc	at law.			1			
Locate with "X" in section be		CH LAK	C <sup>d</sup>	4 WELL DEPTH	l: (completed) (	Onte of Completion	·
	7019			150	ft.	9/24/81	
	V.	( ) (		6 Cable to		ry 🔲 Driver	ս 🔲 քաց ՙ
w	作 1.7.	. ( )		Hollow		<del></del>	
X	BAYLMON 1.6 ROAD	41 /		6 USE: Don	-		Industry
	ROAD	- (		Liteld BaoT	-	Conditioning [	[ Commercial
		•		7 CASING: TH	rended Welder	Height Abo	ve/Balow
1 MILE		Name of the last o	And the second reasons	Diam.		Surface 4	fi,
2 FORMATIC	ON	THICKNESS OF	DEPTH TO BOTTOM OF		6 <u>1</u> ft. Dapt		
		SYRATUM	STRATUM		ft, Dept	h Driva Shae?	Yes No
FINE SAND		.6	6	8 SCREEN:	ONE	_ Dia,;	
Carra			20	1		_ Longth	· ·
SANDY GLAY AND			35	Set between	ft, and	ft,	
SANDY CLAY & GRA	IVEL (HARD)	13	(48)	Fittingst			
		400		9 STATIC WAT		<del></del>	
JACOBSVILLE SAND	STONE	102	150		ft, below land su		<u> </u>
					EVEL bolow land	surraco pumping 15	
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · · · · · · · · · · · · · · · · ·	***			114 41101	Pumping	A.b.ing
					ft, after brs.	pumping	g.p.in.
				ł.	LITY in Parts Per	UNKI	NOWN.
				Iron (Fe)	Chlo	ridos (C))	
				Hardness _	Other	r	
		-				n Approved Pi	
		,				12" Above Gra	nde
					od? 🗌 Yes 🔎 No		•
				1	ement Benton		
				14 Nearest Set	m	ontamination	
				100 test	S Direct	on PRIVVY	Туре
	· · · · · · · · · · · · · · · · · · ·			·		tion Yos N	10
				15 PUMP:		lot installed	
					er's Name		
	,					HP Volte	
				1	Submersible	opavity	21 61116
	- <u></u>			1		Reciprocating	
UBE A 2NG SHEET IF	r HESDED						,
16 Remarks, elevation, source			17 WATER	WELL CONTRA	CTOR'S CERTIFI	CATION:	
•					dor my jurisdictic adpa and beliat.	n and this roport i	la truo
			VALLE	Y WELL &	PUMP	31-125	78
		***************************************					TION NO.
			Addrosel	15 To 1	<u> دیمای ۷۲ (</u>	CALUMET, I	H 457775
			Signod _	yes	Fola	Date · 9	/24/81
			~. Buon _	AUTHORIZED REA	RESENTATIVE	Data	

GEOLOGICAL SURVEY SAMPLE No.

GEOLOGICAL SURVEY SAMPLE NO.		10	
DOTROZNÁSTÁĎ ŠÚMÁŘNSKÍ Jeder vaskou, kakan Astausticzna, zak	WATER N	WELL REC	
1 LOCATION OF WELL	orane dockstele a consess		OF PUBLIC HEALTH
County TOMP TOMP TO ACH	YAKE	Fraction NE%	54x 55 20 55 UNS. 32 WW.
Distance And Direction from Road Intersections AROUT 4 MILES 50 LAKE KINDEN ON BO	OT TACK	CROKE	3 OWNER OF WELL:
Street address & City of Wolf Location \( \textstyle \textstyle \)			
Focato with "X," in section palam 21	ketch Mnp:		4 WELL DEPTH: (completed) Date of Completion
			5 Cable tool Rotary Driven Due
			6 USE: Domestic Public Supply Industry   Irrigation Air Conditioning Communical
1 MILE			7 CASING: Thrended 4 Welded Height: Above/Below Surface 7 ft.
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	Cin. to SOft. Dapth Weight 125 His/ft.  in. to ft. Dapth Orive Shoo? Yes 170
JAND	6	(ے	8 SCREEN: Type: Dia.:
CLAY	20	26	Slot/Gayzu Longth
BRAVELLY CLAY	3	(29)	Sot botween ft, and ft. Fittings:
SAND S TUNE	21	50	9 STATIC WATER LEVEL
			10 PUMPING LEVEL below land surface
			ft, after hrs, pumping g.p.m.
			11 WATER QUALITY in Parts Per Million:  Iron (Fe) Chlorides (CI)
			Hardness Other
and the second s			12 WELL HEAD COMPLETION: In Approved Pit
			Pritiess Adaptor   12" Above Grade   13 Wolf Groutod?   You Ano
			Nent Coment   Bentonite
			14 Nearest Source of possible contamination  20 feet NE Direction 55 / 7 / C. Type
			Wull distributed upon completion 4 Yes No  15 PUMP: Roy installed
			Manufacturor's Name MYERS
,			Model Number 5 4653 - 5 / HP & Voits 23 Co
			Type: Submersible    Jet     Reciprocating
LEE A ZHO SHEET IF NEEDED			T nonnaventa
6 Remarks, elevation, source of data, etc.		This wol	WELL CONTRACTOR'S CERTIFICATION: If was drilled under my jurisdiction and this report is true ast of my knowledge and boiled. TO A WELL DRILLING 0154 STERED BUSINESS NAME REGISTRATION NO.
067d 100M (Rev. 12-68)	107A	Address Signed _	Devel Scille Date 10/26/75

93

TAXNO:	MICHIGAN DE WATER W		•			PERMIT NO:	Ą
1. LOCATION OF WELL	WAIEDW	CLL AI	AD LO	ME UEC		W 4231	0180
County	Township Name	and the second	Fraction	1	Section No.	Town No.	Range No.
HUUGH TON	TORCH LAKE	7		14414 NE 114	20	55N	32W
Distance and Direction from Road		·····	1	3. OWNER C	Charles and the San Street, Street, Street, Street, Street, Street, Street, Street, Street, Street, Street, St		
1 L	UTH OF LAKE	LIND	F N	Address	. ,,,,,,		•
	K ROAD AND I						
WEST	11 14-14 1111 1		- 1				
Street Address & City of Well Loc	ation			Address S	ame as Well Loca	tion LX Yes	No
Locate with 'x' in Section Below		Sketch Map		4. WELLDER	TH: Date C	ompleted 🔯 Ne	Well we
	ME CULLUM	GR.		200		15" 95 🗆 Re	placement Well
				5. X Cable			
	. La			Hollow		iger/Bored 🔲 Jet	
<b> </b> *  <del></del>	X / 51			6 LISE V	Household Ty	na i Bublic Tvo	e III Public
1	1/2					pe lla Public 🗆 He	
	S. C.				Test Well Ty		
	)E			7 CASING:	ØSteel □Th	readed Height	: Above/Bolow
Mile	/			7. OABING.	Plastic W W	1 -	e:tt
2. FORMATION DESCRIPTION		THICKNESS CF STRATUM	DEPTH TO BOTTOM OF STRATUM		Other		•
		STRATUM	STRATUM	Diameter:		36_it. depin   Weigh	n:/8,97_10s/h
SAND		8'	8'		In. to		
		<del></del>	+	BOREHO			ve Shoe
SANDY CLAY 4	GRAVEL	4'	1/2.	Diameter:	in. to _2		ale Packer
CLAY + GRA		111	130	·			
,		<del></del>		1	Not installed		
CLAYSAND + C	BRAUEL	5'	135			Diameter_ Length:	
RED CLAY 4	GRAVEL	1 .7*	136	Set Between		it. and	
i		1 / 1 / 1	·	FITTINGS			
SAND STONE	<u> </u>	64'	200	☐ Blank /	Nove Screen	ft. Other	
	•			9. STATIC W	ATER LEVEL:		
			<b> </b>	┥	ft. Below Land	Surface ` 🗆 Fic	wing
			<b></b>	10. PUMPING	LEVEL: Below La	and Surface	
						hrs. Pumping at	8 G.P.M.
	·	1	1	Plunge		☐ Alr	Test Pump .
		<u> </u>	<u> </u>	11. WELL HE	AD COMPLETION:		
				Pitless		12" Above	Grade
				7 4	ent Offset	Well Hous	.0
		_	ļ	12. WELL GRO	outens Mu	Yes From	io
WHITE				Neat C			167
		7 7 7	1	No. of Bag		Additives	
		<del> </del>	<del> </del>		····	SIBLE CONTAMINA	TION:
	•			Type S E		lance 70 ft. D	
		1	<b> </b>	Туре		tancet. D	
USE A 2ND SH	EET IF NEEDED			14. PUMP:	Not Installed		
15. ABANDONED WELL PLUGG					rer's Name		and only
Casing Diameter				Model Nun	nber 7.5MB	12 B HP 3/4	Volts 230
PLUGGING MATERIAL:	-	☐ Bentonite	•	Length of	Drop Pipe/ 84	ft. Capacity_	
Cement/Bentonite Slurr	•	Bentonite		TYPE:	Submersible	☐ Jet ☐ Other	
No. of Bags		Yes L	No.	PRESSUR		summer and a	
16. REMARKS: (Elevation, Sou					rer's NameA_N		1
met it faith	. 4			Model Nur	nber2_50	Capacity_/3	Gallons 44
1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m	X,	15. WATER	WELL CONT	TRACTOR'S CER	ITIFICATION:		Į.
		This we	ll was drilled	under my jurisd	iction and this rep	ort is true to the be	st of my
17. DRILLING MACHINE OPERA	ATOR:	knowled	ige and belie	d. 	W 6114413	••, ,	/ 7 7 7
DEmployee D Subcont		I SE		N WELL	4 PUMP	3/	GISTRATION NO.
Name GEORGE		Address	RTE	 1 Box 23	8 CALU	MET, MIC	
	IN B BLLLAW	1 Manage	<u> </u>	n!			_ 18 _ GE
DNR	ECLUNURY W.	Signed_	Men	rge De	dancer	Date / 2	- 15

MAR 2 7 1996



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

**Wellogic** 

Failure to comply is a misdemeanor.

Import ID:		Failure to com	iply is a misder	neanor.				
Tax No:	Permit No:	W06-31-113	County: Hough	hton		Township:		
				Section:	Well Status:	: WSSN:	Source	e ID/Well No:
Mall ID: 210	0000402	E .	55N 32W	21 .	Active			
Well ID: 310	0000192	$\mathfrak{O}_{+}$	Distance and D					
Elevation:			.5 MI E OF MUD	LAKE RD 8	SCHOOL FO	OREST RD		
1		•						
Latitude: 47.14261			Well Owner: Well Address:					
Longitude: -88.3701			well Address:			Owner Addre	955;	
Method of Collection: GF	S Std Positioning Svd	SA Off			1	1		
			<u> </u>			Ļ		
Drilling Method: Rotary			Pump Inst		-			
Well Depth: 242,00 ft.	Well Use: Type	•		Fank Installe				
Well Type: New	Date Completed:		Pressure F	Relief Valve	Installed:	No		
Casing Type: Steel - black	Height: 1.5	0 ft. above grade	n 1578.7	Lateral Reviews	na valent (183)	a deren era po		41 No. 1 No.
Casing Joint: Welded								
Casing Fitting: Drive shoe								
Diameters 6.00 to to 36.00 ft d	onth							
Diameter: 6.00 in, to 26.00 ft, d	ebai							양상 왕 12 1
Borehole: 10.00 in. to 26.00 ft.	denth		10.000			jara Kasi		
6.00 in. to 242.00 ft. depth								
								of by Exist
Static Water Level: 48.00 ft. B	elow Grade				D		Thiskness	Depth to
Well Yield Test:	Yield Test Me	ethod: Air	Formation Description				Thickness	Bottom
Pumping level 242.00 ft. after 1.1	00 hrs. at 5 GPM		Clay Sandy	<u>′                                    </u>			16.00	16.00
			Sandstone	T	·		226.00	242.00
					<u> </u>	<u> </u>		
Screen Installed: No	Intake: Be	drock Well						
Temperation   Temperature			, i : i	· · · · · · · · · · · · · · · · · · ·				
불 취임성 보인도 걸려보면, 유수수		( . Is exercis		·				
						<del></del>	<del></del>	
許の作う強制(自動表)  自活り取りた	무소 경찰을 하다			•	• • •			
Well Grouted: Yes Grou	iting Method: Unkn	own						
		Depth		<del></del>				
l		4.00 ft. to 26.00 ft.	Geology R	emarks:				
	<u>-</u>							
Wellhead Completion: 12 incl	nes above grade							
<del> </del>	****							1
		:		<del></del>				
Nearest Source of Possible Co		m1		chine Opera		PAUL LAHTI		1
Туре	Distance	Direction	Employme	nt: Employ	ee			
None	200 ft.		Cantrastar	Tura	152 15 05 142	0.1.1		1077
			Pusiness	iybe: Mat	er Well Drilling TOLA WELL	g Contractor	Reg No: 1	1011
(基本)。 [10] (10] (基本) (基本)		法国出来的基础	Business A		TOLA WELL	UKLG		j
그래마 들어 하는 물건으로 한 경험이 있다면 하고 말이 함께			Dusilless F		Mall Casts	actor's Cer	tification	
			This wall w			actors Cer ision and this i		to the bost of
		in the second		as united and Ige and belie		ioiUII ailU IIIIS I	eport is true	TO THE DESI OF
그는 상품을 받았다.		**		J	•			·
			Cimf	-4 D1-4-	d Onator of			1
General Permarket			Signature	registere	d Contractor	-	Date	
General Remarks: Other Remarks:				<del></del> -				
water fremuital			•					

MICHIGAN DEPARTMENT OF PUBLIC HEALTH GEOLOGICAL SURVEY NO. WATER WELL AND PUMP RECORD PERMIT NUMBER LOCATION OF WELL Section Number Range Number 32 F Township Name Town Number SWANEA HUYA HOUGHTON +URC/+ Distance And Direction From Road Intersection INTERJECT 3 OWNER OF WELL: + 126 Addiess Street Address & City of Well Location 4/4KC CIM OLTM
Locate with % in Section Below Sketch Man. Address Same As Well Location? 4-Yes No WELL DEPTH: (completed) Data of Completion 2900784 162 126 x 5 Cable tool nevir0 🔲 Andiery. Dug Hollow rod 1eguA Deffet 🔲 6 USE: Domestic Type I Public Type III Public T641 [ irrigation Type Ila Public Heat pump Tost Well Type lib Public 7 CASING: Astrol | Threaded | Threaded | Plastic | Welded | In. to | 1t. depth Height: Above/Balow Surface \_ Weight 18,9 ps./ft. THICKNESS DEPTH TO 2 FORMATION DESCRIPTION BOTTOM OF OF STRATUM Grouted Drill Hole Diameter □ Yas Drive Shoe \_\_\_\_\_ in. to \_\_\_\_\_, ft. depth □ No SAND, CLAYES 8 SCREEN: Har Installed \_ Diameter \_ \_ Length \_\_\_\_ CIM PTUNE fi. and \_\_\_\_\_ Set between. FITTINGS: K-Packer Lead Packer Bremer Check Blank above screen \_\_\_\_ Other. 9 STATIC WATER LEVEL: ft. below land surface
10 PUMPING LEVEL: below land surface 02 It, after \_\_\_\_\_ hrs. pumping at . \_\_\_\_ hrs. pumping at 11 WELL HEAD COMPLETION: G42 above grade Pitless adapter Approved plt Besemant offset 12 WELL GROUTED? No Yes From \_\_\_\_\_ to \_ Neat cement Bentonite Other . \_\_\_ Additives .\_\_\_ No. of bags of cement \_\_\_\_ 13 Nearest source of possible contemination TONYES. Well disinfected upon completion? □ No 14 PUMP: Mich. Data of Co. Net Installed Pump Installation Only Manufacturer's name \_ ft. capacity \_\_\_\_\_\_ G.P.M. Length of Drop Pipe ..... USE A 2ND BREEF IF NEEDED TYPE: Submersible Jet \_ PRESSURE TANK: Manufacturer's name. Model number \_

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

18. WATER WELL CONTRACTOR'S CERTIFICATION:

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

	ACT 294	PA 1965	N D	MICHIGAN DEPARTMENT OF				
I LOCATION OF WELL					PUBLIC	C HEALTH		
FlougHTON OCE OLA	<b>,</b>	Fraction	-100	Section No.	55 NN	Range	SA & OIL	
stance And Direction from Road Intersections		7 7	3 OWNER	OF WELL:	<u> </u>	3.	E/T	
Stonce And Direction from Road Intersections 26 0	WNER No.	M C 34 1 16	, ,,,,,,,,	W II CHAIL				
FROM POLLAR BAY IN Street address & City of Well Location Woods 5/D	16 120	<i> </i>	Address		÷			
Street address & City of Well Location WOOD SID	E , D.04	LNG BA		*** <del>*</del>	4		,	
i _	THICKNESS	DEPTH TO BOTTOM OF	4 WELL	EPTH: (comple	ited) Data of (	Completion		
2 FORMATION :	STRATUM	STRATUM			JULY		1969	
		$V - \Sigma$	5 (A) Col		Rotary 🛄		Dug	
5AND - CLAYEY	50	50	<del></del>		Jetted 🔲			
RED- SAND STONE		- A -			Public Supply			
RED- JAIND 370NE	25	10			Air Conditionin	g. 🗀 Con	imercial	
			7 (19)0	Tesi Well		**********		
	·	ļ	Digm.	Threaded	Welded   Hei	ghti Above/	Balow	
			ın. ⊈∟in.	10 53 h.	Dapth surf		t,	
						phi Piliton		
		}	0	<u> </u>	Depth Driv	e Shoe? You	MOL	
	<del></del> -		8 SCREEN				}	
			Түрөз		Dia.;	<del>,,,</del>		
,	<del>-</del>	ļ	Slot/Ga	ure,	Length.	·		
·			See hate	ann ' di	and		and a	
	<del></del> -				Q114	**		
			Fillings	i				
			9 STATIC	WATER LEYE	L			
				ft, below lo				
			10 PUMPIN	IG LEVEL belo	w land surface	,		
			20	ft. ofter	hrs. pumpinge	R. 4:	.4.p.m.	
				fr altar	hrs. pumping	•	_9.p.m.	
p							-y.p.m.	
			[		arts Per Million:	•		
			Iron (Fe	)	_Chlorides (CI)_			
			Hordnes	1	74			
			12 west 6	IEAD COURT E.	FION: In App	Anna Dia		
					iter 🔲 12" A		- 1	
**************************************			13 GROUTI		iles to the fo			
•				outed? Yes	B\$ No			
				1 Neat Cem				
	_[		Dopths	FromIt. 1	afi,	·		
			14 SANITA	•		+		
The state of the s	<u> </u>		Nearest	Source of passi	ble contamination	ر د ر		
		1			Itéction 56		•	
The state of the s	<u> </u>			infected upon c	ompletion (X) Ye	s L No		
			15 PUMP:	, .	. <b>7</b> *	و پرسېني	المحا	
· ·	ļ			luter's Name A	101 /10	>/A/	(£2)	
		'	Model N		<del></del> Н	P		
the approximation of the form of the state o				of Drop Pipe	ft, capacity_	G.P.N	١.	
				Submaraible	Recipro			
16 Remarks, elevation, source of data, etc.		17 WATER		TRACTOR'S CE				
es manufuls distailable brases At datal sie.		1			k fir feet for: diction and this r	eport is true		
				wiedge and beli		-	.	
•		£1244	120 1	TILRIGH	<u>ي.</u> المح	215	4	
•		R:	EGISTERED BY	JMAN CRANIC		REGISTRATIO	и но.	
		Address	RUYTE	= 1, H1	gneuck		GH	
		Sloned	Ile m.	Dolu.	Date Date	1281	601	
	***		NUTHORIZED R	ЗУГУАТИЗЕЗЯЧЗ	A MARKATANA	1 1		

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TAX NO:	MICHIGAN DEF					PERMIT NO:	·
1. LOCATION OF WELL	AAWIEW AAE	LL A!	4D F.O.	ML UEC	OUD	238	4
	waship Name	E	Fraction NW1/4/V	WIA IVEIA	Section No.	Town No.	Range No.
Distance and Direction from Road Interse	ction			3. OWNER	<u>and the same is the first of the same is the same to the same same than the same same to the same same to the same same same same same same same sam</u>		the state of the s
4,4M ILES, 50	UTH OF DRI	5 A/Y	CAND	Address	•		
HOTEL ON BOOTS	ACR ROAD	MAD	30	-			å
FRET WEST. Street Address & City of Well Location				Address	Same as Well Loca	ilion 🗆 Yes 🔀	No
Locate with 'x' in Section Below		teich Map		4. WELL DE 125		Completed X Ne	w Well placement Well
	TAGE LAK	<u></u>		5. Cable			
				Hollov		iger/Bored Jet	
	L	英		ļ [**	Household Ty Irrigation Ty	pe i Public ∐Typ pe ila Public ☐ Hea	e III Public
		BOUTS	HCK RO.			pe (lb Public 🗌	u ramp
	FII	RE# 3	63	7. CASING:			: Above/Below
2. FORMATION DESCRIPTION	Al Allendria and Company on the Company of the Comp	THICKNESS - CF STRATUM	DEPTH TO BOTTOM OF STRATUM		Plastic WW		3tt
			-	Diameter	in. to	221. depth Weigh	t: <u>18,97</u> выль
TOP SUIL		_ <b>ス</b> ゙	2'	BORE HO	LE:	<b>⊠</b> Driv	va Shoe
5 A N 12		3	5'	Dameter		<b>2.5</b> Ti. depth ☐ Sha Ti. depth	le Packer
CLAY SANDA		71	12	B. SCREEN:	Not installed	☐Gravel-Pack	ed
SANDY CLAY+		106	118	SlovGauze	10	Diamete:Length:	<u>и</u>
FINE RED 51	ND	4'	122'	Set Betwe	en /22	ft. and/_	<u>25h.</u>
SAND		3'	125	FITTINGS  Blank	Above Screen		
					VATER LEVEL:	Surlace  Flo	wlan
		<u>, </u>			ELEVEL: Below La		ineig :
				3.9 □Plunge	ft. After /	hrs. Pumping at_	<b>2</b> ○ G.P.M.  ☐ Test Pump
					AD COMPLETION: Adapter	12" Above	Grada
					nent Offset	Well House	•
			-	12, WELL GR		Yes From	
. , , , , , , , , , , , , , , , , , , ,				∐ Neat ( No, of Bag		antonite Ch Additives	ė(
*				13. NEARES	SOURCE OF POS	SIBLE CONTAMINAT	
				1		tance <u>5°5</u> ft. Di tance ft. Di	
USE A 2ND SHEET IF N	······································		<u> </u>	Type		lanceit. Di	rection
15. ABANDONED WELL PLUGGED?	Yes No				Not Installed A7& Ler's Name		HAUDT OTTY
Casing Diameterin. PLUGGING MATERIAL:	Depthit.	Bentonite	Slucov	Model Nu	mber 105P40	:0/T-02HP 1/2	
Cement/Bentonite Sturry	Concrete Grout	Bentonite	Chips	Length of TYPE:	Drop Pipe 44 C	ft. Capacity_	
No.of Bags	<del></del>	Yes 🗌	No	PRESSU	RE TANK:		-
16. REMARKS: (Elevation, Source of E		No.			irer's Name <u>A7</u> mber 202		5 Gallons 2 O
, see	NAT. 3 OFFIC	s. Water	WELL CONT	RACTOR'S CEI			
(,490)	(32)	This wel	l was drilled ge and beliel	under my juriso I.	fiction and this rep	ort is true to the bes	·
17. DRILLING MACHINE OPERATOR:  DEmployee D Subconnector	GRH ' 177.	KE	BANE	N WEL	L+ PWMI	31-17	Z Z
Name G. KERANEA	<i>L</i>					ET, MICH,	
GW-2-228 9/93		Sioned	Menor			Date // G	
F		A.S. 100	AUTHOR	ZED REPRESENTAT	IVE		

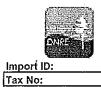


## Water Well And Pump Record Completion is required under authority of Part 127 Act 368 PA 1978.

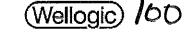
Failure to comply is a misdemeanor.

Import ID:	Failure to cor	nply is a	a misdem	eanor.				
Tax No:	Permit No: W9931116	Count	y: Hough	ton		Township:	Torch Lake	
	000000100	1	'Range: N 33W	Section: 26	Well Status: Active	WSSN:	Source	e ID/Well No:
Well ID: 31	000000426				m Road Inter	section:		
Elevation:	•	.6 mile	northwes	l of intersec	t of Baulman F	Rd. and Nighi	lingale Dr.	
Latitude: 47.128891		Mall C	wner:					
		-	ddress:	<u> </u>		Owner Add	ress:	
Longitude: -88.449103					,			
Method of Collection:	QQQ - Centroid	<u> </u>						·
Drilling Method: Rotary		Р	ump Insta	illed: Ye	\$	Pump ins	stallation Onl	y: No
Well Depth: 142.00 ft.	Well Use: Household	P	ump Insta	illation Dat	e:	HP: 0.50	1	
Well Type: New	Date Completed: 10/11/1999		lanufactui		Jacket		pe: Submer	
Casing Type: Steel - black Casing Joint: Welded	Height: 2.00 ft. above grade			ber: 50C Length: 1		Pump Ca Pump Vo	pacity: 10 (	JPM .
Casing Fitting: Drive shoe			rop Pipe l		20.00 R.	-	Record ID:	
		D.	raw Down	Seal Used				
Diameter: 6.00 in. to 27.50 i	ft. depth			ank Installe				
				ank Type: er: Othe				
Borehole: 10.00 in. to 27.50 ft. depth				er: Otne ber: 202		Tank Ca	pacity: 20.0	) Gallons
				ellef Valve		No	paony.	
Static Water Level: Above				Formation	n Description		Thickness	Depth to
Well Yield Test: Pumping level 142.00 ft. after	Yield Test Method: Unknown		and	<u> </u>	•		2.00	Bottom 2.00
Tumping to ter 142,00 fc exten	1.00 mo. at 25 or m	_	andstone				140.00	142.00
•						,		
Unrestricted Flow Rate:	Intake: Bedrock Well							
Screen Installed: No	Intake: bedrock well Na Par Alle State water E	. ; ; <del> </del>		<del></del>				<del>                                     </del>
		-						
	기를 잃어 하면 살 말이는 불통합니다고 있다.			··········				<del>   </del>
	마리 가입니다. 하는 사람이 되었다는 것을 보았다는 그리고 하는 것이다. 중에 있는 것을 보면 되어 되었다는 사람들에 보고 있는 것이 되었다.					***************************************		
	routing Method: Unknown Additives Depth	-	eology Re					L
Grouting Material Bags Neat cement 10,00			eology Re	marks:				
Wellhead Completion: Pill	ess adapter							
Nearest Source of Possible	Contamination:	Dr	rilling Mad	hine Opera	ator Name:	Paul Lahti		
Туре	Distance Direction			it: Unknov				
Septic tank	60 ft. Southeast			Tunoi ili.	- 147-11 D-1111-	Orado	N N	1077
					er Well Drilling ola Well Drillin		Reg No:	1077
	젊을인가는 말을 하는데 요즘 하는데 다		usiness A	ddress:				
								to the best of
		Si	gnature o	f Registere	d Contractor		Date	
General Remarks:								
Other Remarks: Tank Manuf	acturer:amtrol							

GEOLOGICAL SURVEY SAMPLE No.	•	1 )	
***************************************	WATER '	WELL REG	
1 LOCATION OF WELL	ACT 25	94 PA 196	DF PUBLIC HEALTH
HOUGHTON TORCH	LAKE	Fraction 5E <sub>1/4</sub> .	JENSVY 25 J3WNS. Rame Number 53WNS.
Distance And Direction from Road Intersections  3 MI. EAST OF DOLLAR  ON BENTER ROAD			3 OWNER OF WELLS
ON BENTER RUAL	7	- / 1 - / bata:	Address
Street address & City of Well Location DOLLA.  Locate with "X" in section below Ske	tch Map:	9 1714	4 WELL DEPTH; (completed) Date of Completion.
	,	. •	90 " 7/28/72
		•	5 Cable tool   Rotary   Driven   Dog
*   -   -			Hollow red
			☐ Irrigation ☐ Air Conditioning ☐ Commercial
			7 CASING: Thresded Welded Height: Above/Selow
MILE	THICKNE'S	DEPTH TO	Surface St.
2 FORMATION	OF STRATUM	BOTTOM OF STRATUM	
SAND- CLAYEY	5-	S.	B SCREEN:
h - 01 N.			Typo; Dia.: Stot/Gauza Langth
AED-CLAY	22	27	Set betweenft. andft.
RED-SANDSTONE	63	90	Fittings:
			9 STATIC WATER LEVEL
			10 PUMPING LEVEL below and Burtace
			70 ft. after hrs. pumping 2 g.p.m.
,			ft, after hra, pumping
			If WANT QUALITY in Parts Per Million:    Iron (Fe) Chlor(des (CI)
			Hardness Other II In Approved Pit
			Pitiess Adapter 12" Above Grade
			13 Well Grouted?   Yes   No   Neat Coment   Bentonite
			Depth; From tt. toft.
	_		14 Nearest Source of possible contamination 70 jest 50 UT blantion 5 E P T / C Type
			Well disinfected upon completion 2 yes 2 No
-			Manufacturar's Nego Not installed
			Hodel Number 5652 3 6 HP & Volta 250
			Langth of Drop Pipe
			Jet Analyrocating
USE A 2ND SHEET IF NEEDED			
18 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION:
	:	to the be	I was drilled under my jurisdiction and this report is true and of mystopy and belief.
-			SYERED BUSINESS NAME REGISTRATION NO.
_		esenbb∧ <b>(</b>	DO O O A D
		Signed	Swand Surtales on 0/7/72
DA74 100M (Rev. 12-68)			AUTHORIZED REPRESENTATIVE



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



Township: Torch Lake

Failure to comply is a misdemeanor.

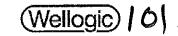
County: Houghton

Permit No: W00-31042

	То	wn/Range: 55N 33W	Section:	Well Status	: WSSN	: Sour	ce ID/Well No:
Well ID: 31000000380	Dis	· · · · · · · · · · · · · · · · · · ·	25 trection fro	Active m Road Inter	section:	1	
				ECT OF SEN		ACKMAN RE	)
Elevation: 778 ft.	<u> </u>						
Latitude: 47.12766439	·	ell Owner:					
Longitude: -88.43847039	We	ell Address:			Owner Add	lress:	
Method of Collection: Address Matching-House Number				<u> </u>			
Drilling Method: Rotary		Pump Insta	alled: Yes	3	Pump In	stallation O	nly: No
Well Depth: 102.00 ft. Well Use: Household				e: 5/25/2001			
Well Type: New Date Completed: 4/28/20 Casing Type: Steel - black Height: 2.00 ft. above		Manufactu		Jacket		ype: Subme	
Casing Type: Steel - black Height: 2.00 ft. above Casing Joint: Welded	grade		nber: 50F: Length: 8		Pump Vo	apacity: 10	GPIVI
Casing Fitting: Drive shoe		Drop Pipe		0.00 11.		Record ID:	
			n Seal Used	l: No			
Diameter: 6.00 in. to 44.00 ft. depth		Pressure T	ank Installe	d: Yes			
		•	ank Type:				^
Parahala, 600 in to 4400 ft don'th	•	Manufactur Model Num	rer: Other aber: 202		T!: C		O Callana
Borehole: 6.00 in. to 44.00 ft. depth			telief Valve		No Tank Ca	apacity: 22	.o Gallons
Static Water Level: 24.00 ft. Below Grade Well Yield Test: Yield Test Method: Al	lr		Formation	n Description		Thickness	Depth to Bottom
Pumping level 102.00 ft. after 1.00 hrs. at 15 GPM	•	Loam Sand	γ .			10.00	10.00
		Clay				34.00	44.00
		Sandstone				58.00	102.00
Screen Installed: No Intake: Bedrock Wel	l Transferensist	ļ				ļ	<u> </u>
		·		<del></del> -		<del> </del>	
				,		<del> </del>	+
		<u> </u>					
			<del></del>	<del> </del>			
Well Grouted: Yes Grouting Method: Unknown		1				<u> </u>	+
Grouting Material Bags Additives Depth							
Bentonite slurry 24.00 None		Geology Re	emarks:				4
							, i
Wellhead Completion: Pitless adapter	· ····	-					
Weinhead Completion: Filess adapter							
The state of the second of the				,			
Nearest Source of Possible Contamination:	.,	_	-	ator Name:	PAUL LAH	TI	
Type Distance Direct Septic tank 76 ft. North		Employmen	nt: Employ	ee .			
Septic tank 76 ft. North	•	Contractor	Type: Wat	er Well Drillin	n Confractor	Reg No:	1677
		Business N Business A	lame: SIIR	TOLA WELL	DRILLING IN	1C 1.03	1077
			Water V				n e to the best of
		Signature o	of Registere	d Contractor		Date	
General Remarks:							
Other Remarks: Tank Manufacturer:AMTROL							



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



import ID:

Tax No: Permit No: W03-31-112 County: Houghton Township: Torch Lake Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W Well ID: 31000000852 Distance and Direction from Road Intersection: .78 miles north on Red Barn Rd, from Baulman Rd, (T 31) and 40 Ft, west. Elevation: Well Owner: [ Latitude: 47.139775 Well Address: Owner Address:

Longitude: -88.427998 Method of Collection: QQQ - Centroid Drilling Method: Cable Tool Pump Installed: Yes Pump Installation Only: No Well Depth: 86,00 ft. Well Use: Household Pump Installation Date: 9/10/2003 HP: 0.50 Well Type: New Date Completed: 8/5/2003 Manufacturer: McDermott Pump Type: Submersible Casing Type: Steel - black Pump Capacity: 12 GPM Height: 2.00 ft. above grade Model Number: PEP3W52BA Drop Pipe Length: 75.00 ft. Casing Joint: Welded 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 83.00 ft. depth Pressure Tank Installed: Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Borehole: 6.00 in. to 86.00 ft. depth Model Number: V60 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: Static Water Level: 48.00 ft. Below Grade Depth to Formation Description **Thickness** Bottom Well Yield Test: Yield Test Method: Test pump Sand & Clay Fine 16.00 16.00 Pumping level 79.00 ft. after 2.00 hrs. at 15 GPM Red Clay 2.00 18.00 Clay & Sand 6.00 24.00 Screen Installed: Yes Filter Packed: No Sand Clayey Fine 13.00 37.00 Clay Screen Diameter: 5.00 in. Blank: Below 38.00 75.00 Sand Clayey Fine Screen Material Type: Stainless steel-wire wrapped 10.00 85.00 Sand Heaving/Quick Clayey 86.00 Slot Length Set Between 1.00 10.00 4.00 ft. 83.00 ft. and 86.00 ft. Fittings: Neoprene packer, Bottom plug Grouting Method: Driven/dry grout Well Grouted: Yes Additives Depth Grouting Material Bags Bentonite dry granular 3.00 None Geology Remarks: Wellhead Completion: Pitless adapter, 12 inches above grade Nearest Source of Possible Contamination: **Drilling Machine Operator Name:** Jeff Eskola Type Distance Direction Employment: Employee Septic tank 110 ft. West-Southwest

West-Southwest Contractor Type: Water Well Drilling Contractor Drainfield/Dry well 120 ft. Reg No: 2176 Business Name: Keranen Well and Pump Business Address: 31005 Township Park Road, Calumet, MI, 49913

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

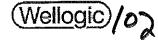
Signature of Registered Contractor

General Remarks: Other Remarks: Coordinate Source:Google well address geocoding

EQP-2017 (4/2010)



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



Failure to comply is a misdemeanor. <u>import</u> ID: Tax No: Permit No: County: Houghton Township: Torch Lake Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 32W Active Well ID: 31000001276 Distance and Direction from Road Intersection: 0.7 MILES NORTH OF INTERSECTION OF DAUMAN ROAD AND LAKE SHORE Elevation: Well Owner: Latitude: 47.13099 Well Address: Owner Address: Longitude: -88,410681 Method of Collection: Interpolation-Map Drilling Method: Rotary Pump Installed: Yes Pump Installation Only: Well Depth: 160.00 ft. Well Use: Household Pump Installation Date: HP: 0.50 Date Completed: 1/9/1987 Pump Type: Submersible Well Type: Unknown Manufacturer: F.E. Myers Casing Type: Steel - unknown Height: Model Number: SJ52-J511P Pump Capacity: 11 GPM Pump Voltage: Drop Pipe Length: 63.00 ft. Casing Joint: Welded **Drilling Record ID:** Casing Fitting: Drive shoe **Drop Pipe Diameter:** Draw Down Seal Used: Pressure Tank Installed: Diameter: 6.00 in. to 156.00 ft. depth Pressure Tank Type: Unknown Manufacturer: Amtrol Borehole: Tank Capacity: 8.0 Gallons Model Number: 250 Pressure Relief Valve Installed: Static Water Level: 9,00 ft. Below Grade Depth to **Thickness** Formation Description Bottom Well Yield Test: Yield Test Method: Unknown 8.00 8.00 Pumping level 160.00 ft. after 1.00 hrs. at 40 GPM Sand 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 156.00 ft. and 160.00 ft. 0.01 4.00 ft. Fittings: Neoprene packer 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 Contractor Type: Water Well Drilling Contractor Reg No: 1677 Business Name: SIIRTOLA WELL DRILLING Abandoned Well Plugged: Business Address: Water Well Contractor's Certification Reason Not Plugged: This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor General Remarks:



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

Fallure to comply is a misdemeanor.

Tax No: 31-014-330-005-00   Permit No: VV0431074	JUOL	anty: Houg	nton:		i ownsnip:	Torch Lake		
NA 11 15 04000004455	E	vn/Range: 55N 32W	Section: 30	Well Status: Active	WSSN:	Source	e ID/Well No:	
Well ID: 31000001455	Dis	tance and D	irection fro	m Road Inters	ection:			
	0.7	mile north o	n Red Barn	Road from Baul	man Road a	and 200 feet e	ast	
Elevation:	L.			<del></del>				
Latitude: 47.13752		Well Owner:						
Longitude: -88.42416	Wel	Well Address: Owner Address:						
Method of Collection: GPS Std Positioning Svc SA Off								
Method of Conection. Graditioning overagion	<b></b>							
Drilling Method: Cable Tool		Pump inst	alled: Ye	25	Pump Ins	stallation Onl	v: No	
Well Depth: 119.00 ft, Well Use: Household				te: 7/30/2004	HP: 0.50			
Well Type: New Date Completed: 7/29/2004		1 '	ırer: Gou			pe: Submer	sible	
Casing Type: Steel - black Height: 2.00 ft. above grad	le	Model Nu	nber: 109	SB05412L	Pump Ca	pacity: 10 (	3PM	
Casing Joint: Welded		Drop Pipe	Length:	107.00 ft.	Pump Vo	itage:		
Casing Fitting: Drive shoe		Drop Pipe	Diameter:	1.00 in.	Drilling F	Record ID:		
			n Seal Use				<del> </del>	
Diameter: 6.00 in. to 115.00 ft. depth		1	Tank Install					
		ſ		Diaphragm/b	ladder	•		
		1	ırer: Proli					
Borehole: 6.00 in. to 119.00 ft. depth		Model Number: CA4202 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: No						
		Pressure	Relief Valve	Installed:	40			
Static Water Level: 48.00 ft. Below Grade							Double to	
Well Yield Test: 48.00 it. below Grade  Well Yield Test Method: Test pt	umo		Formatio	n Description		Thickness	Depth to Bottom	
Pumping level 95.00 ft. after 2.00 hrs. at 6 GPM	unsp	Sand Silty	· · · · · · · · · · · · · · · · · · ·		·	10.00	10.00	
The tripling level 90,00 it. after 2,00 files at 0 Or M		Clay & Sar	nd			56.00	66.00	
		Sand Claye				2.00	68.00	
Screen Installed: Yes Filter Packed: No		Sand Fine	7 1 10			2.00	70.00	
Screen Diameter: 5.00 in. Blank: 1.00 ft. Above		Clay Sand	Gravel	*******		19.00	89.00	
Screen Material Type: Stainless steel-wire wrapped			vel Sandy H	fard		24.00	113.00	
Slot Length Set Between			avel-Clayey			2.00	115.00	
12.00 4.00 ft. 115.00 ft. and 119.00 ft.		Sand & Gra	avel			4.00	119.00	
				·				
Fittings: Neoprene packer, Bottom plug								
		<u> </u>					<u> </u>	
Well Grouted: Yes Grouting Method: Driven/dry grout		<u> </u>				· · · · · · · · · · · · · · · · · · ·		
Grouting Material Bags Additives Depth							<u> </u>	
Bentonite dry granular 5.00 None	•	Geology R		ared at 110 fact				
·		Ciay & Gia	vei eficotifit	ered at 119 feet				
Wellhead Completion: Pitless adapter, 12 inches above grade		1						
weimeau completion: Filless adapter, 12 mones above grade		[						
	<del></del> -	1						
Nearest Source of Possible Contamination:		Drilling Ma	chine One	rator Name:	Ted Kerane	n		
Type Distance Direction			nt: Emplo		. ,			
			-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•				

General Remarks:

Drainfield/Dry well

East-Northeast

Contractor Type: Water Well Drilling Contractor

Business Name: Keranen & Eskola Well Drilling

my knowledge and belief.

Signature of Registered Contractor

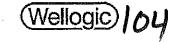
Business Address: 55961 Lake Linden Avenue, Laurium, Ml, 49913 Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of

Reg No: 2413



Tax No:

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



Failure to comply is a misdemeanor.

Tax No:	Permit No:	W9831130	County: Houg	hton		Township:	Torch Lake	
			Town/Range:	Section:	Well Status:	WSSN	: Source	D/Well No:
Well ID: 3100	1000158	Ω	55N 32W	29	Active		<u> </u>	
Well ID. 3100	1000 136	O	Distance and D				ארט, מבמ גיני	CT MEOT
Elevation:			.5 MILE SOUTH	OF FIRE S	TATION ON B	OOTJACK	(OAD; 250 FE	EIWESI
Latitude: 47.12867023		ļ	Well Owner:					
Longitude: -88,4016408		-	Well Address:		7	Owner Add	ress:	
<del>-</del>	1							
Method of Collection: Inter	polation-Map	J						
Drilling Method: Cable Tool			Pump Inst	talled: Ye	s	Pump In	stallation Onl	v: No
Well Depth: 35.00 ft.	Well Use: House	ehold		tallation Dat		HP: 0.50		, , , , ,
Well Type: New	Date Completed:	8/24/1998		ırer: Sta-l		Pump Ty	/pe: Submer	sible
Casing Type: Steel - unknown	Helght: 2.00	) ft. above grade	Model Nur	mber: 105	P4CO15-		apacity: 10 0	SPM ·
Casing Joint: Welded	•			Length: 2	25.00 ft.	Pump Vo		
Casing Fitting: Drive shoe				Diameter:		Drilling I	Record ID:	
Diameters 6.00 in to 22 E0 ft dor	ath			n Seal Used Tank Install				
Diameter: 6.00 in. to 32.50 ft. dep	JUI			rank instan Tank Type:		-		
					-Rite-Flexcon			
Borehole: 6.00 in. to 35.00 ft. depth			I.	mber: WR		Tank Ca	apacity: 20.0	Gallons
·			Pressure I	Relief Valve	installed:	No	-	
Static Water Level: 1.50 ft. Below		#		Formation	n Description		Thickness	Depth to Bottom
Well Yield Test: Yield Test Method: Test pu Pumping level 25,00 ft, after 2.00 hrs, at 20 GPM			Sand		<del>-</del>		5.00	5.00
rumping level 25,00 ft. aliei 2.00 f	115, at 20 GFW		Clay & San	\d		····	3.00	8.00
			Clay Grave				14.00	22.00
Screen Installed: Yes	Filter Packed: No		Clay & Gra				8.00	30.00
Screen Diameter: 6.00 in.	Blank: *u		Sand & Gra	avel			5.00	35.00
Screen Material Type: Stainless	s steel-wire wrapped	I				•		
Slot Length	Set Between				<u> </u>			
12.00 3.00 ft.	7 ft. and 35.00	rt.						
Fittings: Neoprene packer							· · · · · · · · · · · · · · · · · · ·	
	ng Method: Unkno							
		Depth					<u></u>	
Bentonite slurry 3,00 N	one		Geology R	lemarks:				
Vellhead Completion: Pitless a	danter		<del></del>					
Tourisda Completion (18000 a.	aapiot							
e interior de la companya de la companya de la companya de la companya de la companya de la companya de la comp								
learest Source of Possible Cont	amination:		· · · · · ·	-	ator Name:	JEFF ESK	DLA	
уре	Distance	Direction	Employme	ent: Employ	ree			
Septic tank	90 ft.	North	Contractor	Times Net	ter Well Drilling			700
			Rusiness	liype: waa Name∙ w⊏s	er weii Dhiling RANEN WELL	P. DI IMID	Reg No: 1	1122
			Business		CONCIN WELL	& FUNIF		
			A.		Well Contra	ector's Co	ertification	
			This well w		der my supervi			to the best of
그리는 바이 이 음식을 느낌을 보고 있다면 되었다.			my knowled	dge and belie	ef.		=	,
	144 a e	<u> </u>	Signature	of Registere	d Contractor		Date	
eneral Remarks:							·	
ther Remarks:								ł



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

Wellogic 105

Failure to comply is a misdemeanor. Import ID: Permit No: Tax No: County: Houghton Township: Torch Lake Source ID/Well No: Town/Range: Section: Well Status: WSSN: 55N 32W 29 Active Well ID: 31000001597 Distance and Direction from Road Intersection: 1.5 MILE SOUTH OF BOOTJACK ON BOOTJACK ROAD Elevation: Well Owner: Latitude: 47.13043047 Well Address: Owner Address: Longitude: -88.40128247 Method of Collection: Interpolation-Map

Drilling Method: Cable Tool			Pump Installed: Yes Pump Installation Only: No					
	Well Use: Housel	rold	Pump Installation Date:	HP: 0.50				
	Date Completed:	8/24/1974	Manufacturer: F.E. Myers	Pump Type: Submer	sible			
Casing Type: Unknown	Height: 12.00	ft. above grade	Model Number; SG-52-5B	Pump Capacity: 6 Gl	PM			
Casing Joint: Threaded & coupled			Drop Pipe Length: 170.00 ft.	Pump Voltage:				
Casing Fitting: Drive shoe			Drop Pipe Diameter:	Drilling Record ID:				
			Draw Down Seal Used: No					
Diameter: 5.00 in. to 188.50 ft. dept	h		Pressure Tank Installed: No					
			Pressure Relief Valve Installed: No	0				
Borehole:		_						
Static Water Level: 2.00 ft. Below (		nod: Unknown	Formation Description	Thickness	Depth to Bottom			
	Pumping level 100.00 ft. after 1.00 hrs. at 12 GPM			39.00	39.00			
			Sand & Clay Clay Sand Gravel	31.00	70.00			
			Clay	14.00	84.00			
Screen Installed: Yes	Ilter Packed: No		Clay Sand Gravel	100.00	184.00			
Screen Diameter: 5.00 in. E	Blank: *u		Sand Medium	5.00	189.00			
Screen Material Type: Stainless s	teel-wire wrapped							
Slot Length	Set Between							
10.00 10.00 ft.	186.00 ft. and 1	89.00 ft.						
				,				
Fittings: Neoprene packer								
tranigo, troopiono paoto.								
Well Grouted: Yes Grouting	Method: Unknow	Vn	·		[			
	•	epth						
Unknown 0.00 Non		.00 ft. to 100.00 ft.	Geology Remarks:					
0100 14011	-	0 /2 10 /00/00 111	Geology Remarks.					
Weilhead Completion: Pitless ada	nter 12 inches abo	we grade	┪					
Weinteau Completion. Thess add	pier, 12 mones and	ve grade			- 1			
A STATE OF THE STA		· · · · · · · · · · · · · · · · · · ·						
Nearest Source of Possible Contan	nination:		Drilling Machine Operator Name:					
Туре	Distance	Direction	Employment: Unknown		İ			
Septic tank	70 ft.	North-Northeast						
- -	1016.	HOIM HOIMOUDE	Contractor Type: Water Well Drilling (	Contractor Reg No: (	0081			
Abandoned Well Plugged: No			Business Name: KOYKKA WELL DR	II LIN G				
	•		Business Address:					
Reason Not Plugged;			Water Well Contract	stor's Cartification				
Keason Not Flagged;			This well was drilled under my supervisi		to the best of			
	w Paris		my knowledge and belief.	on and this report is true	to the best of			
그 얼룩하는 걸린 때 그릇이			I somongo and bollon		1			
	4. 强。				1			
	·	<u> </u>	Signature of Registered Contractor	Date				
General Remarks:	<u> </u>							
Other Remarks:								

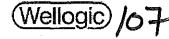


Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

Tax No:	Permit No: W02-31-118	County: Hough	nton		Township:	Torch Lake	
		Town/Range:	Section:	Well Status:	WSSN	Sourc	e ID/Well No:
Well ID: 31000	000764	55N 33W	35	Active			
יטטטין טייטטו וייטיטטין	000704	Distance and D .2 MILE WEST 0				IDDED DT UII	ie on
Elevation:		1.2 WILE WEST	JE INTERSE	OT OF BALL	MANINDAL	TEKDIN	LOND
Latitude: 47.12353815		Well Owner:			-		
•	•	Well Address:			Owner Add	ress:	
Longitude: -88,46389511				·	•		
Method of Collection: Interpolat	ion-Map						
Drilling Method: Rotary		Pump Insta	alled: Yes	· · · · · · · · · · · · · · · · · · ·	Pump In	stallation Onl	v: No
	ell Use: Household	1 .	allation Date		HP: 0.50		,
-	te Completed: 11/1/2002	Manufactu				rpe: Submer	sible
Casing Type: Steel - black	Height: 1.50 ft. above grade	Model Nun				pacity: 10 (	
Casing Joint: Welded	_	Drop Pipe	Length: 1	00.00 ft.	Pump Vo		`
Casing Fitting: Drive shoe		Drop Pipe			Drilling F	Record ID:	
· 		Draw Down	n Seal Used	: No		•	
Diameter: 6.00 in. to 85.00 ft. depth		Pressure T	ank Installe	d: No		•	
	·	Pressure F	Relief Valve	installed:	No		-
B		PAGE 08 PR 283	14 74 74 74 74 74 74 74 74 74 74 74 74 74		eren er var galle		Nargeriya 1921
Borehole: 6.00 in. to 122.00 ft. depth							
Static Water Level: 11.00 ft. Below G							Depth to
Well Yield Test:	Yield Test Method: Unknown	1	Formation	Description		Thickness	Bottom
Pumping level 122.00 ft, after 1.00 hrs.	at 15 GPM	Sand				5.00	5.00
. •		Sand & Gra	vel			8.00	13.00
		Clay				19.00	32.00
Screen Installed: No	intake: Bedrock Well	Sand & Gra	vel Clayey			28.00	60.00
생활적인 고류일으로 불로 잃어졌다		Clay				25.00	85.00
	불악성이 상황하는 사람이 없는 사람이 없다.	Sandstone				37.00	122.00
· 등록 : 프로그로 등 등록 추시했는 1 홍말							
김 집일에 한 다 한병 원리를 맞고를 받고 있다.	49일 등 2006 - 1000 25 11 원 1일 1일 1일 중인 10 121 121 20일 - 12 1 121 121 12 12 121 121 121 121 12					<u> </u>	
	불리 그 불통하는의 맞는 화는 공항						<del></del>
이러 휴가를 내지를 하는 말고 깨를 내려냈다.	됐다. 이번 그리라면 보고하다 하는						<del> </del>
그 마르바다 가 되어 그를 밝혔는 경찰을	화는 그 그 기를 가장하는 것은	A					<del> </del>
Well Grouted: Yes Grouting N	lethod: Unknown						<del>                                     </del>
Grouting Material Bags Additi		<del> </del>		<del></del>			<del> </del>
Bentonite slurry 1.00 None	ves Debii	Geology Re	emarks:			<u>.                                    </u>	<del></del>
11010		000,097 1.					1
		ĺ		•			
Wellhead Completion: Pitless adapte	er						j
							-
Nearest Source of Possible Contamir		_	chine Opera		PAUL LAH	П	
• • •	Distance Direction	Employmen	nt: Employe	ee			1
Septic tank	80 ft. Southeast						
				er Well Drilling		Reg No:	1677
				TOLA WELL	DRLG	-	
	##이션 기계 환성 기계 연변	Business A		V-11 C	4 - v <sup>1</sup> - • •	-4181 41 -	
그는 하는 사람은 그 불어 가운 생기를 했다.		This wall wa				rtification	to the best of
九、三日本語 医的毛纹 译图	九世 医乳管 化二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十		is antied und ge and belle		BIUD BIIG UNS	seport is true	to the best of
그는 그 사용하다는 일본 원과 경인사		,, 18.041100	22 0110 DOILO				ļ
							İ
Daniel Daniel Daniel	·	[Signature c	or Registere	d Contractor		Date	
General Remarks:							



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



Failure to comply is a misdemeanor. import ID: Tax No: 31-014-385-004-00 Permit No: W0631142 County: Houghton Township: Torch Lake Town/Range: Section: Well Status: WSSN: Source ID/Well No: 55N 33W Active Well ID: 31000001883 Distance and Direction from Road Intersection: 0.3 mile east of Senter Road on Baulman Road on north side Elevation: Well Owner: Latitude: 47.1212 Well Address: Owner Address: Longitude: -88.4483 Method of Collection: GPS Std Positioning Svc SA Off Drilling Method: Cable Tool Pump Installed: Yes Pump Installation Only: No Well Depth: 65.00 ft. Well Use: Household HP: 0.50 Pump installation Date: 10/12/2006 Well Type: Replacement Date Completed: 10/9/2006 Manufacturer: Goulds Pump Type: Submersible Model Number: 10SB05412L Casing Type: Steel - black Height: 2.00 ft. above grade Pump Capacity: 10 GPM Casing Joint: Welded Drop Pipe Length: 41.00 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 36.50 ft, depth Pressure Tank Installed: Pressure Tank Type: Diaphragm/bladder Manufacturer: Goulds Borehole: 6.00 in. to 65.00 ft. depth Model Number: V60 Tank Capacity: 20.0 Gallons Pressure Relief Valve Installed: Static Water Level: 25.50 ft, Below Grade Depth to **Formation Description Thickness** Bottom Well Yield Test: Yield Test Method: Test pump Pumping level 26.00 ft. after 20.00 hrs. at 20 GPM Sand & Stones Silty 7.00 7.00 Sand 16.00 23.00 Clav 3,00 26.00 Clay W/Sandstone Screen Installed: No Intake: Bedrock Well 6.00 32.00 Sandstone Soft 4.50 36.50 Sandstone 65.00 28.50 Well Grouted: Yes Grouting Method: Driven/dry grout **Grouting Material Additives** Depth Bags Bentonite dry granular Geology Remarks: Wellhead Completion: Pitless adapter, 12 inches above grade Nearest Source of Possible Contamination: Drilling Machine Operator Name: Kevin Keranen Employment: Employee Type Distance Direction Septic tank 50 ft. North-Northeast Drainfield/Dry well Contractor Type: Water Well Drilling Contractor North-Northeast Reg No: 2413 Abandoned Well Plugged: Business Name: Keranen & Eskola Weil Drilling Business Address: 55961 Lake Linden Avenue, Laurium, MI, 49913 Reason Not Plugged: Well still in use for non-drinking water purposes 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,

General Remarks:

Signature of Registered Contractor



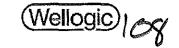
Completion is required under authority of Part 127 Act 368 PA 1978.

County: Houghton.

Section:

Well Status:

Town/Range:



Source ID/Well No:

Township: Torch Lake

WSSN:

import ID: Tax No:

Failure to comply is a misdemeanor.

Permit No: 2046

W-II ID. 04000004000	5	5N 33W	36	Active						
Well ID: 31000001206	Dista	ance and Di	rection fron	ı Road İnterse	ction:					
Elevation:		0.6 MILE EAST OF INTERSECT OF UPPER POINT MILLS ROAD AND SENTER ROAD								
				·						
Latitude: 47.120112		Well Owner:								
Longitude: -88.446109	well	Address:		ļo	wner Add	ress:				
Method of Collection: Interpolation-Map										
			ζ							
Drilling Method: Rotary	t t	Pump Insta			Pump in:	stallation Onl	y: No			
Well Depth: 160.00 ft. Well Use: Household		Pump Insta			HP: 0.50					
Well Type: New Date Completed: 9/22/1992		Manufactur		•		pe: Submer				
Casing Type: Steel - unknown Height: 1.50 ft. above gr		Model Num				pacity: 11 0	SPM ·			
Casing Joint: Welded		Drop Pipe L		.00.04	Pump Vo					
Casing Fitting: Drive shoe		Drop Pipe I <u>Draw</u> Down		No	ունյուն ւ	Record ID:				
Diameter: 6.00 in. to 55.00 ft. depth		Pressure Ta				<del></del>				
prameter. 0.00 m. to 30.00 m. depar		Pressure Ta								
		Manufactur								
Borehole:	1	Model Num		•	Tank Ca	pacity: 30.0	Gallons			
	.	Pressure Re	elief Valve I	nstalled; N						
Static Water Level: 50.00 ft. Below Grade			Formation	Description		Thickness	Depth to			
Well Yield Test: Yield Test Method: Unki			TOMMANON	Description			Bottom			
Pumping level 140.00 ft. after 1.00 hrs. at 4 GPM		Sand	<u> </u>			13.00	13.00			
Pumping level 160.00 ft. after 1.00 hrs. at 10 GPM	_	Sand Clayey	<u>'</u>			15.00	28.00			
Communication of the State of t		Sand Cood & Cook	rat Olaviani		<del></del>	6.00 21.00	34.00 55.00			
Screen Installed: No Intake: Bedrock Well		Sand & Grav Sandstone	ei Ciayey			105.00	160.00			
- 종류학 역용용하도 여름일 없었다면 모든걸으면 그리 말다.		<u>Sanusione</u>	<del>-</del>			103.00	100.00			
- 왕고 1951년 왕조는 기교에 전 1952년 1월 1922년 - 김 1일 1972년 - 김 1일 1일 - 제 중요한 경우 1일 1일 중요한 사용한 1932년 - 김 1일 1일 1일 1일 1일 1일 1일 1일 1일 1일 1일 1일 1일	- t				······	l				
경쟁하고 있는 일 기를 경쟁을 다 주었다. 그 하는 것은										
			<del></del> ,							
· 물통을 소설을 받는데 하루 보고를 받는데 그 말을 모르는 것이다. - 물통을 하다 하는 사람들을 보고 있는 물을 들었다. 그 말로 하는데 그를 받는데 되었다.					****					
그렇도 있는 이를 모르고 못한다. 그들의 이루스트 그						·				
Well Grouted: No										
그리다 하는 경기를 보고 있다면 주어되는 데 되었다면 그림	-					L				
그림 그를 가르는 모양이 오른 보면도 말했다. 부분 의 전 이 모양을 받았다. 그는	· ·	Geology Re	marks:							
- 하늘 하고 있는 하는 하고 있다. 이번 하는 하는 하는 하는 하는 사람들이 되었다. 그렇게 하는 바로 하는 사람들이 하는 사람들은 하는 하는 사람들이 하는 것이 하는 것이다.										
Wellhead Completion: Pitless adapter										
relinead Completion. This sadapter	ĺ									
Nearest Source of Possible Contamination:	i i	Drilling Mac	hine Opera	tor Name: P	AUL ZIEN	INICK				
Type Distance Directio	n E	Employmen	t: Unknow	า			ſ			
Septic tank 70 ft. Southea										
		Contractor	Type: Wate	r Well Drilling (	Contractor	Reg No:	1677			
(金属) 人名英格兰森 医二氏虫虫 法证据				FOLA WELL DE	RILLING		1			
	. [	Business A				.141 /1				
		Titulia and Alexander		Vell Contrac			4. 40 1			
		This well was drilled under my supervision and this report is true to the best of my knowledge and belief.					to the best of			
	ľ	ny ratovilous	aria naiia	•						
							I			
	[8	Signature of	Registered	Contractor		Date				
General Remarks:	······									
Other Remarks:										



Tax No: 31-014-386-008-60

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

County: Houghton

Township: Torch Lake

Contractor

7/6/2006 12:26 AM

Import ID:

EQP-2017 (4/2010)

Page 1 of 1

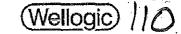
Failure to comply is a misdemeanor.

Permit No: W0631047

	Town/Range:	Section:	Well Status:	WSSN:	Source	ID/Well No:
Well ID: 31000001812	55N 33W	36	Active			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Distance and D				oof ald.	
Elevation:	300 feet south o	t Nightingale	Drive on Baulm	nan Road on e	ast side	
Latitude: 47.12651	Well Owner:	•				
	Well Address:		lo	wner Address	3:	
Longitude: -88.44534	1		[			
Method of Collection: GPS Std Positioning Svc SA Off						
Drilling Method: Cable Tool	Pump Inst	alled: Yes	3	Pump Instal	ation Only	v: No
Well Use: Household	1 7		e: 5/15/2006	HP: 0.50		,
Well Type: New Date Completed: 5/12/2006	Manufactu	rer: Goule	is	Pump Type:	Submers	sible
Casing Type: Steel - black Height: 2.00 ft, above grade	Model Nun	nber: 10S	B05422	Pump Capac		SPM .
Casing Joint: Welded		Length: 6		Pump Voltag	-	
Casing Fitting: Drive shoe		Diameter:		Drilling Reco	ord ID:	
Diameters 6.00 in to 40.50 ft doubt		n Seal Used ank Installe				
Diameter: 6.00 in. to 49.50 ft, depth	1		ru: res Diaphragm/bla	adder		
•	Manufactu					-
Borehole: 6.00 in. to 70.00 ft, depth		nber: V-60		Tank Capac	ity: 20.0	Gallons
	Pressure F	Relief Valve	Installed: Y	es .	•	
Static Water Level: 37.00 ft. Below Grade Well Yield Test: Yield Test Method: Bailer		Formation	Description	Т	hickness	Depth to Bottom
Pumping level 50.00 ft. after 0.50 hrs. at 25 GPM	Sand			4.0	0	4.00
	Sand Claye	y		10.	00	14.00
,	Sand			8.0		22.00
Screen Installed: No Intake: Bedrock Well	Sand Claye	У	·	3.0		25.00
·홍영 : 프로젝트를 통로 나타가 나와 보다 및 기름 이름함.	Sand			11.		36.00
	Brown Clay Red Clay	<u>'</u>	<del></del>	1.0		37.00 38.00
그램, 회 기록 하면 한 경험을 가능한 수 있는 것이 없다.	Sandstone	Soft	·	11.		49.50
[BE 사진 프로젝트 및 프로젝트 프로그램 프로그램 프로그램 프로그램 프로그램 프로그램 프로그램 프로그램		Jacobsville S	Ss	20.		70.00
물기들은 양악과 얼마맞았다는 물리면서 그는 것이라는 맛없다						
그는 그는 그리를 하는 것이 사람들이 그들을 가는데 하는데 모양이다. 말했다.						
Well Grouted: Yes Grouting Method: Driven/dry grout	<u> </u>					
Grouting Material Bags Additives Depth Bentonite dry granular 4.00 None	O a da una D		·			
Bentonite dry granular 4.00 None	Geology R	emarks:			-	ļ
	- 1	•				•
Wellhead Completion: Pitless adapter, 12 inches above grade	<del></del>					
	}					
Nearest Source of Possible Contamination:		chine Opera		ed Keranen		
Type Distance Direction		nt: Employ				
Septic tank 80 ft. South Drainfield/Dry well 100 ft. South		Iller: Jeff	Eskola er Well Drilling (	Contractor	Reg No: 2	2/13
STANLING TOO IL GOULT			er weii Dilling C inen & Eskola V		Neg No; 2	.+1J
사람들이 살아 가는 지는데, 이 가방하는 사람들이 불빛이			5961 Lake Lind		urium. ML	49913
			Well Contrac			
그 말로 가는 사람들이 하고 있는 사람들은 사람들 부모	This well wa		ler my supervisi			to the best of
		lge and belie				
	Signature o	of Registere	d Contractor		Date	
General Remarks:	1	3,000				
Other Remarks:			*			



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

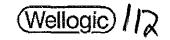


Failure to comply is a misdemeanor.

Tax No: 31-014-331-045-00	Permit No	: W08-31-053	County: Hough	nton .			Torch Lake	
			Town/Range:	Section:	Well Status:	WSSN	: Source	e ID/Well No:
Well ID: 3100	000210	ገበ	55N 32W Distance and D	31	Active	oction:		
Well ID. 0100	70002 N	30	0.6 MI E OF INT				MAN RD	
Elevation:		-		_				
Latitude: 47.12176			Well Owner:					-
Longitude: -88.41677			Well Address:		Į.	Owner Add	ress:	-
Method of Collection: GPS	Std Positioning S	Svc SA Off						
Drilling Method: Rotary			Pump Inst			•	stallation On	ily: No
Well Depth: 182.00 ft.	Well Use: Ho		, ,	allation Date		HP: 0.50		
Well Type: New	Date Complete		Manufactu				pe: Subme	
Casing Type: Steel - black Casing Joint: Welded	Height: 1	.50 ft. above grade	1	nber: 50C; Length: 1		Pump Vo	apacity: 10	GPW
Casing Fitting: Drive shoe				Diameter:			Record ID:	
				n Seal Used				
Diameter: 6,00 in. to 159.00 ft. de	epth		Pressure 7	ank Installe	d: Yes			
			i i		Diaphragm/b	oladder		
i	4.			rer: Amtro				
Borehole: 6,00 in. to 182,00 ft. de	epth		1	nber: BN4: Relief Valve i		Tank Ca Yes	apacity: 20.	0 Gallons
			Pressure	tener valve	nstaneu:	168		,
Static Water Level: 36.00 ft, Bel	ow Grade			- 41	<del></del>			Depth to
Well Yield Test:	Yleld Test i	Method: Air		Formation	Description		Thickness	Bottom
Pumping level 182,00 ft. after 1,00	hrs. at 12 GPM		Sand				10.00	10.00
			Sand Claye	<u> </u>			47.00	57.00
Screen Installed: No	Intoles	Bedrock Well	Clay	Jacobsville S	· · · · · · · · · · · · · · · · · · ·		102.00 23.00	159.00 182.00
	ilitane. i	Senfock Aveil	Sanustone	Jacobsville 3	>>>		23.00	102.00
그렇게 하는 이래에도 만들고 싶잖았							<del></del>	<del> </del> -
그릇들이는 안 된장을 전통되었다며 했다.				·· <del>-</del>				
		그 통안 없이 된었	<b></b>					
					·			<del></del>
Well Grouted: Yes Grouti	ng Method: Uni	(noun						<del></del>
	dditives	Depth						1
	one	4.00 ft. to 159.00	ft. Geology R	emarks:	<del></del> -		<u></u>	
								i
Wellhead Completion: Pitless a	dapter		İ					
								-
Nearest Source of Possible Cont	amination:		Drilling Ma	chine Opera	tor Name:	PAUL LAH	rs	
Type	Distance	Direction	Employme	nt: Employe	эе	*		
Septic tank	70 ft.	Northeast			HAN SIIRTOL			
	<del> </del>	<del></del>			er Well Drilling		Reg No:	1677
그 보통할 그림도 토	a deki b	40 30 13 445	Business A		TOLA WELL E	ORILLING		.
			Dusiness A		Veil Contra	otor'o Co	rtification	^
선생이 한밤이 된 살이 얼마다			This well w					to the best of
걸칠 그는 그 원하는 강성하다		er i de en ligge de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la companya de la companya de la companya de la companya de la companya de la companya de la co		lge and belie				2.0 200.01
<b>"我们"</b> 一个人的意识。								
			Signature	of Registere	d Contractor		Date	
General Remarks:	· .							
Other Remarks:								

GEOLOGICAL SURVEY SAMPLE NO.		l	11									
78.26		WATER	VELL REG	GORD	─────────────────────────────────────	AICHIGAN DE		السلسان الرق				
LOCATION OF WELL		ACT 29	4 PA 100			P⊌BLIC HI	OF JC HEALTH					
	waship Namo	Paris and Character And 1	Fraction		Section Number	Town Number		. 1				
Distance And Direction from Road In	TORCH LAKE		<u>.   Sex 1</u>	3 OWNER OF		55 N/S	32	Ew.				
4 MILES EAST OF MI. N. OF BAULMA Street address & City of Wolf Location	n ROAD.	3\P DNA	3	Addruss	o							
Locate with "X" in section bulow	Skeic			4 WELL DEPTH	t; (completed) f	Date of Complet	lon					
	其 Dan	e BAI		65	11,	8/7/78	3					
				S X Cable to			<u> </u>	Dug				
*	4 MINES			6 USE: X Dor	naelic Dubi	ια Συρρίγ		y				
	) V		٠	∏irri: ∏Tosi	. =	Conditioning	பேர்கி <b>ம்</b>	reini				
	-> EMIE				weaded Welder	Holphi: /	\bove/Balar	V				
1 MILE		THICKNESS	DEPTH TO			ວັນເໄລເຄ_	<u>2</u> ft.	.				
2 FORMATION		OF STRATUM	SOTTOM OF STRATUM		62_ft, Dapt		Leg lbs./I					
				8 SCREEN:	•							
CLAY SAND		6	6		INLESS		ELESCO	PE_				
SAND & MUCK		5	11		12 SLOT 62 11. and _							
CLAY AND SAND		13	24	1	AD PACKER	-	BOTTO	м				
VENT DITE OFFIE				9 STATIC WAT	ER LEVEL		18-15 PM 4					
CLAY SAND & ROCKS		6	<u>30</u>	10 PHMPING I	ft, below land su EVEL below land	rface						
CLAY SAND & GRAVE	L	3	<u>33</u>	23 ft. ofter 2 hrs. pumping 13 g.p.m.								
CLAY SAND & ROOKS		25	58		ft. oftor hrs.		(J.P.	.m.				
CLAY AND SAND		3	61	i	ALITY in Parts Por							
	~ 0: Out to us	21	CE.			-		***************************************				
WATER BEARING SAN	D & GRAVEL	4	65	12 WELL HEAD	Otho COMPLETION:	I to Approved	Pri	*****				
			ACA 857	√ Pi	itless Adapter	12" Above						
					od? Yes ViNo unvent Benton			***************************************				
**************************************				Depth: Fre	omft,	to	L					
ر المراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة والمراجعة				_1	urce of possible c	antaminution	•	_				
				1	t E Directi schol upon comple			Type				
			_	15 PUMP:		lot installed						
					or's Name_BUE Bor_A3SN6B		AAE					
					Bor A221V2D Orop Plpa 42_fi			·				
				Тури:	Subnaceible		-	ŀ				
P. P. P. P. P. P. P. P. P. P. P. P. P. P					Jet [	] Reciprocatin	Ü					
USE A 2NO SHEET IF HI	EDEO				wanten was the same of the sam							
16 Remarks, elevation, source of	data, etc.				CTOR'S CERTIFI ndor my juriodictic		rt is truo	ļ				
			3.6.	ost of my knowle EY PLBC STERED BUSINES	edge and bollaf.  & HTG-9 S NAME	ING. REGIS	1681 TRATION NO.					
					B. DOLLAR			2				
·			Signed Striphonten broness Warting Date 7/5/28									
D67d 100M (Rev. 12-68)	SEP 1 1 197	8	o.Huest ~	AUTHORIZED RE	PRESENTATIVE		pt way he december	<u></u>				



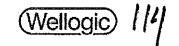


Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

Tax No: Permit No: W9931127		isnip; Torch Lake						
		WSSN: Source ID/Well No:						
Well ID: 3100000394	55N 32W   32   Active							
	Distance and Direction from Road Intersection: Fire #116 on Boot Jack Road							
Elevation:	Life will only once kind ,							
Latitude: 47,118197	Well Owner:							
Longitude: -88.401904	Well Address: Owner	er Address:						
Method of Collection: QQQ - Centroid	<b>\</b>							
method of collection. QQQ - centroid								
Drilling Method: Cable Tool	Pump Installed: No							
Well Depth: 46.00 ft. Well Use: Household	Pressure Tank Installed: No							
Well Type: New Date Completed: 8/14/1999	Pressure Relief Valve Installed: No	·						
Casing Type: Steel - black Height: 2.00 ft. above grade	Had Content to the Same	。 "我就是多种品的人,是1954年,到1964年的人员的表现。""我们						
Casing Joint: Welded Casing Fitting: Drive shoe		B FR : 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1						
dualing Fitting. Diffe slice								
Diameter: 6.00 in. to 42.00 ft. depth								
		이 교육을 받는 것 같다. 그들은 발생물을 하다. 2018년 - 1일 전 1일 전 1일 전 1일 전 1일 전 1일 전 1일 전 1일						
Borehole: 6.00 in. to 46.00 ft. depth								
		- 교교학교육 전환자 - 15차 10차 개최로 사용하다 12개최 - 15차 1일 1일 15차 15분 15분 15분 15분 15분 15분 15분 15분 15분 15분						
Static Water Level: 3.00 ft, Below Grade		Depth to						
Well Yield Test: Yield Test Method: Test pump	Formation Description	Thickness Bottom						
Pumping level 37.00 ft, after 2.00 hrs. at 20 GPM	Topsoil	1.00 1.00						
	Sand & Stones	4.00 5.00						
HILL B. L. L. L.	Clay Sand Gravel	5.00 10.00						
Screen Installed: Yes Filter Packed: No Screen Diameter: 6,00 in. Blank:	Clay & Gravel Sandy Sand & Gravel	31.00 41.00 5.00 46.00						
Screen Material Type: Stainless steel-wire wrapped	Sano & Gravei	5.00 46.00						
Slot Length Set Between								
12.00 4,00 ft. 42.00 ft. and 46.00 ft.								
, , , , , , , , , , , , , , , , , , ,								
Fittings: Neoprene packer		<del></del>						
Well Grouted: Yes Grouting Method: Unknown								
Grouting Material Bags Additives Depth								
Bentonite slurry 3.00 None	Geology Remarks:							
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							
Wellhead Completion: Pittess adapter		,						
	<del> </del>							
Nearest Source of Possible Contamination:	Drilling Machine Operator Name: Jeff E	 Eskola						
Type Distance Direction	Employment: Employee	201014						
None								
None	Contractor Type: Water Well Drilling Cont	ractor Reg No: 1722						
[1] [1] [1] [1] [1] [2] [2] [2] [2] [2] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4	Business Name: Keranen Well & Pump							
스러워 클리스 경험하고 있다는 게 하는 보다 보다는 사람이 있다.	Business Address:	1 6 48 4						
그릇 총일은 이번에는 사람들이 노른 말에 하고 이 이 분들까?	Water Well Contractor							
	This well was drilled under my supervision and this report is true to the best of my knowledge and belief.							
그는 말이 되는 그는 말했습니다. 그는 말을 내는 것이 없는 것이 없었다.								
	Signature of Registered Contractor	Date						
General Remarks:	Torsugrate or redustried contractor	Date						
Other Remarks:		·						

CIEOLOGICAL SURVEY SAMPLE NO.		13	
•	WATER		
1 LOCATION OF WELL	ACT 20		PUBLIC HEALTH
Distance And Direction from Road Intersections	LAKE	Fraction SEX	Section Number Town Number Range Number of State W. 18 33 Welw.  3 OWNER OF WELL!
ON BOUTTHEK ROAD			Address
Street address & City of Well Location LAKE Locate With "X" in section below Skets	1110	D) 1710	4 WELL DEPTH: (completed) Date of Completion
	ու ասեւ		196 ft. 5EPT 15, 1975 €  5 ★ Cable tool
W			Hottow rod Jetted Borod 5
MI.			Irrigation
MILE		attanti de la companione de la companione de la companione de la companione de la companione de la companione	Surfaceft.
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	Lin. to 122 ft. Depth Weight L. Wue./ft.
FAND	5	5-	Type: STAINLESS Dia.: 67"
3AND- CLAYE(	55	60	Stot/Genze, C/ Q Length 4/ Sat between 192 ft. and 126 ft.
CRAVELLY CLAY	28	88	Fittings: 5 TANDARD
JAND CLAYEY	104	192	9 STATIC WATER LEVEL
MITER BEARING SAND	2/	196	10 PUMPING LEVEL below land surface  SO ft. ufterhre. pumping480 o.p.ni.
· · · · · · · · · · · · · · · · · · ·			11, after hrs. pumping, g.p.m. 11 WATER QUALITY In Paris Per Million:
			tron (Fe) Chiorides (CI)
			Hardone
		<del></del>	HardnessOther
			Pitioss Adapter 12" Above Grade
			13 Well Grouted? Yes X No
	<del> </del>		Naat Cament Announte Announte
-			Dopth: From ft. to ft.  14 Nearest Source of possible contemination
			75 1001 ACRITHOCOTION SEPTIC TYPE
	. [		Woll distinfected upon completion Wes No
		· · · · · · · · · · · · · · · · · · ·	Manufacturor's Name MYER ( Modul Number 5052-58HP Volts 236
	<u> </u>	<u> </u>	Longth of Drop Pipe 20.5 It. capsuity G.P.M.
			Type: Submeraible
42	-		Jet Reciprocating
USE A 2NO SHEET IF NEEDED			
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION: I was drilled under my jurisdiction and this report is true
		l to the be	st of my knowledge and heliof.  TULY WELL DOLL LIKE (15 Y)  STEREN BUSINESS NAME  REPOSTRATION NO.
	*	}	LUNTE I HANCOCK MICH
			Demil Sinteled Date 10/11/76
D67d 100M (Rev. 12-68) J OCT 2 7 197	6	Signed 6	AUTHURIZED REPRESENTATIVE



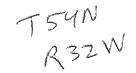


Water Well And Pump Record
Completion is required under authority of Part 127 Act 368 PA 1978. Failure to comply is a misdemeanor.

Tax No:	Permit No:	County: Houg	hton		ownship:	Torch Lake				
V4 / 11 IFD 0 4 0 0 0	004077	Town/Range: 55N 32W	Section: 33	Well Status: Active	WSSN:	Source	ID/Well No:			
Well ID: 31000	0001277			om Road Inters	ection:	<del> </del>				
		1		RSECTION OF F		AND GROS	SE POINT			
Elevation:		ROAD		<u> </u>						
Latitude: 47.127091		Well Owner:								
Longitude: -88.378243		Well Address: Owner Address:								
Method of Collection: Interpole	ation-Man									
. Method of conection. Intorpos	anon map	L								
Drilling Method: Rotary		Pump Inst	talled: Y	es	Pump ins	taliation Onl	y: No			
	Vell Use: Household	Pump Inst		ate:	HP: 0.50					
	Pate Completed: 7/8/1981	Manufactu	arer: F.E	. Myers	Pump Ty	oe: Submers	sible			
Casing Type: Unknown	Height: 1.50 ft. above grade	Model Nu	mber: Sł	152-58	Pump Ca	pacity:				
Casing Joint: Welded		Drop Pipe	Length:	89.00 ft.	Pump Vo	ltage:				
Casing Fitting: Drive shoe		Drop Pipe	Diameter:		Drilling R	ecord ID:				
	·	Draw Dow	ın Seal Use	ed: No						
Diameter: 6.00 in. to 29.00 ft; depth		Pressure								
		Pressure	Relief Valv	e Installed: N	Vo					
					1.002.00.00	- 1895-190 1900-1900				
Borehole:										
•				sar Agarta, an laiA asaN <del>i</del> Na laika kata kata katawa						
Static Water Level: 24.00 ft. Below	Grada	12.72					Depth to			
Well Yield Test:	Yield Test Method: Unknown			on Description		Thickness	Bottom			
Pumping level 100.00 ft. after 1.00 hr	s. at 20 GPM	Clay Sand	у .			12.00	12.00			
		Clay	<del>,</del>		-	17.00	29.00			
·		Sandstone				91.00	120.00			
Screen Installed: No	Intake: Bedrock Well									
	기존 기관 기관 기관 기관 기관 기관 기관 기관 기관 기관 기관 기관 기관	:								
	일하다 하는 사람이 되었다는 사람들이 없다.	9 ( <del> </del>	<del></del>							
	맞고 뒤를 가입하다 하는 것을 받았다.			~		<del></del>	<del></del>			
	<u> </u>									
	费尔克克 医多次流溢的 医乳皮类									
	열리 살맞는 그 집에 가는 이 남편이었다.									
Well Grouted: No	min ala di Control de la contr									
	살으라고요 !!! 그는 말을 다. 말!	· · · · · · · · · · · · · · · · · · ·	<del></del>	<del></del>						
그 불다 되어 하다 됐네!! 한 하는데	중 경쟁 강소 그리움 라 댓!	Geology R	Remarks:							
기류를 하고 있다면서 모두 모두 하기	읽다면서 그렇다면 함께 함이									
(大多)的复数 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	建二十四十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二	· ·		•						
Wellhead Completion: Pitless adap	oter	<del></del> }								
	·									
Nearest Source of Possible Contam	ination:			erator Name:						
Туре	Distance Direction	Employme	e <b>nt:</b> Unkn	own						
Septic tank	60 ft. East									
				ater Well Drilling		Reg No: (	0154			
Abandoned Well Plugged: No				IRTOLA WELL D	RILLING					
		Business.		147 11 6	( ) ^	(16) (1				
Reason Not Plugged:				Well Contra						
기계의 기계 시간 기계 생각되다는 경기		This well w		nder my supervis	sion and this	report is true	to the best of			
		in a kilowie	añe eua ne	uou						
	<u> </u>	Signature	of Registe	red Contractor		Date	· · · · · · · · · · · · · · · · · · ·			
General Remarks	•						i			

### Appendix H

Michigan Natural Features Inventory Survey Results



New Search

MICHIGAN STATE PNIVERSITY EXTENSION

Heat 25 Records &

Query Results Generated on Mar 07, 2012

Database Updated on Nov 07, 2011

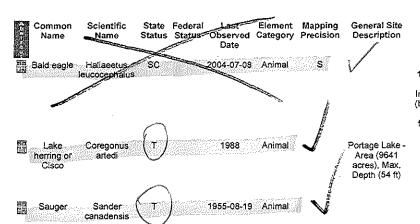
...

Web Database Search

MNFI Home Contact Us Plant List Animal List Abstracts Help

Michigan Natural Features Inventory

Search Results for Houghton County
Displaying Record 1 to 3 of 3 Records Found



New Search Refine Search 4 Pravious 25 Records Heat 25 Records 5 EO Data Site of Best Documentation of EO Town Range Section County Observation 1988: inactive, 1989: ad sitting, 1990: 2 yg. Ho-10 Hendrickson, J. 1988. 1991: 2 yg, 1 banded. 1992-93: 2 yg banded. Bootjack Eagle/Osprey Production 1988. 1994: 2 yg. 1995: ad seen in area, 1996: Inactive. 1997; (a) gone. 1998; Inactive. 1999; (b) Ad. obs. incubating, nest failed. 2000; (c) 2 unbanded yg. 2001: (c) nest occupied but failed: 3 eggs found, 2002: (c) nest occupied but failed. 2003: (c) 2 yg. 2004: (d?) 2 yg?. Portage Lake Bailey, R.M., W.C. Latta, and G.R. 54N Smith, 2003, MI Fish Atlas 2003 -Access database and shapefiles. In Digital Water Atlas V1 edited by Institute for Fisheries Rearch, MI DNR, Feb 20 2003. Portage Lake Bailey, R.M., W.C. Latta, and G.R. 54N 32W Houghton Smith, 2003, MI Fish Atlas 2003 -Access database and shapefiles. In Digital Water Atlas V1 edited by Institute for Fisheries Rearch, MI DNR, Feb 20 2003.

4 Previous 25 Records

Refine Search

T= threatened

Search Results for Houghton County

Displaying Record 1 to 6 of 6 Records Found

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### Michigan Natural Features Inventory

Web Datebase Search

T54N R33W

MICHICAN STATE EXTENSION

Query Results Generated on Mar 08, 2012 Database Updated on Nov 07, 2011

ΨIS	playing Re	CO10 1 10 0	01 0 1/60	colus F	Juna									Database Opdated	
										Ĺ	New Search	) (	Refine Sear	ch (4 Previous 25 Records) ( Next 2	ts Records >
	Common Name	Scientific Name		Federal Status		Element Category	Mapping Precision	General Site Description	EO Data	Site of Observation	Best Documentation of EO		Range	Section	County
		Oreat Laives Marsh			1987-08-	Community		Portage Lake	The northwest part is primarily wet meadow of acidic nature, resembling bog. Mat depth 4'-7'. Shrub swamp of monoculture Myrica occupies old river channels Emergent bulrush marsh with submergent species on rivermouth sandbars. Strong currents prohibit rivermouth vegetation. ~60	ı	Albert, D.A. 1987. August 12 - MNFI Site Survey.	54N	33W	28,32,33,34	Houghton
	Common loon	Gavía immer		etrolomico para presunt	1992	Animal	M	-	species. 1992: 1 pr.	Portage Lake - Houghton County	Westhoven, Arlene. 1992 Michigan Loon Watch Report.	54N	33W	9,10,11,14,15,16,21,23,23	Houghton
	Douglas's hawthorn	Crataegus douglasii	11		1950-06- 13	Plant	G	Î		Houghton		54N	33W	\$16,7(8)(7),18	Houghton
er Da	Lake on herring or Cisco	Coregonus			1988	Animal		Portage Lake - Area (9641 acres), Max. Depth (54 ft)		Portage Lake	Bailey, R.M., W.C. Latta, and G.R. Smith. 2003. MI Fish Atlas 2003. Access database and shapefiles. In Digital Water Atlas V1 edited by Institute for Fisheries Rearch, MI DNR, Feb 20 2003.		33W (4,5,8,9,10	),11,12,13,14,15,16,17,20,21,22 <b>,2</b> 27,28,29,3;	2,33,34) Houghton
Fig.	Lake sturgeon	Acipenser fulvescens			1998-08- 03	Animat		no habilat information provided.	13 juveniles were captured using 12 experimental gill nets. Nets were set at 16 to 50 ft depths. Eleven of the fish ranged in length from 230 to 395 mm in total length and 2 to 9 oz. The remaining 2 were 386 mm and 8 0z and 625		Auer, N.A. 1998.  DNR -  Threatened /  Endangered  Species Report.			4,5,9,10,15,16	Houghton
											1	hr.	eatene	Life (	(over)

MICHIGAN STATE

**EXTENSION** 

Query Results Generated on Mar 07, 2012

Database Updated on Nov 07, 2011

T55N R32W

MNFI Home Contact Us Plant List Animal List Abstracts Help

Michigan Natural Features Inventory

Web Database Search

Search Results for Houghton County
Displaying Record 1 to 3 of 3 Records Found

							New Search	Ref	ine Search 🧣 १८७७ विकास	25 Records	Next 25 Flecture	4(5 ½
Common Name	Scientific Name	State Fed Status Sta			Mapping Precision		EO Data	Site of Observation	Best Documentation of EO	Town Range	Section	County
Baid eagle	Haliaeetus leucocephalus		2004-07 08	Animal	S		1988: inactive. 1989: ad sitting. 1990: 2 yg. 1991: 2 yg. 1 banded. 1992-93: 2 yg banded. 1994: 2 yg. 1995: ad seen in area. 1996: Inactive. 1997: (a) gone. 1998: Inactive. 1999: (b) Ad. obs. incubating, nest failed. 2000: (c) 2 unbanded yg. 2001: (c) nest occupied but failed; 3 eggs found. 2002: (c) nest occupied but failed but failed. 2003: (c) 2 yg. 2004: (d?) 2 yg?.	Ho-10 Bootjack	Hendrickson, J. 1988. Eagle/Osprey Production 1988.	55N 32W	20,29(30)31	ioughton
Lake herring or Cisco	Coregonus artedi		1988	Animal		Torch Lake - Area (2750 acres), Max. Depth (123 ft) Thermal/Oxygen (Latta, 1995 where =coldest, high oxyger and 4 = warmest, low oxygen) - 1		Torch Lake	Bailey, R.M., W.C. Latta, and G.R. Smith. 2003. MI Fish Atlas 2003 - Access database and shapefiles. In Digital Water Atlas V1 edited by Institute for Fisheries Rearch, MI DNR, Feb 20 2003.	,	5,6,7,8,17,18,19	doughton ,
Sauger	Sander canadensis	(1)	1976-08 29	- Animal				Torch Lake	Bailey, R.M., W.C. Latta, and G.R. Smith. 2003. MI Fish Atlas 2003 - Access database and shapefiles. In Digital Water Atlas V1 edited by Institute for Fisheries Rearch, MI DNR, Feb 20 2003.	3	5,6,7,8,17,18,19	Houghton
		•					New Search	Ref	ine Search   (4 Previous	26 Records)	( Rest 25 Stope	ds P

T= threatened

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Michigan Natural Features Inventory

Web Database Search

Search Results for Houghton County
Displaying Record 1 to 4 of 4 Records Found

T55N N

MICHICAN STATE UNIVERSITY EXTENSION

Query Results Generated on Mar 07, 2012 Database Updated on Nov 07, 2011

	, 5								New S	earch	Refine Search	Previous 2	5 Records) (R	ow 25 (fecords P
0.0	Common Name	Scientific Name		Federal Status	Last Observed Date		Mapping Precision	General Site Description	EO Data	Site of Observation	Best Documentation of EO	Town Rang	re Sectio	on County
	Douglas's	Crataegus douglasii	sg		1950-06- 13	Plant	<b>G</b> ****	4		Houghton		55N 33V	/ 31,32	2 Houghton
	Lake herring or Cisco	Coregonus artedi			1988	Animal	and the second	Torch Lake - Area (2750 acres), Max. Depth (123 ft) Thermal/Oxygen (Latta, 1995 where 1=coldest, high oxygen and 4 = warmest, low oxygen) -1	i.	Torch Lake	Bailey, R.M., W.C. Latta, and G.R. Smith. 2003. MI Fish Atlas 2003 - Access database and shapefiles. In Digital Water Atlas V1 edited by Institute for Fisheries Rearch, MI DNR, Feb 20 2003.	,	/ 12/13,14,23,24.	26,27 <b>64</b> 5 Noughton
	Lake sturgeon	Acipenser fulvescens		<b>\</b>	1998-08- 03	Animal	,	no habitat information provided.	13 juveniles were captured using 12 experimental gill nets. Nets were set at 16 to 50 ft depths. Eleven of the fish ranged in length from 230 to 395 mm in total length and 2 to 9 oz. The remaining 2 were 386 mm and 8 0z and 625 mm and 39 oz (both of these fish were fitted with transmitters). The small fish tagged did not survive.	Portage Lake	Auer, N.A. 1998. DNR - Threatened / Endangered Species Report.	55N 33V	y 32,33	Houghton V
	Sauger	Sander canadensis	+	)	1976-08- 29	Animal			Sinal list legged at list salvivo.	Torch Lake	Bailey, R.M., W.C. Latta, and G.R. Smith. 2003. MI Fish Atlas 2003 - Access database and shapefiles. In Digital Water Atlas V1 edited by Institute for Fisheries Rearch, MI DNR, Feb 20 2003.		V V2(13,14,23,24,	26,27, <b>1</b> Voughton
				,					New Se	earch	Refine Search	Problem 3	S Recards ) (H	ear ZS Raporús (b. )

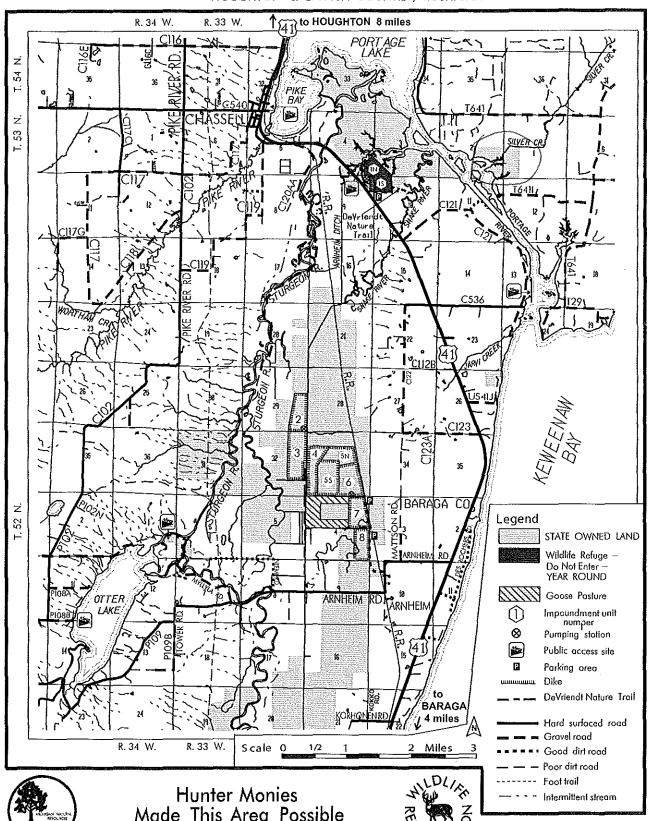


MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Great Lakes, Great Times, Great Outdoors! www.michigan.gov/dnr

# **SLOUGHS**

HOUGHTON & BARAGA COUNTIES, MICHIGAN





Made This Area Possible DNR - Wildlife Map 310101 (was 0101) Rev. 8/2006 -MLS

