ESE No. 493-8087-0004

Report of Phase I Environmental Assessment 146-Acre Site Within Dewitt Township

Location:

Section 21
T. 5 N. — R. 2 W.
Dewitt Township
Clinton County, Michigan

Prepared for:

Ms. Angela Bidlack 10003 Parkland Drive Wexford, Pennsylvania 15090

Prepared by:

Environmental Science & Engineering, Inc. 1099 West Grand River Avenue Williamston, Michigan 48895

August 30, 1993

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1. Site Location

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1.0 INTRODUCTION

Ms. Angela Bidlack has retained Environmental Science & Engineering, Inc. (ESE) to conduct a Transaction Screen (Appendix A) and a Phase I Environmental Assessment of a 146-acre farm site located in Dewitt Township, Clinton County, Michigan (Figure 1). A copy of the property Certified Survey Map is presented as Appendix B.

The investigation was conducted in accordance to guidelines established by the American Society for Testing and Materials (ASTM) and consisted of the following items:

- A physical inspection of the property
 - This inspection included observations for unusual discolorations or odors, debris, stressed vegetation, and evidence of underground storage tanks (USTs) or PCBcontaining transformers. Also noted during the site visit were adjacent properties and their uses with respect to potential environmental contamination.
- A records search including assembling and reviewing available historical, local, federal, and state files relative to potential environmental contamination
 - The records search included a review of aerial photographs, city directories, and review of local, state, and federal environmental agency information. Current listings of sites of known environmental contamination were reviewed to determine if such sites were within a 1/4- to 1-mile radius from the site.



2.0 SITE DESCRIPTION

2.1 Location

The property is located approximately one quarter of a mile west of Highway 27 (Figure 1). The north, west, and part of the south boundary of the property is bordered by Solon, Turner, and Stoll roads, respectively. Residential and vacant property is to the east of the subject site.

2.2 Natural Setting

According to the Lansing North, Michigan Quadrangle USGS topographic map, the 146-acre site covers a southerly sloping setting with vertical relief ranging from 870 to 840 feet above the National Geodetic Vertical Datum. This site rests on end moraines of medium textured till, bordered to the north by glacial outwash, and medium textured glacial till to the south. Moraines are primarily accumulations of unsorted glacial sediments known as tills, which form in direct contact with melting ice lobes or tongues. Michigan tills are typically clay-rich, but do contain coarser sediments, ranging in grain-size from silt and sand to gravel, cobbles and even large boulders.

The 1981 Hydrogeologic Atlas of Michigan, together with water well records (Appendix C) for the surrounding district obtained through the Michigan Department of Natural Resource (MDNR), Geological Survey, confirm the study area to be underlain by 51 to 100 feet of unconsolidated glacial till deposits composed dominantly of clay with interbedded layers of sand and gravel of various textures. The records show that domestic, public, and commercial water is supplied in the area through wells screened in glacial drift aquifers. The bedrock beneath the glacial sediments is identified as the Coldwater Formation of Early to Middle Mississippian age (335 to 345 million years old).

Surface water runoff in this area is to the east-southeast along Gunderman Lake Drain and Prairie Creek, to the south of the property. This creek and lake drain follows northeast, merging with Chandler drain into the Looking Glass River, approximately 5 miles to the north-northeast. Surface drainage should follow the established local



topographic gradient created by stream dissection, and is therefore expected to follow this route.

Typical groundwater movement should follow a similar southerly path and discharge to the creek. However, the site-specific hydrogeologic situation cannot be accurately appraised without detailed subsurface hydrogeological information.



3.0 SITE HISTORY

The historical ownership and land use of the subject property was compiled through reviews of aerial photographs, Polk City directories, the Bresser's Index, and Clinton County plat books.

3.1 Aerial Photographs

Aerial photographs of the vicinity were obtained from the Center for Remote Sensing located at Michigan State University. Photographs were available for review from the years 1940, 1972, and 1980. These photographs were examined to review the development of the study area in addition to identifying nearby locations that would indicate potential sources of environmental contamination.

The aerial photograph from 1940, depicts the overall region, including the study site, as farmland. With the exception of a small wooded area along the south border of the property, the property is cleared land. A building is adjacent to the north central boundary of the subject site. However, no suspect environmental activities were apparent in the photograph.

The 1972 and 1980 photographs show substantial growth of residential developments and highways. The subject site was depicted the same as it had appeared on the 1940 photograph. However, nothing was noted that would raise concern regarding environmental improprieties.

3.2 City Directories

Polk City directories were available for the area of the subject site, but an address of the subject site was not included. A Clinton County Rural Directory for 1940 listed 150 W. Stoll as the address for Michael O'Neill.



3.3 Ownership History and Land Use

According to Ms. Bidlack; her parents, Michael R. and Angela M. O'Neill; and her aunt and uncle, Arthur J. and Antoinette Faggion, jointly obtained the subject site via Land Contract. The subject site was purchased from Louis G. Lietzke and Clara M. Lietzke on January 20, 1957. Several years of Clinton County plat books listed M. O'Neil and A. Faggion as owners of the subject site.

According to Liber 339, Page 754 of Clinton County Records of Deeds, a Quit Claim Deed of the subject site dated 18 August 1989, indicated ownership was to Antoinette C. Faggion Bommarito; Michael R. O'Neill, Trustee; and Angela M. O'Neill, Trustee.



4.0 REGULATORY REVIEW

A review of known and potential sites of environmental concern was conducted to identify such sites located within the vicinity of the subject site, which included information extracted from federal, state, and local databases. The table below list the sites of concern and the search radii.

List	Search Distance (miles)
National Priorities List for CERCLA Remedial Actions (NPL)	1
Federal Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) List	1/2
Federal Resource Conservation and Recovery (RCRA) Treatment Storage and Disposal Facilities (TSD) List	1
Federal RCRA Generators	Property and Adjoining Properties
Michigan Act 307 List	1
Michigan State Landfills	1/2
Municipal Landfills	1/2
Michigan Leaking Underground Storage Tank (LUST) Site List	1/2
Michigan State Registered USTs	Property and Adjoining Properties

Neither the subject site nor any of the sites within the radii of concern were listed in any of the reference database. According to Ms. Arlene Williams of the MDNR, Environmental Response Division, the MDNR does not maintain a file pertaining to the subject site.



5.0 SITE INSPECTION

The site visit was conducted on April 13, 1993, by Maggie Henderson of ESE. A subsequent site review was also performed on July 21, 1993. The walkover was comprised of a visual inspection of the subject property and adjacent properties to identify potential sources of environmental contamination. The site is agricultural land which is primarily surrounded residential and other agricultural properties. With the exception of a wooded section to the south and a small clump of trees to the northwest, the site is primarily cleared land.

During the walkover of the subject site and observation of the surrounding properties, no indications of environmental contamination were observed. Although seasonal conditions did not allow for definitive assessment of stressed vegetation, there were no other indicators which could establish suspicion of environmental contamination such as stained soils, debris, or noxious odors emanating from the property. Industrial operations are not located on any of the adjoining sites.

No evidence of USTs were observed on the subject site or adjacent properties. The State Fire Marshal's office was also contacted regarding USTs on or near the property. A records search conducted by Ms. Terri Harmon of the State Fire Marshal's office confirmed that there are no USTs on the subject site or adjacent properties. In addition no electrical equipment or transformers were observed during the walkover of the subject site.

Other than seasonal conditions, there were no notable changes to the subject site and surrounding properties during the July 21, 1993, site review.



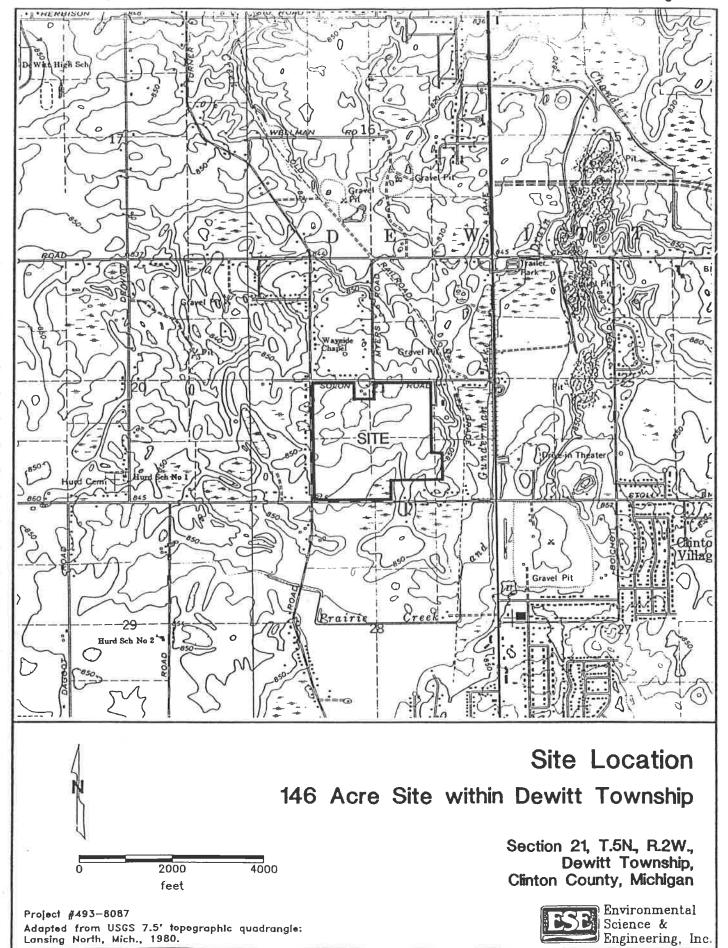
6.0 CONCLUSIONS

Based upon information obtained during this investigation, it does not appear that any gross contamination has occurred at the subject property nor does it appear to be a point source for the release of environmental contaminants. No visual signs of contamination were identified during the site visit. Available historical information indicates that the subject site has been used as agricultural land. There are no known sites of environmental concern within the vicinity of the subject site.

In the best professional judgement of ESE, the scope of the subject audit was sufficient to discover contamination, given the nature and specific circumstances of the site. The conclusions provided by ESE are based solely on the scope of work conducted and on observations made at the time the services were rendered. No other warranty, expressed or implied, is made as to the professional opinions included by ESE in this report.



Engineering, Inc.



3

Appendix A

Transaction Screen



April 20, 1993

Ms. Angela Bidlack 10003 Parkland Drive Wexford, Pennsylvania 15090

RE: Transaction Screen of a 144-Acre Site Located Within Dewitt Township, Clinton County, Michigan - ESE Project No. 493-8087

Dear Ms. Bidlack:

Environmental Science & Engineering, Inc. (ESE) conducted a Transaction Screen (TS) of a 144 acre site located within the East ½ of the Southwest ¼ and West ½ of the Southeast ¼ of Section 21, Township 5 North, Range 2 West, Dewitt Township, Clinton County, Michigan. The TS may allow the user to conclude that no further inquiry is needed to assess the potential for identifying any recognized environmental condition at the property and hence that performance of the TS Process constitutes appropriate inquiry without undertaking a Phase I Environmental Site Assessment.

This letter/report has been prepared to describe events and activities which transpired during the course of this TS and conclusions made by ESE as a results of this investigation. The events of this TS included a site visit, Transaction Screen Questionnaire (TSQ), and government record/historical sources inquiry. These tasks were performed by Maggie A. Henderson of ESE during April 13 and 14, 1993.

Site Visit

A site inspection which included visual observation of the property and surrounding areas was conducted on April 13, 1993. The subject site is agricultural land which is primarily surrounded by residential and other agricultural properties. The north, west, and part of the south boundary are bordered by Solon, Turner, and Stoll Roads, respectively. With the exception of a wooded section to the south and a small clump of trees to the northwest, the site is primarily cleared land.

During the walk-over of the subject site and observation of the surrounding properties, no indications of environmental contamination was observed. Although seasonal conditions did not allow for definitive assessment of stressed vegetation, there were no other indicators which could establish suspicion of environmental contamination such as stained soil, debris,

Ms. Angela Bidlack April 20, 1993 Page 2

or noxious odors emanating from the property. Also, there are no industrial operations on any of the adjoining properties.

Transaction Screen Ouestionnaire

The Transaction Screen process consists of asking questions of owners and occupants of property who observed site conditions at the property. The property is not occupied. The attached TSQ was answered by Ms. Angela Bidlack, the owner's daughter and representative. Ms. Bidlack has lived on the property and is knowledgeable about site conditions.

The purpose of the TSQ is to discover the potential for or any environmental concerns which may pertain to the subject site. Ms. Bidlack's responses to the TSQ indicate that there are no known or suspect environmental contamination which has occurred at the subject site. Also, the subject site has not been identified by any government agency as a point source for the release of environmental contamination.

Government Records/Historical Sources Inquiry

The Dewitt Township Office was contacted regarding industrial operation within the vicinity of the subject site. According to Officer Dalton, a Dewitt Township Police Officer, to his knowledge there has never been any industrial facilities located at or within the vicinity of the subject site.

Federal, state, and local government record systems lists were reviewed to determine if the subject site or any adjacent property are included on any of these lists. The results of this review indicate that neither the subject site nor any adjacent property are included on these lists. A sanitarian from Clinton County Health Department, Environmental Health Services, reported that there are no Solid Waste/Landfill Facilities within the vicinity of the subject site. The government record systems list and the considered circumference of the subject site are noted below:

- National Priorities List (1.0 mile)
- CERCLIS List (0.5 mile)
- RCRA TSD Facility (1.0 mile)
- Leaking Underground Storage Tank (LUST) List (0.5 mile)
- Solid Waste/Landfill Facilities (0.5 mile)

Conclusion

The Transaction Screen of the site described as a 144 acre site located within the East ½ of the Southwest ¼ and West ½ of Southeast ¼ of Section 21, Township 5 North, Range 2 West, Dewitt Township, Clinton County, Michigan, included a site visit; TSQ; interviews

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ESE

Ms. Angela Bidlack April 20, 1993 Page 3

with Dewitt Township and Clinton County Officials; and a review of government record systems list. Based upon the results of this investigation, ESE concludes that the site is not a point source for the release of environmental contaminants and no further inquiry into recognized environmental conditions at the property is needed for purpose of appropriate inquiry.

In the best professional judgement of ESE, the scope of the subject audit was sufficient to discover contamination, given the nature and specific circumstances of the site. The conclusions provided by ESE are based solely on the Scope of Work conducted and on observations made at the time the services were rendered. No other warranty, expressed or implied, is made as to the professional opinions included by ESE in this report.

ESE appreciates the opportunity to provide this service. Should you have any questions pertaining to this report or if we may be of further assistance, contact this office at (800) 669-4391.

Sincerely,

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

Maggie A. Henderson Senior Staff Scientist

MAH:cn

Enclosures

Transaction Screen Questionnaire

	Yes	No	Unk
Is the Property or any Adjoining Property used for an industrial use?		Х	
To the best of your knowledge, has the Property or any Adjoining Property been used for an industrial use in the past?		Х	
Is the Property or any Adjoining Property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?		X	
To the best of you knowledge, has the Property or any Adjoining Property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?		Х	y
Are there currently, or to the best of your knowledge have there been previously, any automotive or industrial batteries in significant quantities, or pesticides, paints, or other chemicals in individual containers of greater than 5 gallons in volume or 50 gallons in the aggregate, stored on or used at the Property or at the facility?		X	
Are there currently, or to the best of your knowledge have there been previously, any industrial Drums (typically 55 gallon) or sacks of chemicals located on the Property or at the facility?		X	
Has Fill Dirt been brought onto the Property which originated from a contaminated site or which is of an unknown origin?		Х	
Are there currently, or to the best of your knowledge have there been previously, any Pits, Ponds or Lagoons located on the Property in connection with waste treatment or waste disposal?		Х	
Is there currently, or to the best of your knowledge has there been previously, any stained soil on the Property?		Х	
Are there currently, or to the best of your knowledge have there been previously, any registered or unregistered storage tanks (above or underground) located on the Property?		Х	
Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes or access ways indicating a fill pipe protruding from the ground on the Property or adjacent to any structure located on the Property?		Х	

	Yes	No	Unk
Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?			
If the Property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency?			3.0
Does the Owner or Occupant of the Property have any knowledge of Environmental Liens or governmental notification relating to past or current violations of environmental laws with respect to the Property of any facility located on the Property?		Х	
Has the Owner or Occupant of the Property been informed of the past or current existence of Hazardous Substances or Petroleum Products or environmental violations with respect to the Property or any facility located on the Property?	5)	Х	
Does the Owner or Occupant of the Property have any knowledge of any Environmental Site Assessment of the Property or facility that indicated the presence of Hazardous Substances or Petroleum Products on, or contamination of, the Property or recommended further assessment of the Property?		X	x
Does the Owner or Occupant of the Property know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any Hazardous Substance or Petroleum Products involving the Property by any Owner or Occupant of the Property?		Х	
Does the Property discharge waste water, other than storm water, directly to a ditch or stream on or adjacent to the Property?		Х	.7
To the best of your knowledge, have any Hazardous Substances or Petroleum Products, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried, and/or burned on the Property?		Х	
Is there a transformer, capacitor or any hydraulic equipment for which there are any records indicating the presence of PCBs?		Х	
Government Records/Historical Sources Inc	quiry		
Do any of the following Federal government record systems list the Property or any property within the circumstance of the area noted below:			
National Priorities List - within 1.0 mile/1.6 Km? CERCLIS List - within .5 mile/.8 Km?		х	
RCRA TSD Facilities - within 1.0 mile/1.6 Km?		X	

	Yes	No	Unk
Do any of the following state record systems list the Property or any property within the circumference of the area noted below:			
List maintained by State environmental agency of hazardous waste sites identified for investigation or remediation that is the state agency equivalent to NPL - within approximately 1.0 mile/1.6 Km?		Х	
List maintained by State environmental agency of sites identified for investigation or remediation that is the state equivalent to CERCLIS - within .5 mile/.8 Km?		х	
Leaking Underground Storage Tank (LUST) List - within .5 mile/.8 Km?	.5		P
Solid Waste/Landfill Facilities - within .5 mile/.8 Km?		X	
Based upon an interview conducted with DeWitt Township officials, are any buildings or other improvements on the Property or on an Adjoining Property identified as having been used for an industrial use or uses likely to lead to contamination of the Property?		Х	

The Preparer of the Transaction Screen Questionnaire must complete and sign the following statement.

THIS QUESTIONNAIRE WAS COMPLETED BY:

Name	Maggie A. Henderson					
Title	Senior Staff Scientist					
Firm	Environmental Science & Engineering, Inc.					
Address	1099 West Grand River Avenue					
	Williamston, Michigan 48895					
Phone N	umber (517) 655-4391					
Date	April 13, 1993					

PREPARER'S RELATIONSHIP TO USER (e.g.	, principal, employee, agent, consultant)
Consultant Copies of the Completed Questionnaire Have Been	Filed at:
N/A	
Copies of the Completed Questionnaire Have Been	Mailed or Delivered to:
N/A	
PREPARER REPRESENTS THAT TO THE BEST THE ABOVE STATEMENTS AND FACTS ARE BEST OF THE PREPARER'S ACTUAL KNOWL	TRUE AND CORRECT AND TO THE
BEEN SUPPRESSED OR MISSTATED. Signature	20 April 1993 Date
Signature	Date
Signature	Date

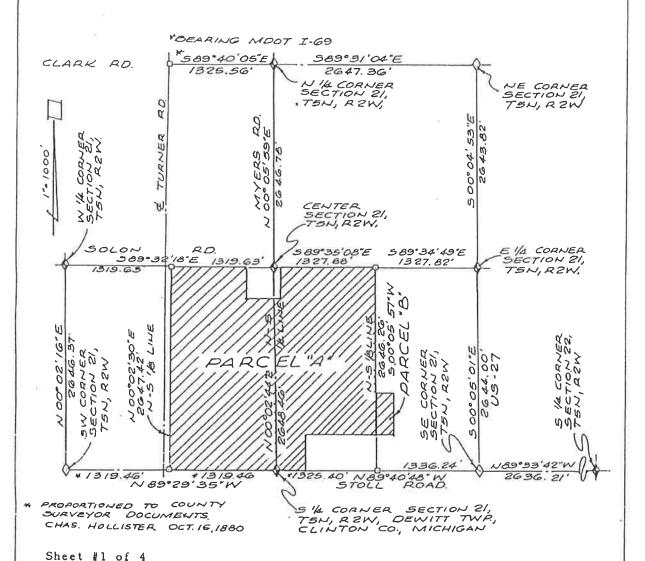
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Appendix B

Copy of Certified Survey Map

FOR: Michael R. O'neill, Etal

DESCRIPTION: (See Sheet #4 of 4)



I CERTIFY THAT THIS MAP CORRECTLY REPRESENTS A SURVEY MADE UNDER MY SUPERVISION OF THE LAND DESCRIBED ABOVE IN COMPLIANCE WITH THE REQUIREMENTS OF PUBLIC ACT 132 OF 1970. THE RELATIVE ERROR OF CLOSURE BEING 1 PART IN 105,000 : AND THAT THE ENCROACHMENTS AFFECTING SAID LAND, IF ANY, ARE

LOCATED AS SHOWN HEREON.

PIERSON & ASSOCIATES, INC.

LAND SURVEYING & RELATED ENGINEERING

B728 AIRPORT ROAD

DEWITT, MICHIGAN 48820

ORDER NO. 93/08

DRAWN BY ASP.

BY: CLICENSED LAND SURVEYOR \$ 13039



FOR: Michael R. O'neill. Etal

DESCRIPTION: (See Sheet #4 of 4)

Sheet #2 of 4 TURNER ROAD 22.46' / 1/8 CORNER 589°32'18'E E-W IKLINE 1.319.63 SECTION 21, EXISTING IRON IN MONUMENT BOX LINE USED AB E-WALINE FOR PAIOR SURVEYS CENTER SECTION 21, TSH, RZW, DEWITT TWR. CLINTON CO., MICH. SEE DETAIL. 27 - SCORNER -67' 589°35'08'E \ 1260.88 5 89°32'18'E 969.63 5.86. A SOLON RO 350 TURNÉR Ø LIETZKE 10 00 81 CO. DRAIN 509.49 B3 E 417.00 60 00 2 17 80 16 15 14 PARCEL "A" 1 13 146.841 AC. 12 11 lιi 10 589°40'48'E ď 217.00 8 FOUND IRON 3.8 EAST 84 546.04 N00009 57 546. 6 OLD FENCE CORNER 3.4' EAST COATRIGHT 5 α N89°40'48"W 5 1/4 CORNER 4 907.50 SECTION 21, TON, RZW 50.00 4"82'04°68'M PIG 3 82 DEWITT TWAI CLINTON CO., MICH. 479.00 217.00 2 STOLL RD 1417.90 N89°29'35"W 1319.46 N 69°40'48"W. 31.57 "O" INDICATES 1/2" IRON & CAD SET.

I CERTIFY THAT THIS MAP CORRECTLY REPRESENTS A SURVEY MADE UNDER MY SUPERVISION OF THE LAND DESCRIBED ABOVE IN COMPLIANCE WITH THE RECUIREMENTS OF PUBLIC ACT 132 OF 1970. THE RELATIVE ERROR OF CLOSURE BEING 1 PART IN 1/05, 203.: AND THAT THE ENCROACHMENTS AFFECTING SAID LAND, IF ANY, ARE LOCATED AS SHOWN HEREON.

INDICATES IRON FOUND.

PIERSON & ASSOCIATES, INC.
LAND SURVEYING & RELATED ENGINEERING
8728 AIRPORT ROAD
DEWITT, MICHIGAN 48820

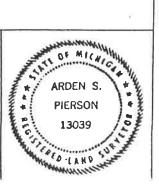
DATE 4-05-93

REV 6-16-93

ORDER NO. 93100

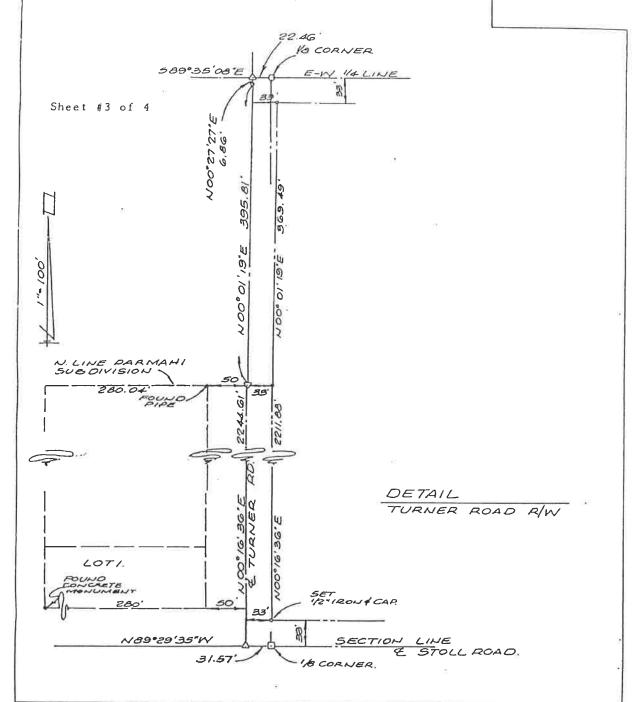
DRAWN BY 450

BY: CILLEN S. PLEUM.
LICENSED LAND SURVEYOR . 13039



FOR: Michael R. O'neill, Etal

DESCRIPTION: (See Sheet #4 of 4)



I CERTIFY THAT THIS MAP CORRECTLY REPRESENTS A SURVEY MADE UNDER MY SUPERVISION OF THE LAND DESCRIBED ABOVE IN COMPLIANCE WITH THE REQUIREMENTS OF PUBLIC ACT 132 OF 1970. THE RELATIVE ERROR OF CLOSURE BEING 1 PART IN 105,253 : AND THAT THE ENCROACHMENTS AFFECTING SAID LAND, IF ANY, ARE LOCATED AS SHOWN HEREON.

PIERSON & ASSOCIATES, INC. LAND SURVEYING & RELATED ENGINEERING 8728 AIRPORT ROAD DEWITT, MICHIGAN 48820

DATE 4-03-93 REV 6-16-93 ORDER NO. 93108 ORDER NO.

DRAWN BY ASP

ala stres LICENSED LAND SURVEYOR # 13039



FOR:

Michael R. O'neill, Etal

DESCRIPTION:

PARCEL "A" -Beginning at the South 1/4 corner of Section 21, T5N, R2W, Dewitt Township, Clinton County, Michigan; thence N89°29'35"W 1319.46 ft. along the South line of said section; thence N00°02'30"E 2647.42 ft. along the West line of the E 1/2 of the SW 1/4 of said section; thence S89°32'18"E 969.63 ft. along the E-W 1/4 line of said section; thence S00°10'07"W 418.79 ft. along a line as occupied; thence S89°49'53"E 417.00 ft. along a line as occupied; thence N00°10'07"E 416.71 ft. along a line as occupied; thence S69°35'08"E 1260.88 ft. along the E-W 1/4 line of said section; thence S00°05'57"W 2166.44 ft. along the East line of the West 1/2 of the SE 1/4 of said section; thence N89°40'48"W 907.50 ft. parallel with the south line of said section; thence N89°40'48"W 907.50 ft. parallel with the south line of said section; thence S00°05'57"W 479.82 ft.; thence N89°40'48"W 417.90 ft. along said south line to the point of beginning. Containing 146.841 acres, and subject to all easements and restrictions of record.

PARCEL "B"- Commencing at the South 1/4 corner of Section 21, T5N, R2W, Dewitt Township, Clinton County, Michigan; thence S89°40'48"E 1325.40 ft. along the South line of said section; thence NO0°05'57"E 479.82 ft. along the West line of the E 1/2 of the SE 1/4 of said section to the true point of beginning; thence NO0°05'57"E 546.84 ft. along said West line; thence S89°40'48"E 217.00 ft.; thence S00°05'57"W 546.84 ft.; thence N89°40'48"W 217.00 ft to the point of beginning. Containing 2.724 acres and subject to all easements and restrictions of record.

GOVERNMENT CORNER WITNESSES

West 1/4 corner Section 21, T5N, R2W, Liber 2, Pages 239 & 513

Center Section 21, T5N, R2W,
Set Railroad spike from previous survey
Telephone Pole (NE side) -N34°W- 51.23'
Guy Pole (SE side) -S59°W- 43.03'
Power Pole (SE side) -N58°E- 49.84'
NE Corner Garage -S11°E- 93.14'

South 1/4 corner Section 21, T5N, R2W,
Railroad Spike (4.3 ft. South of Bryan point)
5.2 ft. South of centerline pavement
Center Manhole Cover -N77°W- 48.07'
Center North end 15" culvert -N43°E- 35.75'
Center South end 15" Culvert -S43°E- 28.29'

SW corner Section 21, T5N, R2W, 1/2" rod in Monument Box Liber 2, Page 31

Sheet #4 of 4

I CERTIFY THAT THIS MAP CORRECTLY REPRESENTS A SURVEY MADE UNDER MY SUPERVISION OF THE LAND DESCRIBED ABOVE IN COMPLIANCE WITH THE REQUIREMENTS OF PUBLIC ACT 132 OF 1970. THE RELATIVE ERROR OF CLOSURE BEING 1 PART IN : AND THAT THE ENCROACHMENTS AFFECTING SAID LAND, IF ANY, ARE LOCATED AS SHOWN HEREON.

PIERSON & ASSOCIATES, INC. LAND SURVEYING & RELATED ENGINEERING 8728 AIRPORT ROAD DEWITT, MICHIGAN 48820

DRAWN BY ASP

BY: CLUM S. PLEUM
LICENSED LAND SURVEYOR . 13039



Appendix C

Water Well Logs

GEOLOGICAL SURVEY SAMPLE No.	Ì		
OCT 21 1980	WATER WE		
	ACT 294	PA 1965	PUBLIC HEALTH
1 LOCATION OF WELL Twp.		Fraction	Section No. Town Range
(INTON) DEWIN	/	VWIVN	3 OWNER OF WELL (5 ON/S. 02 E/W)
APPX 2504JS, W. OF US	OWNER No		3 SWNER OF WELL AREA SIMERCROSS INC
APPX 25045, W. OFUS	5-27		Address 2715 S. Cedar
Street address & City of Well Lacquid CK FINE	THICKNESS	5 - 2 7 DEPTH TO	4 WELL DEPTH; (completed) - Date of Completion
2 FORMATION	OF STRATUM	STRATUM	64 h. Sept. 2, 1980
a all	19	19	5 Cable tool Rotary Driven Dug Hollow rad Detted Bored
Den. (legy		1/5	6 USE: Domestic Public Supply Industry
Gray Litty Clay	30	49	Irrigation Air Conditioning Commercial Test Well
March Andley	4	53	7 CASING: Threaded Welded Height Above Below
2 starting seeing stay	11	211	2 in. to 60 ft. Depth surface TWO ft.
fine Timel		64	Weight 7 bs/ft. in. toft. Depth Drive Shoe? Yes No.
8			8 SCREEN:
		1	Type 2 Stawles De Steel
			Slot/Gauze 7 Sto T Length 4/9 ft
			Set between Oft. and Off.
			Fittings:
			9 STATIC WATER LEVEL
		-	10 PUMPING LEVEL below land surface
			38 ft. after hrs. pumping 12-14g.p.m.
			ft. afterhrs. pumpingg.p.m.
			11 WATER QUALITY in Parts Per Million: NT
			Iron (Fe)Chlorides (CI)
			Hordness
			12 WELL HEAD COMPLETION: In Approved Pit Pitless Adapter 12" Above Grade
			13 GROUTING:
			Well Grouted? Yes No
			Material: Neat Cement V Depth: From ft.
			14 SANITARY:
			Negrest Source of possible contamination 3/10/feet Eu Direction FILE Type
	, , , , , , , , , , , , , , , , , , ,		Well disinfected upon completion Yes No
			15 PUMP: REPIDENTON
			Manufacturer's Name (FID 2017 CN) Model Number HP 1/2
			Length of Drop Pipa 20 ft. capacity 2 G.P.M.
			Type: Submersible Reciprocating
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION:
Will the a sounding the say		This we	Il was drilled under my jurisdiction and this report is true
*CONSCIENCE AT		Swith	Palement Noily 1511
##ADDLINGN BY 12" ELEVATION	: No.	- Julio	REGISTERED BUSINESS HAME REGISTRATION NO.
SECYATION SOCK		Addreys	225 US 21 Newwe III.
		Signed	AUTHORIZED REPRESENTATIVE

D67D

100M

WATER WELL RECORD ACT 294 PA 1965 1 LOCATION OF WELL County Township Name Township Name Fraction DEW, TY Disyance And Direction from Road Intersections Address Address Address Address Address Address Township Name Town Number Range Number Range Number Range Number Range Number Address Address Address Address Town Number Range Number Rang
Township Name County
County Township Name
Dispance And Direction from Road Intersections ADPX. 2-00 USS. Will OF US-27 Sure Displays a Employed USS Will OF US-27 Locate with "X" in section below Seaton F. Seaton Map: W
Address 3715 5. Culture 18910 Substituting Street Map: Locate with X in section below Sweeth Map: Rd. 4 WELL DEPTH: (completed) Date of Completion 18910 19910 1
Locate with 'X' in section below Sketch Map: A WELL DEPTH: (completed) Date of Completion
Total Company Driven Dug Hollow rad Jetted Bored Hollow rad Jetted Bored Industry Irrigation Air Conditioning Commercial
5 Cable tool Driven Dug Hollow rad Jetted Bored Output W
W Hollow rad Jetted Bored 6 USE: Domestic Public Supply Industry Irrigation Air Conditioning Commercial
6 USE: Domestic Public Supply Industry
L M.1
Test Well 7 CASING: Threaded Welded Height: (bove) Below
Diam. Surface 7.5 ft.
2 FORMATION THICKNESS DEPTH TO OF BOTTOM OF STRATUM STRATUM In. toft. Depth Drive Shoe? Yes No. No.
2 3 1/ 2 8 SCREEN:
Type /AIN/ESS TEE Dia.: 2
Stoney Bin. Clay 5 14 Set between 59th. and 104 ft.
5+ mo F than Way 13 27 Fittings:
9 STATIC WATER LEVEL
Bouldiers 6 33 30 ft. below land surface
Aran Olas 437 44 ft. after hrs. pumping 14 g.p.m.
mink to the day of the total
Med to Farge stravel 15 52 ft. after hrs. pumping g.p.m.
Line gravel/water) 13 65 Iron (Fe) Chlorides (CI)
HardnessOther
12 WELL HEAD COMPLETION: In Approved Pit
Pitless Adapter 12" Above Grade
Neat Cement Bentonite
Depth: From O ft. to 59 ft.
14 Nearest Source of possible contamination 150 feet E. Direction SEPTIC THN Stype
Well disinfected upon completion Yes No
15 PUMP: Not installed
Manufacturer's Name //4/25 0 3/49 Model Number 3544 D HR/U Voits 2.30
Length of Drop Pipe 42 ft, capacity 8 G.P.M.
Type: ☐ Submersible ✓ Jet ☐ Reciprocating
Jet Recipiocating
16 Remarks, elevation, source of data, etc. 17 WATER WELL CONTRACTOR'S CERTIFICATION:
ADDED INFO BY DRILLER, HEN The to the best of my knowledge and belief.
*CORRECTED BY REGISTERED BUSINESS NAME REGISTRATION NO.
**ADDITION BY !
ELEVATION DEPTH IO ROCK Address Address Address
D67d 100M (Rev. 12-68) Signed M. K. LLICESON Date KILLY 31 1700

GEOLOGICAL SURVEY SAMPLE No.			
JAN 9 8 1990	WATED '	WELL REG	CORD
			MICHIGAN DEPARTMENT OF PUBLIC HEALTH
1 LOCATION OF WELL County Township Name		Fraction	Section Number Town Number Range Number
		WW45	E 1 & 1 & N.B. 2 EW.
Distance And Direction from Road Intersections			3 OWNER OF WELL: Harry Worst
2 . 4 6 (5 2 2			Address 420 W. Stoll Rd.
Street address & City of Well Location Locate with "X" in section below Sketcl			Dewitt
Locate with "X" in section below Sketch	h Map:		4 WELL DEPTH: (completed) Date of Completion
		r	76' ft. 8/25/19 5 Cable tool Rotary Driven Dug
x .2		US - 27	Cable tool
W		-27	6 USE: Domestic Public Supply Industry
			☐ Irrigation ☐ Air Conditioning ☐ Commercial
			Test Well
1 MILE			Diam.
2 FORMATION	THICKNESS	DEPTH TO BOTTOM OF	in. to 22 ft. Depth Weight 3.75 lbs./ft.
2 PONWATION	STRATUM	STRATUM	in. toft. Depth Drive Shoe? Yes No
clayogavel	54	54	8 SCREEN:
			Type: Stain (55 Dia.: 1/4) Slot/ Geuze 12 Length 3.5
clay Gray	10	64	Set between 22 ft. and 76 ft.
	ξ	69	Fittings: Disk C Wint check
clayof, ave		0	9 STATIC WATER LEVEL
gravel Medica	7	76	ft. below land surface
j			10 PUMPING LEVEL below land surface
			40 ft. after / hrs. pumping / g.p.m.
1			ft. after hrs. pumping g.p.m.
			11 WATER QUALITY in Parts Per Million:
<u> </u>	0.		Iron (Fe) Chlorides (CI)
			HardnessOther
			12 WELL HEAD COMPLETION: In Approved Pit
			Pitless Adapter 12" Above Grade
			13 Well Grouted7 Yes No Neat Cement Bentonite
			Depth: Fromft. toft.
			14 Nearest Source of possible contamination
			30 feet 5 Direction 5eWer Type
			Well disinfected upon completion Tyes No
			Manufacturer's Name
			Model Number 100 CL B HP / Volts 230
			Length of Drop Pipe <u>CO</u> ft. capacity G.P.M.
			Type: Submersible
			Jet Reciprocating
USE A 2ND SHEET IF NEEDED			The state of the s
16 Remarks, elevation, source of data, etc.		This well	WELL CONTRACTOR'S CERTIFICATION: I was drilled under my jurisdiction and this report is true
PCORRECTED BY		to the be	STERED BUSINESS NAME REGISTRATION NO.
**ADDITION BY		REGIS	TERED BUSINESS NAME REGISTRATION NO.
ELEVATION		Address	G13' Pitsburg & Caingsburg
DEPTH TO ROCK			Danis LISS Date 12/22/19
D67d 100M (Rev. 12-68)		Signed _	AUTHORIZED REPRESENTATIVE

GEOLOGICAL SURVEY SAMPLE No.			
al di	WATER \		
1 LOCATION OF WELL	ACT 29	4 PA 196	OF PUBLIC HEALTH
Clinton Township Name Clinton DeWitt		Fraction	S/W S/E 21 T5 N/s. Range Number
Distance And Direction from Road Intersections		D/ E4 2	3 OWNER OF WELL:
7/10 Mile East Of Turner Rd	On Nor	•th	Vernon.L.Keefer Address 390.W.Stoll Rd
Side Of Stoll Rd 390. Lan.	sing ,M	ich	Lansing, Mich
H31			4 WELL DEPTH (completed) Date of Completion ft. 5/13/72
1			5 Cable tool Rotary Driven Dug
Stoll_gi	Bd_X	====	6 USE Domestic Public Supply Industry
			6 USE Domestic Public Supply Industry Irrigation Air Conditioning Commercial
			Test Well 7 CASING: Threaded Welded Height: New Below
1 MILE			Diam. Height: About Below Surface 1 ft.
2 FORMATION	THICKNESS OF	DEPTH TO BOTTOM OF	2 in. toft. Depth Weight 375 lbs./ftin. toft. Depth Drive Shoe? Yes No
	STRATUM	STRATUM	8 SCREEN:
Clay & Sand	18	18	Type: 121 Dia.: 12 Slot/Gauze 60 Length 36 Len
Sand Brown	7	25	Set between 58 ft. and 61 ft.
Clam Pula	15	40	Fittings:
Clay Bule	15		2 Drop Check 9 STATIC WATER LEVEL
Bule Clay & Gravel	7	47	38ft. below land surface
Brown Sand & Some Clay	8	55	Not ft. after hrs. pumping Known g.p.m.
Gravel Water Bearing	6	61	Not ft. after hrs. pumping Known g.p.m.
			11 WATER QUALITY in Parts Per Million: Iron (Fe) Not Chlorides (CI) Known
	(1.5)		
			Hardness Not Other Known
			12 WELL HEAD COMPLETION: In Approved Pit Pitless Adapter 12" Above Grade
		:	13 Well Grouted? Yes No
		y	Depth: Fromft.
			14 Nearest Source of possible contamination 50 feet East Direction Sept Tank Type
			Well disinfected upon completion Yes No
			15 PUMP: Not installed
			Manufacturer's Name Redjacket Model Number 750 J.A. HP 3/4 olts 110
			Length of Drop Pipe 42 ft. capacity G.P.M.
			Type: Submersible Reciprocating
16 Remarks, elevation, source of data, etc.	1	17 WATER	 WELL CONTRACTOR'S CERTIFICATION:
ADDED 1990. BY DRILLER, ITEM HO.		to the be	I was drilled under my jurisdiction and this report is true est of my knowledge and belief.
-C. C. L. Y.		REGI	STERED BUSINESS NAME Well Drilling 0142
##GDD TYDN 22		Address	903. Pine St Box. 27, DeWitt, Mich
##A00°7'0N 32		Signed	903. Pine St Box. 27, DeWitt, Mich
D67d 100M (Rev. 12-68)		(//	AUTHORIZED REPRESENTATIVE

GEOLOGICAL SURVEY SAMPLE No.				
MAY 1 1574		WATER V	VELL DEC	CORD MICHIGAN DEPARTMENT
		ACT 29	4 PA 196	55 OF
1 LOCATION OF WELL County Towns	hip Name		Fraction	S/W S/W PUBLIC HEALTH Section Number Town Number Range Number
	DeW1tt		1911	13 OWNER OF WELL:
# Mile North Of Sto	oll Road (On West	Side	DeWitt Lumber Co
Of Turner Rd 14784		. 1. 4		Address 118.E. Washington St DeWitt Michigan
Street address & City of Well Location Locale with "X" in section below	Sketch	hap:		4 WELL DEPTH: (completed) Date of Completion
	•	ಸಕಿದೆಸಗ		61 ft. 1/4/1972
	1	ස් ග		5 Cable tool Rotary Driven Dug
w		•		Hollow rod Jetted Bored
	×i	C.		6 USE: Domestic Public Supply Industry
│ ├ -	1			Test Well
	toll	Ra		7 CASING: Threaded Welded Height: Above/Below
I MILE		THICKNESS	DEPTH TO	Surfaceft,
2 FORMATION		OF STRATUM	BOTTOM OF	2 in. toft. Depth Weight375 lbs./ft. in. toft. Depth Drive Shoe? Yes No
		371117011		8 SCREEN:
Sandy Clay		16	16	Type: 121 Dia.: 12 Slot/Gauze 60 Length 36 Set between 58 ft. and 61 ft.
		2474		Slot/Gauze 60 Length 36"
Yellow Sand		12	28	
Clay & Gravel		9	37	Fittings: 2" Drop Check
		_	C BOLO	9 STATIC WATER LEVEL 38 ft. below land surface
Sandy Clay		7	44	10 PUMPING LEVEL below land surface
Blue Clay		9	_53	Not ft. after hrs. pumping Known g.p.m.
Gravel Water Bearing		8	61	Not ft. after hrs. pumping Known g.p.m.
Graver water bearing				11 WATER QUALITY in Parts Per Million:
				(ron (Fe) Not Chlorides (CI) Known
				Hardness Not Other Known
z .				12 WELL HEAD COMPLETION: In Approved Pit
				Pitless Adapter 12" Above Grade 13 Well Grouted? Yes No
				Neat Cement Bentonite Sandy Clay
				Depth: Fromft. toft.
				14 Nearest Source of possible contamination 50 sourcest Direction Sept Tank Type
				50 feetWest Direction Sept Tank Type Well disinfected upon completion ■ Yes □ No
- 1				15 PUMP: Not installed
				Manufacturer's Name Rediacket
				Model Number P.J.A HP & Voits 115
				Length of Drop Pipe 42 ft. capacity G.P.M.
				Type: Submersible Submersible Reciprocating Submersible Reciprocating Submersible Subme
	n			
16 Remarks, elevation, source of data, etc.				WELL CONTRACTOR'S CERTIFICATION:
ADDED OUTD BY DRILLER, ITEM MO.				II was drilled under my jurisdiction and this report is true est of my knowledge and belief.
		Robert	t. W. Suiter Well Drilling 0142 STERED BUSINESS NAME REGISTRATION NO.	
STATE OF SY				
	W	58	Adefess	903.Pine St. DeWitt Mich
			Signe	sheet (1) Full are 1/5/1972
D67d 100M (Rev. 12-68)		1	1	AUTHORIZED REPRESENTATIVE

GEOLOGICAL SURVEY SAMPLE No.			
asp 20 1072	WATER V	WELL REG	CORD MICHIGAN DEPARTMENT
SEP 20 1972	ACT 29		
County Township Name		Fraction	Section Number Town Number Range Number
Clinton DeWitt Distance And Direction from Road Intersections		S/W4 S	S/W, S/W 21 N/S. 2 E/W.
2/10 Mile West Of Turner Rd	On No	rth	Joseph.F.Donahue Builder
Side Of Stoll Rd 1620			Address869. Northcrest
Street address & City of Well Location Lansing, Locate with "X" in section below Sketci		an	Lensing, Michigan
Locats with "X" in section below Sketch	h Map:		4 WELL DEPTH: (completed) Date of Completion 57 ft. May, 22, 1972
2 1			5 Cable tool Rotary Driven Dug
x "!			Mollow rod Jetted Bored
"			6 USE: Domestic Public Supply Industry
Stoll B	Rd		Irrigation Air Conditioning Commercial
			7 CASING: Threaded Welded Height: Above/8elow
1 MILE	T		Surfaceft.
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	2 in. toft. Depth Weigh 375 lbs./ftin. toft. Depth Drive Shoe? Yes No
			8 SCREEN:
Sandy Clay	18	18	Type: Midwest Dia.: 12"
Yellow Sand	7	25	Stot/Gauze 60 Length 36"
16110W Danu	-		Set between 55 ft. and 57 ft.
Brown Sand & Gravel	9	34	Fittings: 2 Drop Check 9 STATIC WATER LEVEL
Bule Clay	3	37	ft. below land surface
Clay & Gravel	9	46	Not ft. after hrs. pumping Known g.p.m.
Sand & Gravel Water Bearin	g 11	57	Not ft. after hrs. pumping Known g.p.m.
			11 WATER QUALITY in Parts Par Million:
			Iron (Fe) Not Chlorides (CI) Known
	82		Hardness Not Other Known
			12 WELL HEAD COMPLETION: In Approved Pit
			Pitless Adapter 12" Above Grade
			Neat Cement Bentonite X Sandy Clay
			Depth: Fromft. toft. 14 Nearest Source of possible contamination
			14 Nearest Source of possible contamination 50 feet Northirection Sept. Tank Type
			Well disinfected upon completion X Yes No
Ε.			15 PUMP: Not installed Manufacturer's Name Redjacket
			Model Number C A HP Voits 110
			Length of Drop Pipe 38 ft. capacity G.P.M.
			Type: Submersible
			Jet Reciprocating
USE A 2ND SHEET (F NEEDED			
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION: I was drilled under my jurisdiction and this report is true
	i	to the be	st of my knowledge and belief.
Miles SY: 5 W		u-obe	Sister Well Drilling 0142
**ADDITION 80		Address	203, Pine St Box, 27, DeWitt, Mich Sully Date May, 22, 1972
- CONTROL WE		Signed	Short W. Swill Date May 22, 1072
D67d 100M (Rev. 12-68)			AUTHORIZED REPRESENTATIVE

D67d

MICHIGAN D	EPARTI	MENT OF	PUBLIC HEALTH
GEOLOGICAL SURVEY NO . WATER V	VELL A	ND PU	MP RECORD PERMIT NUMBER
1 LOCATION OF WELL		-	
County United Township Township	- (Sed Val	Section Number Town Number Range Number
Distance And Direction From fload Intersection	A A	9-	3 OWNER OF YELL'S & helter Cast
200 yords south of age	7.5		Address 5576, Earlight in.
150 was of 1 water, on	_	01	Hislett m
Street Address & City of Well Location 5 12 1 Sket	ch Map	14/	Address Same As Well Location? Yes No 4 WELL DEPTH: Date Completed Now Well
	N		246FT. 10,22,70 \ Replacement Well
50.63	7		Cable tool Pétary Driven Dug
W			6 USE Domestic Type Public Type III Public
X			Irngation Type Ila Public Heat pump
5-5	Fi		CASING: Steel Threaded Height: Above/Below
1 MILE		DEDTH TO	Welded Surface
2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	in, toft, depth
	15	15	in. to 1 11. depth Unive Shoe Tres
Sondy glavel	13	1)	8 SCREEN: Not Installed
arrel	40	55	Type Diameter
Clarie	15	70	Slot/Gauzeft. andft.
Car 1	58	125	FITTINGS Lead Packer Bremer Check
gravel	20	128	Blank above screenft Other 9 STATIC WATER LEVEL
Clay 1 1	3	133	ft. below land surface Flow 10 PUMPING LEVEL below land surface
and the a sondach	82	215	10 PUMPING LEVEL below land surface 5.0 ft, after hrs. pumping at G.P.M
J + 1	3/	2111	ft, after hrs. pumping at G.P.M.
while somewall	0/	246	11 WELL HEAD COMPLETION Basement offset Approved pit
			Basement offset Approved pit 12 WELL GROUTED? No Pres From 5 to 1000 ft.
			Neat cement Sentonite Other Helphy
			No. of bags of cement Additives
			13 Nearest source of possible contamination Type Distance 5 ft. Direction
			Well disinfected upon completion? Yes No
			Was old well plugged? Yes No
			Manufacturer's name M!/=15
			Model number SZNSZ HP 1/2 Volts 2=0
	71.		Length of Drop Pipe
	14:		PRESSURE TANK: Manufacturer's name Wall-Y-Ti-F
USE A 2ND SHEET IF NEEDED	H.	7.3145	Model number LUX 203 Capacity 36 Gallons
15. Remarks, elevation, source of data, etc.			R WELL CONTRACTOR'S CERTIFICATION: all was dolled under my jurisdiction and this report is true
	h	to the b	est of my knowledge and belief
	41,	= · · · _ /	REGISTERED BUSINESS NAME THE REGISTER FOR NO.
17. Rig Operator's Name		Address	1000 J 1000 N
D67d 2/89		Signed	AUTHORIZED REPRESENTATIVE ACT 368 PA 1978

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

GEOLOGICAL SURVEY NO

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

T					T
1	1	131		1 1	ł
- 1		-	1 1	1	1

1 LOCATION OF WELL	I						
County	Township Name		Fraction		Section Number	Town Number	Range Number
CLINION	DEWITT		NW 1/4	SW 1/4 NE 1/4	21	5N N/S	2W E/W
Distance And Direction From Road In	tersection			3 OWNER OF	WELL:		
1/2 MILE WEST OF U		SIDE OF		1	KEN KOEPPE		
SOLON RD.				Address	500 SOLON RI) .	
					DEWITT, MI.		1
Stree 5 Qui SOFON ORD II LODATE	итт мт. 48820	}		Addrage S	ma As Wall Locatio	nz Tyl yes F] No
Locate with "X" in Section Below	I CLARK SI		(11)	4 WELL DEPT	H: Date Complete	WEAR ! Naw We	
	ICLARK		<u>. </u>	200=	7 31	90 X Replacer	nent Well
				5 13 Cable to	al N Bosso	Driven	Dug
	2 2		17	Cable to	ol 🔀 Rolarv od 🔲 Auger	Jetted	
* * _e	KNE		2				
"	LI RA	" WELL			nestic Type i	Public	Type III Public
	7 1 1	1 HOUSE	N	Irrig			Heat pump
			72		Well Type II		
	SOLUN	Rd.	1~1	Diameter	Steel Thread	ed Height: Abov	
1 MILE				يا إ	Plastic Welder	Surface	<u>1</u> ft.
2 FORMATION DESC	MOLTOIO	THICKNESS	DEPTH TO BOTTOM OF		o 139 ft: depth	Weight	lbs /ft
2 FORMATION DESC	AIFTION	STRATUM	STRATUM	Grouted Dri	o ft. depth	i i	
				8 in. t	Hole Diameter o 139 ft. deoth	Drive Shoe	
SAND & BROWN CLAY		5	6	1	o ft. depth	E	□ No
				8 SCREEN:		☐ Not In	stalled
GRAVEL		18	24	Type	NONE	Diameter	
0.02.17.000					1/		
CLAY & STONES		42	66				
CIAT 4 DIOIES				Set between	K-Packer	lead Packer	Bremer Check
COALIET		31	97		bove screen1		
GRAVEL		131	31	9 STATIC WAT		t. Other_	
		24	120				□ Flow
RED CLAY & STONES		31	128	10 PUMPING I	42 ft, below land	dace	1104
			430				,
RED SANDSTONE		4	132	ALR	ft. after hrs.:	pumping at	J. G.P.M.
					ft. after hrs:	pumping at	G.P M
WHITE SANDSTONE		16	148				
		of the second		11 WELL HEAD		_	above grade
GRAY SHALE		9	157		Basemen		
				12 WELL GROU	UTED? No	X Yes From	0 to 139 ft
WHITE SANDSTONE		43	200			—	DEMICIONE
				☐ Neat ce	ement 🔀 Bento	nite 🔀 Other	BENSFAL
				No. of bags	of cement	Additives	
				1	irce of possible conta		8
				Type TVP.	SEWER Distar	nce 50ft. Dire	ection SOUTH
				Well disinfect	ed upon completion?	X Yes .	No
				Was old well		X Yes	
				14 PUMP	Not Installed	Pump Inc	stallation Only
						_	Constitution Only
		-		1	er's nameRED :		230
A .	A			II.	oer	HP <u>1/2</u> \	
Mic	AUG OF Public He Chic He			The second second	_	30ft. capacity	10 G.P.M.
	" O . C .			1	Submersible	Jet	
	PI			PRESSURE	TANK: er's nameWEL	. פיייב	
۵.	Alla Pun E	\					
USE A THE PHEET IF	NEEDED 9	U			per WR 60-02	Capacity	Gallons
15. Remarks, elevation Cource of	data, etcu 100	ah,			RACTOR'S CERTIF		
PATIO	ENVID 1390	77		ell was drilled und best of my knowle	der my jurisdiction an edge and belief.	a mis report is true	
10	NAI TONNER						1616
USE A LAPMEET IF 15. Remarks, elevation Course of 17. Rig Operator's Name: RTCHARD T, SCHRADE	MEALENTA		Da.S	REGISTERED BUSI	VELL DRILLI	REGISTRATI	1616 ION NO.
17. Rig Operator's Name:	HEL ALL		Address	6131 PI	PISBURG RD.		G, MI. 48848
, , , , , , , , , , , , , , , , , ,	WOS		Address	777	100		
RICHARD T. SCHRADE	R		Signed	April	10	Date 8	-10-90
D67d 2/89				AUTHOR	ZED REPRESENTATIVE	1	

GEOLOGICAL SURVEY SAMPLE NO.			
	WATER \	WELL REC	CORD MICHIGAN DEPARTMENT OF
1 LOCATION OF WELL			65 OF PUBLIC HEALTH
County Winten Township Name		Fraction N H 1/4	VEXSEX ZI Town Number Range Number ZW.
Distance And Direction from Road Intersections 27,	South.	المانية	3 OWNER OF WELL:
Walan Parthe 12 Viet. Ar	10322	0	Address Acting 70 - Dewitt, Mil.
Street address & City of Well Location			463, Salan Rd - Dewell, 1111-
	h Map:		4 WELL DEPTH: (completed) Date of Completion 200 ft. 14 May - 9 - 1987
Solon Rt	1 17		5 Cable tool Rotary Driven Dug
	#/1/0		6 USE: Domestic Public Supply Industry
	1/4		☐ Irrigation ☐ Air Conditioning ☐ Commercial
	1 1 3		Test Well
	(λ)		7 CASING: Threaded Welded Height: Above/Below
1 MILE	THICKNESS	рерти то	5-4.V.C 130 Surfaceft.
2 FORMATION	OF STRATUM	BOTTOM OF STRATUM	in. toft. Depth Weightlbs./ftin. toft. Depth Orive Shoe? Yes No
Brown sky-	10	10	8 SCREEN: Type:
2 Wate Dist	7	17	Slot/GauzeLength
Level C. Land	7.7	44	Set betweenft. andft. Fittings: // SML
Jave Cana and	111	58	9 STATIC WATER LEVEL
ing one	14	77~	ft. below land surface 10 PUMPING LEVEL below land surface
France Waly Bearing	17	177	nat ft. after hrs. pumping hyawa.p.m.
Lay Chay	47	129	nut ft. after_hrs. pumping Snaw g.p.m.
You Sand Tane	55	179	11 WATER QUALITY in Parts Per Million: Iron (Fel WAT Chlorides (CI)
white Sand Tank	21	200	Hardness At Other Fraw
			12 WELL HEAD COMPLETION: In Approved Pit
			13 Well Grouted? X Yes No Neat Cement X Bentonite X Levele
			Depth: From D ft. to 25 ft.41/30
			14 Nearest Source of possible contamination
			160 feet / MIL Direction (114 Seward Type
			Well disinfected upon completion Rives No
			15 PUMP: Not installed Sul-
			Moder Number 30-9.8.6 HP Volts 110
	-		Length of Drop Pipe 60 ft. capacity 10 G.P.M.
			Type: T Submersible Reciprocating
USE A 2ND SHEET IF NEEDED			
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION:
		This well	ell was drilled under my jurisdiction and this report is true sest of my knowledge and belief.
	21	Losly	- well Dilling' 1616
	•	Address	6131- sittisburg. Kd. Laugsburg M
- HE			1-9-27
		Cigned	AUTHORIZED REPRESENTATIVE Date

GEOLOGICAL SURVEY SAMPLE No.			
	WATER \	WELL REC	CORD MICHIGAN DEPARTMENT
1 LOCATION OF WELL	ACT 29		OF PUBLIC HEALTH
County Town Township Name	11		ENE 2 05 N Range Number OZ W.
Distance And Direction from Road Intersections APPX 140 5.0F 3060	NRD	,	3 OWNER OF WELL: BERNARD TICE Address 139 SCLONRY.
Street address & City of Well Location SA	JE -	>	DEWINT, MI
	etch Map:		4 WELL DEPTH: (completed) Date of Completion (t. SEP1, 18,1973
4		27	5 Cable tool Rotary Driven Dug Hollow rod Jetted Bored 6 USE: Nomestro Public Supply Industry
	@ N	15	Irrigation Air Conditioning Commercial
1 MILE	1	7	7 CASING: Threaded Welded Height: Above Flow Surface of ft.
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	Tin. to ft. Depth Weight bs./ft. in. to ft. Depth Drive Shoe? Yes No 8 SCREEN;
Snael Shave VE Clar	, 30	30	Type:Dia.:
Line Strolo VE Clas	130	60	Slot/Gauzeft. andft.
They Clay	35	95	Fittings:
whiteigh, They Shall	25	120	9 STATIC WATER LEVEL 10 ft. below land surface
White Sandston, & Shale	20	140	10 PUMPING LEVEL below tend surfaces K.E.M. g.p.m.
White Sandstone	40	180	ft, afterhrs. pumping g.p.m.
ported Grisser			11 WATER QUALITY IN BAITS PER MILLION TO KEN
		₫1 ¹²	HardnessOther
			12 WELL HEAD COMPLETION: In Approved Pit
	-		13 Well Grouted? No
			Depth: Fromft, toft.
			14 Nearest Source of possible contamination Ofeet Direction
			Well disinfected upon completion Yes No
			Manufacturer's Name RALLEY STEEL
minimum satural said			Model Number 5 1208 HP 4 Volts 250 Length of Drop Pipe 63 ft. capacity 14 G.P.M.
n.t. 1			

Type: Submersible Jet Reciprocating USE A 2ND SHEET IF NEEDED 17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to best of purknowledge and ballet.

REGISTERED BUSINESS NAME REGISTRATION N ------

GEOLOGICAL SURVEY SAMPLE No.								
	JAN 1 5 1973 WATER WELL RECORD MICHIGAN DEPARTMENT							
1 LOCATION OF WELL	ACT 294 PA 1965 OF							
Clinton	Township Name Dewi	++	Fraction	E MW 14	Section Number	Town Number	Range Number	
Distance And Direction from Road			WE 1/5	3 OWNER OF	WELL:	3 (N/s.	∠ E(W)	
	* North of Solon Rd.			Robert Hudson				
300' West of Mye	Come	!		Address 14894 Myers Rd. De witt, Michigan				
Street address & City of Well Local Locate with "X" in section bell	a City of Well Education			4 WELL DEPTH: (completed) Date of Completion				
Y				245 _{ft.} 12–24–70				
				5 Cable to				
w					nestic Publ		Industry	
				Irri		Conditioning	Commercial	
				7 CASING: TI		Height: Abo	ove/ XGXGX X	
1 MILE				Diam.	1.2	Surface	1ft.	
2 FORMATIO	N	THICKNESS OF STRATUM	BOTTOM OF	1		h Weight 1		
				8 SCREEN:	п. оерг	II OTTVE SIDE!	163 🔼 140 📘	
Sand		15	15	Type: NO	10	Dia.:		
Clay		25	40		ft. and	_ Length		
		7	47	Fittings:				
Sand & Gravel			-7	9 STATIC WAT	ER LEVEL			
Clay		10	57		ft, below land su			
Sand & Gravel		32	89.	10 PUMPING LEVEL below land surface ft. after hrs. pumping g.p.m			g.p.m.	
Clay & Gravel		31 .	120		Net Requ			
oray & craver				11 WATER QUA	ALITY in Parts Per	Million:	g.p.m.	
Bhale		60	180	(ron (Fe)		rides (CI)		
Sandrock		65	245		Othe			
						In Approved Pi		
					tless Adapter	12" Above Gra	ade	
				☐ Neat C	ement Benton	ite K Bent	onite	
	*				omft.			
				1,11-	· · - · · - · ·	on Septic	Туре	
						tion Yes N	10	
				15 PUMP:		ould:		
				1		HP 16 Volts	230	
				1	_	. capacity 516 G	.P.H	
				_	Submersible Jet [Reciprocating		
						-		
16 Remarks, elevation, source of			17 WATER	WELL CONTRA	CTOR'S CERTIFI	CATION:		
ADDED INTO BY DRILLER, ITEM A	iQ.				nder my jurisdiction edge and belief.	n and this report	is true	
			-Man	TERES BUSINES	rks Inc.	O38 3	LTION NO.	
ANNITED IN MILE			Address	_4700 N	. East St	. Lansing	, Mich	
ADDITIDGA			Signed	luga. 5	mount	Lansing Date /-	11-70	
D474 100M (Rev. 12-68)			1 Signed	AUTHORIZED RE	PRESENTATIVE	Date		

100M (Rev. 12-68)

D67d

GEOLOGICAL	SURVEY	SAMPLE No.	
GEOLOGICAL	3014 - 1	JAMII CE III	

MICHIGAN	DEPARTMENT
	OF

M	
3	

ACT 294 PA 1965

OF PUBLIC HEALTH

1 LOCATION OF WELL			PUBLIC REALTH
County Twp. Clinton DeWitt		Fraction	\$\frac{1}{21}\$ \$\frac{1}{20}\$ \$\frac
Distance And Direction from Road Intersections 1/10 Mile west of US-27 on	OWNER No		3 OWNER OF WELL:
Solon Rd. South side.			Ray Minier
Street address & City of Well Location			# 3, DeWitt, Mich.
2 FORMATION	THICKNESS OF	DEPTH TO BOTTOM OF	4 WELL DEPTH: (completed) Date of Completion
L Committee	STRATUM	STRATUM	220 ft. 11/2/67 5 Cable tool Rotary
Black dirt	2	2	☐ Hollow rod ☐ Jetted ☐ Bored ☐ —
		-0	6 USE: Domestic Public Supply Industry ☐ Irrigation Air Conditioning Commercial
Brown sand	56	58	Test Well
Grey clay	6	64	7 CASING: Threaded K Welded Height: Above/Below
-1 2	8	m	4 in. to 109 ft. Depth surface 0 ft. Weight lbs/ft.
clay & sand	0	72	in. toft. Depth Drive Shoe? Yes No.
grey chay	32	105	8 SCREEN:
	aks XXXX	170	Type: Rock well Dia.;
Grey sanstone with shale stre	aks AAAA	110	Slot/GauzeLength
Grey shale	30	140	Set betweenft, andft.
sanstone with shale streaks	10	150	Fittings:
Sans tone with share sureas			9 STATIC WATER LEVEL
Grey sandstone	70	220	ft. below land surface
			10 PUMPING LEVEL below land surfaceft. afterhrs. pumpingg.p.m.
			ft. afterhrs. pumpingg.p.m.
			11 WATER QUALITY in Parts Per Million:
			Iron (Fe)Chlorides (CI)
			Hardness
S .			12 WELL HEAD COMPLETION: In Approved Pit
			Pitless Adapter 12" Above Grade
v.		I,	13 GROUTING: Yes No
			Material: Neat Coment Bentonite
			Depth: From 0 ft. to 109.
			14 SANITARY: Negrest Source of possible contamination
			60 feet West Direction Septic Type
			Well disinfected upon completion 🛱 Yes 🗌 No
MODED INFO. BY DRILLER, ITEM NO.			15 PUMP: Myers Myers
ACCORDECTED BY			Model Number SF -7-21 HP 3/4
●CORRECTED BY:			Length of Drop Pipe84_ft. capacity_12_G.P.M.
**ADDITION BY:			Type: A Submersible Reciprocating
16 Remarks, elevation, source of data, etc.	- L		WELL CONTRACTOR'S CERTIFICATION:
SEPTIC N			II was drilled under my jurisdiction and this report is true est of my knowledge and belief.
118 + 1 =			t & Ingalls Inc. 408
W IF	10		<u></u>
	well	Address	1. Box 27- C DeWitt
5		Signed	AUTHORIZED REPRESENTATIV
D67D 100M 6-66 110 1968	3	•	· ·

GEOLOGICAL SURVEY SAMPLE NO.				
768.23 1974	WATER \	WELL REC	ORD	MICHIGAN DEPARTMENT
1 LOCATION OF WELL	ACT 29	4 PA 196	5	OF PUBLIC HEALTH
County Township Name		Fraction		Section Number Town Number Range Number
Clinton DeWitt Distance And Direction from Road Intersections	¥-1	\$/E!\$7	3 OWNER OF W	21 5 TNB. 2-5W)
2/10 Mile west of U S 27 On	north	Sobole		2:11 Gilmore
of Stoll Rd 310 Lansing,			Address	10.W. Stoll R d Lansing, Mich (completed) Date of Completion
Street address & City of Well Location	sh Map: 11		4 WELL DEPTH:	Lansing, Mich (completed) Date of Completion
	ii.			25 ft. 2/12/74
- - - -	11		5 Cable too	
w	_ X _ L		6 USE: Dome	
	rd	N	Irriga	ation Air Conditioning Commercial
	11	ນ	Test	Welleaded Height; Above Below
1 MILE	11:	>	Diam.	Surface
	THICKNESS	DEPTH TO BOTTOM OF	_2_in, to	104 ft. Depth Weigh 375 lbs./ft.
2 FORMATION	STRATUM	STRATUM	8 SCREEN:	ft. Depth Drive Shoe? Yes No [
Red sand & clay	20	20		None
nou band - ozaj			Slot/Gauze _	None None None
Gray Clay	18	18		ft. and ft.
Gray Clat & Gravel	42	80	Fittings:	Nonr none
Stay Stay Stay			9 STATIC WATE	
Gravel Some Water Drity	6	86		t. below land surface
Clay & Gravel	18	104	Not	t. after hrs. pumping Known g.p.m.
Gray Sand Rock	21	125	Not_	t. after hrs. pumpingKnown_ g.p.m.
Cray band noon			11 WATER QUA	LITY in Parts Per Million:
		1	Iron (Fe) 🔨	10W1 Chlorides (CI) Known
			Hardness	ot Other Known
				COMPLETION: In Approved Pit
				less Adapter 12" Above Grade
			☐ Neat Ce	ement Bentonite Clay Sandy
			Depth: From	mft. toft.
	-	-		West Direction Sewage Line Type
				cted upon completion X Yes No
			15 PUMP:	Not installed
				r's Name HP Volts
		131		rop Pipeft. capacityG.P.M.
			Type: S	
			1 0,	et Reciprocating
USE A 2ND SHEET IF NEEDED				
16 Remarks, elevation, source of data, etc.		This we	II was drilled un	CTOR'S CERTIFICATION: der my jurisdiction and this report is true
ADDED INFO SY DRILLER, ITEM NO.		to the be	est of my knowle	dge and belief.
*CHARGETED BY		1		er Well Drilling. 0142 NAME REGISTRATION NO.
ELEVATION	- 57	Address	1010. P	ine st Box 27 DeWitt, Mich
DEPTH TO ROCK		Stanger		Date 2/12/74

100M (Rev. 12-68)

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GEOLOGICAL SURVEY SAMPLE No.			
JUN 0 4 1979	WATED.	WEII DE	CORD
_	ACT 2	94 PA 196	MICHIGAN DEPARTMENT OF PUBLIC HEALTH
1 LOCATION OF WELL County Township Name		Fraction	Section Number Town Number Range Number
Clinton D-Witt Distance And Direction from Road Intersections .4 m W. of U.S 27 98' N.		SE 45	W45E4 21 5 N/B. 2 EW.
Distance And Direction from Road Intersections	ef 55011	Rd	3 OWNER OF WELL: G. F. Doody
soc wisted Rd Dewitt Mil	-		Address 706 W. Stall Rd.
Street address & City of Well Location			
	h Map:	1	4 WELL DEPTH: (completed) Date of Completion
		27	200' It. S-p 7 2 % 5 Cable tool & Rotary Driven Dug
w E	X — 4.	_	Hollow rod Jetted Bored
			6 USE: Domestic Public Supply Industry Irrigation Air Conditioning Commercial
Stall	Rd.		Test Well
			7 CASING: Threaded Welded Height: Above Selaw
1 MILE	THICKNESS	DEPTH TO	Surface
2 FORMATION	OF STRATUM	BOTTOM OF STRATUM	in, toft. Depth Drive Shoe? Yes No
1	00	20	8 SCREEN:
clay sgrave	20	20	Type: Dia.;
a.avel	15	35	Slot/Gauzeft. andft.
clay+c, asel	43	28	Fittings:
Clayor	1.7		9 STATIC WATER LEVEL
gravel course	40	118	ft. below land surface
gravel course Endstone	89	200	10 PUMPING LEVEL below land surface 190 ft. after 5 hrs. pumping 50 g.p.m.
5000 3100		200	
			ft, after hrs. pumping g.p.m.
_			11 WATER QUALITY in Parts Per Million: Iron (Fe) Chlorides (C)
	10.7		(initial citizentes)
			HardnessOther
			12 WELL HEAD COMPLETION: In Approved Pit Pitless Adapter 12" Above Grade
			13 Well Grouted? X Yes No
			Neat Cement Bentonite
			Depth: From 6 ft. to 129 ft. 14 Nearest Source of possible contamination
			20 feet E Direction Seuer Type
			Well disinfected upon completion ₹ Yes No
			15 PUMP: Not installed Manufacturer's Name Pool Jacket
			Model Number 75CR 1213C HP34 Volts 240
			Length of Drop Pipe & 1 ft. capacity 6 G.P.M.
			Type: ☑ Submersible ☐ Jet ☐ Reciprocating
			☐ ger ☐ uecibiocatiuā
16 Remarks, elevation, source of data, etc.		17 WATER V	VELL CONTRACTOR'S CERTIFICATION:
To hemarks, elevation, source of data, etc.		This well	was drilled under my jurisdiction and this report is true
AUDED INFO BY DRILLER, ITEM	NO	_D.S	st of my knowledge and belief.
*CORRECTED BY		REGIS	TERED'BUSINESS, MAME REGISTRATION NO.
ELEVATION		Address	0151 11112 para 10 1014 25 Bus
ОЕРТИ ТО ЯПСК	3	Signed	Dans & Erod Date 2/9/19
D67d 100M (Rev. 12-68)			AUTHORIZED-REPRESENTATIVE

GEOLOGICAL SURVEY SAMPLE No.			
Z JAN 0 6 1978	WATER V	VELL REC	CORD MICHIGAN DEPARTMENT
1 LOCATION OF WELL	ACT 29	4 PA 196	OF PUBLIC HEALTH
County Township Name Clinton DeWitt		Fraction	Section Number Town Number Range Number
Distance And Direction from Road Intersections		142	3 OWNER OF WELL:
14950 Myers Road, NW Corner	Manua Dan	a	Dan Ruhle Address Hyers Road
Street address 20100 were seen ion	nyers me	4	Dewitt, Mi. 48820
	eh Map:		4 WELL DEPTH: (completed) Date of Completion 230 11/7/77
			230 ft. 11/7/77 5 Cable tool Rotary Driven Dug
		1	Hollow rod Jetted Bored
w = -			6 USE: Domestic Public Supply Industry Irrigation Air Conditioning Commercial
1			Test Well
			7 CASING: Threaded Welded Height: Above/Below Diam.
1 MILE	THICKNESS	DEPTH TO	Surfaceft. Let in, to 138ft, Depth Weightlbs./ft.
2 FORMATION	OF STRATUM	BOTTOM OF	in. toft. Depth Drive Shoe? Yes No
Brown Clay	10	10	8 SCREEN: Type: Dia.:
IN OWN GEST			Slot/Gauze Length
Sand	10	20	Set betweenft, andft.
Clay and stones	110	130	Fittings:
			9 STATIC WATER LEVEL
Shale, grey	6	136	ft. below land surface 10 PUMPING LEVEL below land surface
Shale grey, med hard	22	158	106 ft. after ½ hrs. pumping 20 g.p.m.
Shale and sandstone	32	190	ft. after hrs. pumping g.p.m.
Sigle am Sams Ole		2,50	11 WATER QUALITY in Parts Per Million:
Sandstone	40	230	Iron (Fe) Chlorides (CI)
	· DOWN	XXXXXX	HardnessOther
			12 WELL HEAD COMPLETION: In Approved Pit
			Pitless Adapter 12" Above Grade 13 Well Grouted? Yes No
			Neat Cement Bentonite
			Depth: From 0 ft. to 138 ft. 14 Nearest Source of possible contamination
			100 feet T Direction Sever Type
			Well disinfected upon completion Yes No
			Manufacturer's Name
			Model Number SG 5251 HP 2 Voits
			Length of Drop Pipe 105ft, capacity G.P.M.
			Type: Submersible Jet Reciprocating
16 Remarks, elevation, source of data, etc.			WELL CONTRACTOR'S CERTIFICATION:
8856			I was drilled under my jurisdiction and this report is true est of my knowledge and belief.
SOURD INFO BY DRILLER, ITEM NO.		GAL	TERED BUSINESS NAME REGISTRATION NO.
CORRECTED BY		Address	6461 W. Howe Road DeWitt, Mi. 48820
**ACCITION BY C		. (Deane K. Juffle Date 11/8/77
DESTH TO ROCK		Signed	AUTHORIZED MEPRESENT TIVE Date 11/8/77

D67d

GEOLOGICAL SURVEY SAMPLE No.	r	•		
GEOLOGICAL SURVEY SAMPLE NO.				
1	<u> </u>	MATER A	WELL DE	COPD MICHICAN DEPARTMENT
		WATER V	W ELL KEC 4 PA 196	5 OF
1 LOCATION OF WELL	JUL 0 9 1981			PUBLIC HEALTH
County	Township Name		Fraction	Section Number Town Number Range Number
Clenton	Devitt		1/4	14. 14 2/ TONS. RELW.
Distance And Direction from Road	Intersections			3 OWNER OF WELL: TIN N Builders
1				Address 6840 S. Cedar Suit 9A
Street address & City of Well Local				Lansing Mich
Locate with "X" in section belo	X will Sketch	h Map:		4 WELL DEPTH: (completed) Date of Completion
	1750ft 15	1	10	222 ft. 3/6/8/
	T			5 Cable tool Rotary Driven Dug
	1/ 1/	, , , , , , ,		Hollow rod Jetted Bored
w	1, [6 USE: Domestic Public Supply Industry
	M. R			☐ Irrigation ☐ Air Conditioning ☐ Commercial
- - - - - - - - -	m · (D.	116 21	7	Test Well
		4701		7 CASING: Threaded Welded Height: Above/Below Diam.
1 MILE				, Surfaceft.
2 FORMATIO	N	THICKNESS OF	DEPTH TO BOTTOM OF	#_in. to ### Weight lbs/ft.
		STRATUM	STRATUM	in. toft, Depth Drive Shoe? Yes No
01 . 1	0 10		60	8 SCREEN:
Clay sand for	ne gravil	0	60	Type: Dia.:
o and out	,	60	00	Slot/Gauze Length
gravel & Dlone		60	90	Set betweenft, andft,
an date	midal & list	90:	101	Fittings:
Clay & Prone 1.	ruged S. Where	10	-	9 STATIC WATER LEVEL
Il. I sult dans	11 Ama 10. 6	101	160	ft, below land surface
chare where 4 years	y convenience	101	100	10 PUMPING LEVEL below land surface
Danlo Alieb & D	and rack.	160	220	200 ft. after / hrs. pumping /8 g.p.m.
course place of pa	744 /114			
				ft. afterhrs. pumping g.p.m.
				11 WATER QUALITY in Parts Per Million:
				tron (Fe) Chlorides (CI)
				HardnessOther
				12 WELL HEAD COMPLETION: In Approved Pit
				Pitless Adapter 12" Above Grade
				13 Well Grouted? Yes No
				Neat Cement Bentonite
				Depth: Fromft. toft. 14 Nearest Source of possible contamination
				50 lental
				Well disinfected upon completion Yes No
				Manufacturer's Name Not installed
				Length of Drop Pipeft. capacityG.P.M.
				Type: * Submersible Reciprocating
USE A ZNO SHEET IF	NEEDED			
16 Remarks, elevation, source				WELL CONTRACTOR'S CERTIFICATION:
	DE DOULES ITEM	MO		I was drilled under my jurisdiction and this report is true est of my knowledge and belief.
1	THE BY DRILLER, LIEM	(C-100)	m	even W Camelle Sonahe 08/9
	SUTCO 3Y 6 9 ITIOM SY 6		REGI	STERED BUSINESS NAME REGISTRATION NO.
78.64			Address	5077 11. 11 Kredien FL
James .	to pect		72	womoton, mich 21, 101
	-: -: I ¶		Signed/	Mervin WComell Date 2/6/8/

D67d

100M (Rev. 12-68)

- 19 THE S			
GEOLOGICAL SURVEY SAMPLE NO.		N sec	
	WATER WI	ELL RECO	DRD MICHIGAN DEPARTMENT OF PUBLIC HEALTH
JAN 03 1979	ACT 294	РД 1905	PUBLIC REALTH
1 LOCATION OF WELL Township Name	0.1	Fraction	3 Ms. 2 EW
County Dienie	· · · · · · · · · · · · · · · · · · ·	141	A C WELL:
Distance And Direction Iron Road Intersections Nyers Rd.			Galen Johnson
30' South of Solon Rd.		1	1001 Solon Manigan
Advise & City of Well Location	Same		Date of Completed
Locate with X' in section below Ske	etch Map:	1	230 ft. 12-22-76
		1	5 Cable tool Rored
		1	6 USE: Pomestic Public Supply Industry
w	*0	1	Irrigation Air Conditioning Commercial
X 1 1 2 MI			Test Well Height: Above W
			Diam. Surfaceft.
1 MILE	THICKNESS	DEPTH TO	Weight bs./ft.
FORMATION	OF STRATUM	STRATUM	in. to
2 FORWATION			8 SCREEN:
Clay & Stones	42	42	Type: None Dia.:
Clay & Stelle		00	Stot/Gauzeft, andft;
Sandy Clay & Gravel	47	89	Fittings:
	46	135	9 STATIC WATER LEVEL
Clay	500	205	65 ft, below land surface
Shale & Sandrock	70	20)	10 PUMPING LEVEL below land sulface
	25	230	ft. afterhrs. pumpingg.p.m. Required.
Sandrock			ft. after hrs. pumping g.p.m.
			111 WATER QUALITY in Parts Per Million:
			ron (Fe: Chlorides (CI) Rot Required
			Hardness Other
			12 WELL HEAD COMPLETION: In Approved Pit
			Pitless Adapter 12" Above Grade
			13 Well Grouted Yes No Neat Cement Bentonite
			Tarable Score O ft. to 148 ft.
	1		noting contamination
			14 Nearest Source of possible Colon. 10 feet E Direction Sewer Line Type Well disinfected upon completion Yes No
		_	15 PUMP: Not installed
			Goulds
			10Fd HP/2 Voite 50
			Length of Drop Pipe 26. ft. capacity Card.
		1	Type: Submersible Jet Reciprocating
			OTODIS CERTIFICATION.
USE A ZND SHEET IF NEEDED 16 Remarks, elevation, addice of data, etc.		17 WA	TER WELL CONTRACTOR'S CERTIFICATION. s well was drilled under my betief. the best of my known Parks Inc. 0383. CHERED BUSINESS NAME REGISTRATION NO.
ADDED INFO BY DRILLER, ITEM NO.		10 1	the best of my known Parks Inc. 0383.
*CORRECTED BY		_	GYTHEO BUSINESS NAME REGISTRATION NO.
F ADDITION BY		Add	ned Lugue Maure Date 12-36-78
ELEVATION DEPTH TO ROCK		Sin	ned lucere Maurer Date 12-26-78
PERM O ROCK SOP			AUTORIZED REPRESENTATIVE

100M (Rev. 12-68)

GEOLOGICAL SURVEY SAMPLE No.			
MAY U.S. 1978	WATER	WELL DE	CORD
1 LOCATION OF WELL	ACT 29	94 PA 19	MICHIGAN DEPARTMENT OF PUBLIC HEALTH
County Township Name	,	Fraction	
Clinton Da Wil	7	1/4	14 14 20 13 N/s. K2/W.
Hell & Turner 500ft	8. 20	11000	3 OWNER OF WELL: Mel Butley
Stall of miller still	80	une	Addiess 4251 W. Jowe RA
Street address & City of Well Location			No With Thick
Locate with "X" in section below Sket	ch Map:	7	4 WELL DEPTH: (completed) Date of Completion 200 ft. 10 - 2 - 77
7	XCR S		5 Cable tool Rotary Driven Dug
434	, , , , ,		Hollow rod Jetted Bored
With the transfer of the trans	le_		6 USE: Domestic Public Supply Industry
			Irrigation Air Conditioning Commercial
	1		7 CASING: Threaded Welded Height: Above/Below
1 MILE	T success	220211 70	Surface ft.
2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM	# in. to 92 ft. Depth Weight lbs./ft.
	3111110111	-7-	8 SCREEN:
Clay	0	60)	Type: Dia.:
Bo mind willed	1/2	99	Slot/GauzeLength
Clay Musea wor side	. 60	//	Set betweenft. andft,
State mixed W. Sandfork	99	200	
	200		9 STATIC WATER LEVEL
	3.00		ft, below land surface
*			100 ft. after hrs. pumping 2000 g.p.m.
			G G
			ft. after hrs. pumping g.p.m.
			Iron (Fe) Chlorides (CI)
	-		12 WELL HEAD COMPLETION: In Approved Pit
		(2)	Pitless Adapter 12" Above Grade
			13 Well Grouted? Yes No
	1		Neat Cement Bentonite
			Depth: Fromft. toft. 14 Nearest Source of possible contamination.
			feet Direction Cetter Sealer Type
			Well disinfected upon completion Yes No
			15 PUMP: Not installed Manufacturer's Name T T W.
			Manufacturer's Name 4 W. Model Number HP 12 Volts 230
			Length of Drop Pipeft. capacityG.P.M.
			Type: Submersible
USE A 2ND 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
ADDED 1970 BY DRILLER, ITEM NO.		te the be	streed Business NAME RESISTRATION NO.
*CORRECTIO BY L.		REGIS	STERED BUSINESS NAME RESISTRATION NO.
**ADEMINA BY		Address	5077 11. mender 22 umstra
ELEVATION DEPTH TO ROCK		(Mewin Cornell Date 10-2-77
067d 100M (Rev. 12-68)		Signed 🖊	AUTHORIZED REPRESENTATIVE
70 TOOM (1154) 12-00)			KL

GEOLOGICAL SURVEY 1984

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

				1 1	
	1		1 1	1	
	- 0	1 1	1 1	i i	
- 11	_			 	

PART 127 ACT 368. P.A., 1978

1 LOCATION OF WELL			Fraction		Section Number	Town Numb	ar I	Range Nu	mbor
	Name aidsnwo			NE ¹ /4 NU ¹ /4	27	_	N/S	2	₽¥W
CLINTON Distance And Direction From Road Inters	DEWITT		SE 74	3 OWNER OF			14/3		L/00
						earles,	OW	ıer	
1/2 mile west of US-2	_	ad. Sou	tn on	Address	Paul H	enson B	uild	lers	
Myers to 14900 (west	side)				6604 k	. Sagin	law		
Street Address & City of Well Location	1/000 1/	n	-112 a.a.	Address Sa	me As Weirnsin	B, MI ve	4891	17 _{No}	
Locate with "X" in Section Below	14900 Myers	etch Map	EWILL		'H' (completed)	Date of Co			
	S 01	ARK		1	263 ^{ft}	k-	5-84		
	-31-6	17-6-		5 Caple to	oi Rotary		Driven		Dug
[-] - <u>X</u> -	डी ग्री			Hollow r			Jetted		į .
w	F1 31			6 USE Don	nestic Type I	Public		Type III Pu	blic
	1 Solo	In	_	Irrig		la Public		Heat pumi	5
	31 30.0	•••		Test	Well Type I	lb Public			
	2			7 CASING Diameter	Steel Threa	ded Height	Above	e/Below	
1 MILE				X	Plastic Welde	d Surfac	e	ft	
- CORLATION DESCRI	STION	THICKNESS	DEPTH TO BOTTOM OF	I.	o 147 it depth	Weight	t	lbs:/ft	
2 FORMATION DESCRI	PTION	OF STRATUM	STRATUM		o ft_depth il Hole Diameter	1			
				•	o ft_depth	Drive S	Shoe	X Yes	
Brown clay and gravel		24	24	n t	o ft. depth			☐ No	
				8 SCREEN		G	Not ins	stalled	
Gravel		11	35	Туре		Diameter			
				Slot/Gauze		Length			
Gray clay		26	61	Set between	1f	and	f	it.	
				FITTINGS	K-Packer	Lead Packer	□ B	remer Che	łck
Clay and stones		92	153		bove screen	h O	ther		
				9 STATIC WAT	ER LEVEL			_	
Shale and sandrock mi	xed	110	263		ft. below land			L Fic	ow.
				TO POMPING L	EVEL below land s	inace			
					ft after hrs	pumping at _	_40_	_ G P M	
					ft after hrs	pumping at _		_ G P M	
				11 WELL HEAD		۳	7.00		
9				COMPLETIO	N Filless a		Appro	bove grad	а
				12 WELL GROU		XYes From			47_fı
				☐ Neat de	ment Dena	onite 🗘	Other	ont+i	noe
									1163
					of cement				
							h -		
					ty severossa	nce	· Direc	ction	
			CEIVED	1.00	ted upon completion	Yes		No	
	52	ाता ! शिक्ष	of Public	11 (2) 27 (3)	Not installed	. —	mp Insi	allation Or	ylc
		MAC Y	8 198	78	er's name Ta				
			0	Model numb		HP _1/2			
	- ت	read of E	nvironme	ntailengin of D	rop Pipe	ft. capacii	ty:		_ G P M
(<u>%)</u>	O	romation	al Health	ICWYS:	Submersible	☐ Jet _			
				PRESSURE		lauton b	damle		
茅本					er's nameC	THE CHARGO			Callac
USE A 2ND SHEET IF NEE			16 MATE	Model numb	RACTOR'S CERTIF	Capaci ICATION:			Gallons
15. Remarks, elevation, source of da			-		ter my jurisdiction a		is true		
	IFO BY DRILLER, ITEM N	15,	to the b	est of my knowle	edge and belief				
*CORRECT	- **		DYE		ILLING & SE			0418	
FLEVATION **				REGISTERED BUSI	100		ISTRATIO		
ELEVATION		E	Address	Lainesh	urg, MI. 48	848	_651	L-5339	
DEPTH TO	R-JUN	40	Signed	Bles	en Alul	Dat	te 1-5	5-84	
67d (Rev. 10.90)			7.0	AUTHOR	ZED PEPHESENTATIVE				

GEOLOGICAL SURVEY SAMPLE No.			
JUL 3 1984	WATER \	WELL DEC	CORD MICHIGAN DEPARTMENT
1 LOCATION OF WELL	ACT 29		
1 LOCATION OF WELL County Township Name		Fraction	Section Number Town Number Range Number
Clinton Dewitt		SW , N	W 14 NE 14 21 5 N/s. 2 E/W.
Distance And Direction from Road Intersections mile N of Stoll Rd. and 100' W o.	ff of Tu	mer Rd.	3 OWNER OF WELL: Mike Davis Construction Address
Street address & City of Well Location Lansing, Mi	chigen		P.O. Box 129 Grand Ledge, Mighigan
Locate with "X" in section below Sketo	h Mag		4 WELL DEPTH: (completed) Date of Completion
	2		240 ft. June 30, 1981 5 Cable tool Rotary Driven Dug
we'll	3		Hollow rod Jetted Bored
	1.17		6 USE: Domestic Public Supply Industry
			☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐
Stoll	Rel		7 CASING: Threaded Welded Height: Above/Betow
1 MILE	THICKNESS	оветн то	Surfaceft.
2 FORMATION	OF STRATUM	BOTTOM OF STRATUM	in. toft. Depth Weight1 lbs./ft.
			8 SCREEN:
0-110 Clay	110	110	Type:
110-115 Gravel	5	115	Stot/Gauze Length Set between ft. and ft.
IIIV-11, Made Car			Fittings
115=120 Sandrock	5	120	9 STATIC WATER LEVEL
120-200 Shale	. 80	200	ft, below land surface
			10 PUMPING LEVEL below land surface
200-240 Sandrock	40	240	ft. afterhrs. pumping g.p.m.
- x			Test pumped with air fi. after hrs. pumping 50 g.p.m.
			11 WATER QUALITY in Parts Per Million: [Iron (Fe)Chlorides (CI)
			Tion (re)
			Hardness Other
			12 WELL HEAD COMPLETION: In Approved Pit Pitless Adapter 12" Above Grade
Turner Rd.			13 Well Grouted? X Yes No
Job No C-123			Neat Cement & Bentonite
			Depth: From 0 ft. to 132 ft. 14 Nearest Source of possible contamination
			100 feet E Direction Drain Field Type
Company (Company)			Well disinfected upon completion Yes No 15 PUMP: Not installed
10 A			Manufacturer's Name Flint & Walling
20.500			Model Number 011008-305 HP 1 Volts 230
2 = 1.5 16 52.2 Å			Length of Drop Pipe 68 ft. capacity 10 G.P.M.
B. 889 - 30 (1991			Type: Submersible Jet Reciprocating
Cooupaint that \$1000			
16 Remarks, elevation, source of data, etc.	L	17 WATER	MELL CONTRACTOR'S CERTIFICATION:
ADDED INFO BY DRILLER, LIEM ME	1		was drilled under my jurisdiction and this report is true st of my knowledge and belief.
*CORRECTED BY	1,6	Jim ?	SONE Well Drilling Inc. REGISTRATION NO.
ELEVATION BY	ŽŽ.	2444	7603 Brookfield Rd. Charlotte, Mich.
DEPTH TO ROCK			
D67d 100M (Rev. 12-68)	.337	Signed _	Jumps wat Darafuly 1, 1981

MAR OF S			
	WATER	WELL RE	CE ANTWENT
1 LOCATION OF WELL	ACT 2		PUBLIC HEALTH
Charton De wid	4	Fraction VE 13	Section Number Town Number Range Number 5 N/S. 2 E/W
Distance And Direction from Road Intersections of Since Not Stoll Road on 1814760 NUS27 Dewitt	V. side	A-US27	3 OWNER OF WELL: 2291
814760 NUS27			Address 14760 N US 27
Street address & City of Well Location			رسرسه فلو
Locate with "X" in section below Sketc	h Map:		4 WELL DEPTH: (completed) Date of Completion 200' ft. 10-10-83
1 9 0 0 1			5 Cable tool Rotary Driven Dug
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	\sim		Hollow rod Jetted Bored
1 3 *	-		6 USE: Domestic X Public Supply Industry Irrigation
Stocked.			Test Well
1 MILE	5		7 CASING: Threaded Welded Height: Above Below Surface / ft.
2 FORMATION	THICKNESS OF	BOTTOM OF	5 in. to 121- ft. Depth Weight ledes ft.
0	STRATUM	STRATUM	8 SCREEN:
Clay & gravel	15	15	Type: NONE Dia.:
grand	10	25	Slot/Gauze Length
0	20		Set betweenft, andft, Fittings:
ctoy Lgranes	38	63	9 STATIC WATER LEVEL
gravel	8	71	_291 ft. below land surface
Classica	7	80	10 PUMPING LEVEL below land surface
Croyage was			ft. after _ hrs. pumping g.p.m.
Block & Red Shalo	40	120	ft. after hrs. pumping 35 g.p.m.
white Sondatone	80	200	Iron (FelChlorides (CI)
	ette.		
MARINES			12 WELL HEAD COMPLETION: In Approved Pit
	1.4		Pitless Adapter 12" Above Grade
MEE 6 6 3 294			13 Well Grouted? ✓ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ Clay Lgroud
a vot satisfie	1		Depth: Fromft. toft.
12 TO HE 284	e e		14 Nearest Source of possible contamination 25 feet N-W Direction Lower Type
COS ATOM	16	\	Well disinfected upon completion X Yes No
			15 PUMP: Not installed Manufacturer's Name Red Section
			Model Number HP / Volts 236
			Length of Drop Pipe 74 ft. capacity 8 G.P.M.
			Type: X Submersible . Det Reciprocating
	*(
16 Remarks, elevation, source of data, etc.			VELL CONTRACTOR'S CERTIFICATION:
ADDED INTO BY DOLLED	14. 445	to the he-	was drilled under my jurisdiction and this report is true st of my knowledge and belief.
ADDED INFO BY DRILLER, ITE *CORRECTED GY	M NOL	1/an REGIS	TERED BUSINESS NAME REDSTRATION NO.
**ADDITION BY ELEVATION		Address	Jansing
DEPTH TO GOOK	-		AUTHORIZED DEPOSESTATIVE Date 10-10-83.
D67d 100M (Rev. 12-68)		aignea	AUTHORIZED REPRESENTATIVE