COMPENDIUM OF HYDROGEOLOGIC DATA

POWERTRAIN DIVISION
WILLOW RUN PLANT
YPSILANTI, MICHIGAN

May 1996

ABB Environmental Services, Inc.

Compendium of Hydrogeologic Data

Prepared for:

GM Powertrain
Willow Run Plant
Ypsilanti, Michigan

Prepared by:

ABB Environmental Services, Inc.
39255 Country Club Drive - Suite B025
Farmington Hills, Michigan 48331

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INTRODUCTION

This Hydrogeologic Compendium has been prepared for GM Powertrain (GM) by ABB Environmental Services, Inc. (ABB) as part of the Tier I Environmental Engineering Consulting Contract for the Willow Run Plant in Ypsilanti, Michigan. The purpose of the Compendium is to provide GM with a comprehensive, organized document that contains hydrogeologic information for the known Areas of Concern (AOC) at the plant.

To prepare this Compendium, ABB reviewed over 36 existing reports for the various AOCs, generated over a period of several years. Key hydrogeologic information was extracted from each report and summarized in the Compendium. The information contained in this document will aid future investigation or remediation efforts at the plant by providing a concise reference for site-specific hydrogeologic information.

ORGANIZATION OF THE COMPENDIUM

The Compendium consists of seven appendices designated A through G. The information contained in each appendix is described in the following paragraphs.

Appendix A - Key to Areas of Concern

Before beginning a review of the existing information, each AOC was assigned a number. Appendix A contains Table A-1, which is a key to the areas of concern. It shows the number for each AOC and the corresponding name of the AOC. Figure A-1 shows the locations of the AOCs.

Appendix B - Soil Boring Logs and Well Diagrams

In Appendix B, Table B-1 is a summary of the logs/diagrams which includes the AOC number, AOC name, the type of boring or well, the boring/well number, the total depth in feet below grade, the geologic unit in which the boring/well was completed, and the source number for the document which contained the original log or diagram.

The soil boring logs and well diagrams for each AOC are located behind Table B-1 in Appendix B. To make it easy to locate logs/diagrams for a particular AOC, Appendix B is subdivided into 22 sections representing the 22 AOCs.

Appendix C - Aquifer Test Data, and Groundwater Flow Data, and Groundwater Flow Maps (Typical)

In Appendix C, Table C-1 summarizes aquifer test data for the shallow aquifer at the plant. The table includes the AOC, the date of the test, well number, the geologic unit, saturated thickness, the average hydraulic conductivity (plus other paramaters - if available - such as transmissivity and storativity), and the source number for the document that contained the original data.

Table C-2 presents a summary of groundwater flow data. It includes the AOC, the date of data collection, the geologic unit, direction of groundwater flow, the horizontal gradient, the average groundwater flow velocity, and the source number for the document that contained the original data.

Following Table C-2 is a compilation of typical groundwater flow maps for several AOCs for which flow maps were generated. The source document number is included on each map.

Figure C-1 is a generalized groundwater flow map for the entire plant property. This map was generated by ABB in April, 1996, using 22 selected groundwater monitoring wells located across the property.

Appendix D - Location of Soil Borings and Monitoring Wells

Appendix D contains a comprehensive map that shows all the locations of soil borings and monitoring wells listed in Table B-1.

Appendix E - Geologic Cross Sections

Figure E-1 shows the locations of two geologic cross sections (Figures E-2 and E-3) that extend across the Willow Run Plant property. These cross sections were generated using site-specific boring logs as well as water well records obtained from State agencies.

Appendix F - Water Well Records

Appendix F contains water well records obtained from State agencies

Appendix G - References

The references reviewed by ABB during compilation of the Hydrogeologic Compendium are listed in Appendix G.

COMPENDIUM OF HYDROGEOLOGIC DATA

A - Key to Areas of Concern
B - Soil Boring Logs and Well Diagrams
C - Aquifer Test Data
Groundwater Flow Data and Groundwater Flow Maps (Typical)
D - Locations of Soil Borings and Monitoring Wells
E - Geologic Cross Sections
F - Water Well Records
G - References

TABLES

A-1 - Key to Areas of Concern
B-1 - Summary of Soil Boring Logs and Well Diagrams
C-1 - Aquifer Test Data
C-2 - Groundwater Flow Data

FIGURES

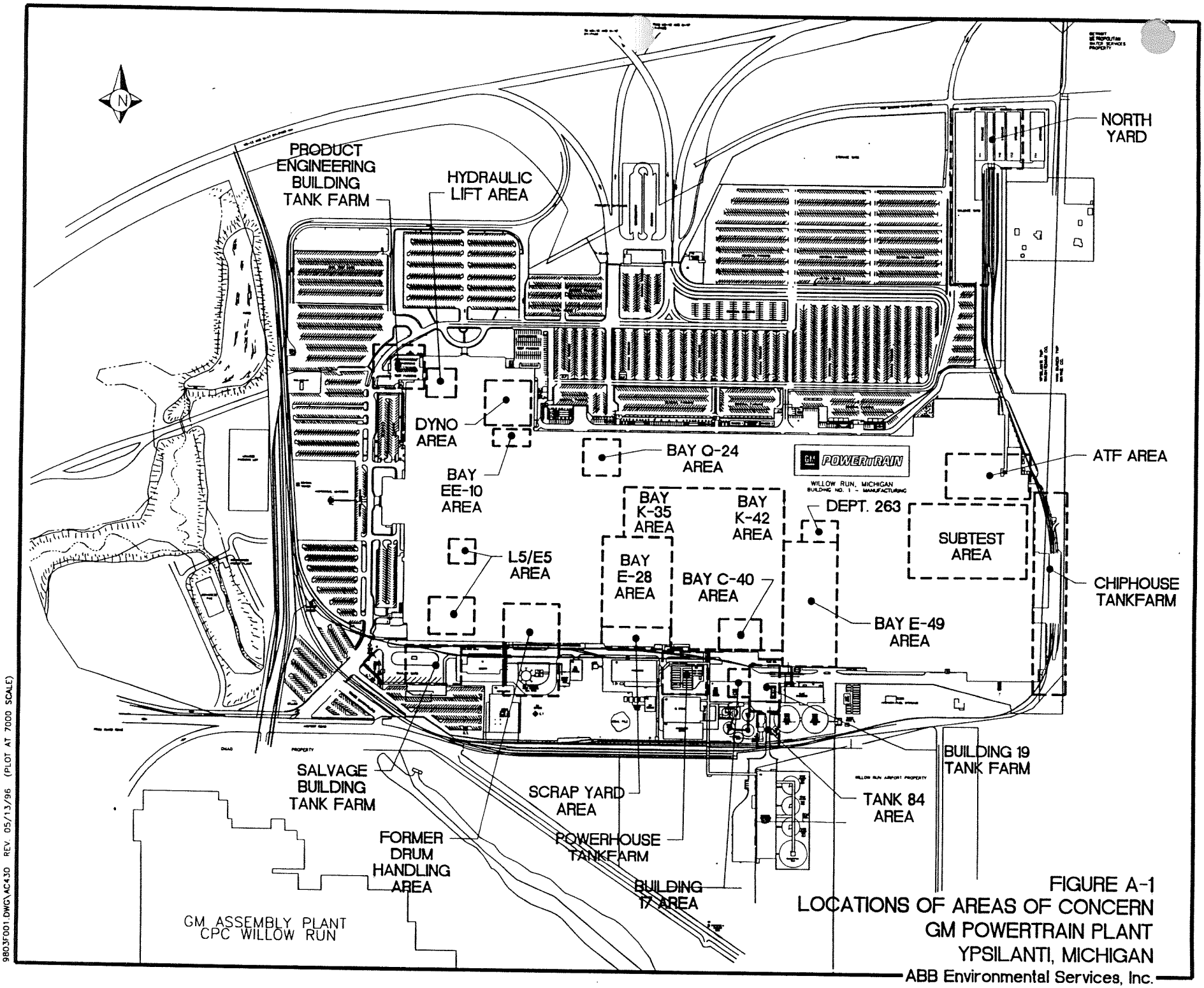
A-1 - Locations of Areas of Concern
C-1 - Generalized Groundwater Flow Map
D-1 - Locations of Soil Borings and Monitoring Wells
E-1 - Geologic Cross Section Locations
E-2 - Regional Geologic Cross Section A-A'
E-3 - Regional Geologic Cross Section B-B'

SECTION A

KEY TO AREAS OF CONCERN

TABLE A-1
KEY TO AREAS OF CONCERN
WILLOW RUN PLANT
Ypsilanti, Michigan

AREA	AOC NAME
1	Chip House Tank Farm
2	Bay K-35
3	Bay K-42
4	Former Drum Handling Area
5	Department #263
6	Bay E-49
7	Hydraulic Lift
8	Bay EE-10
9	Scrap Yard
10	ATF Area
11	Dynamometer Area
12	North Yard
13	Building #17
14	Product Engineering Tank Farm
15	Bay L-5 & E-5
16	Tank #84
17	Building #19 Tank Farm
18	Salvage Building Tank Farm
19	Bay C-40
20	Bay Q-24
21	Bay E-28
22	Subtest Area



9803F001.DWG\AC430 REV. 05/13/96 (PLOT AT 7000 SCALE)

FIGURE A-1
LOCATIONS OF AREAS OF CONCERN
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN
ABB Environmental Services, Inc.

SECTION B

SOIL BORING LOGS
AND
WELL DIAGRAMS

TABLE B-1

SUMMARY OF SOIL BORING LOGS AND WELL DIAGRAMS

WILLOW RUN PLANT

Ypsilanti, Michigan

AOC#	AOC Name	Type	Boring/Well#	Total Depth (ft. below grade)	Geologic Unit	Source
1	Chiphouse	Boring	SB-8	15	Silty Clay	9803-003
1	Chiphouse	Boring	SB-9	13	Silty Clay	9803-003
1	Chiphouse	Boring	SB-10	13	Silty Clay	9803-003
1	Chiphouse	Boring	SB-11	11	Silty Clay	9803-003
1	Chiphouse	Boring	SB-12	16	Silty Clay	9803-003
1	Chiphouse	Boring	SB-13C	16	Silty Clay	9803-003
1	Chiphouse	Boring	SB-14	16	Silty Clay	9803-003
1	Chiphouse	Boring	SB-15	14	Silty Clay	9803-003
1	Chiphouse	Boring	SB-16	14	Sand	9803-003
1	Chiphouse	Boring	SB-18	16	Silty Clay	9803-003
1	Chiphouse	Boring	SB-19	20	Silty Clay	9803-003
1	Chiphouse	Boring	SB-21	11.5	Silty Sand	9803-003
1	Chiphouse	Boring	SB-22	16	Silty Clay	9803-003
1	Chiphouse	Monitoring Well	MW-604	13	Sand to Silty Sand	9803-003
1	Chiphouse	Monitoring Well	MW-605	13	Sand to Silty Sand	9803-003
1	Chiphouse	Monitoring Well	MW-606	15	Sand to Silty Sand	9803-003
1	Chiphouse	Monitoring Well	MW-607	13	Silty Sand to Sand	9803-003
1	Chiphouse	Monitoring Well	MW-608	20	Sand to Silty Sand	9803-003
1	Chiphouse	Monitoring Well	MW-609	13	Sand to Silty Sand	9803-003
1	Chiphouse	Monitoring Well	SB-17/MW610	16	Grav. Sd.-Silty Sd.	9803-003
1	Chiphouse	Monitoring Well	SB-20/MW611	14	Sand to Clay	9803-003
1	Chiphouse	Monitoring Well	MW-612	16	Sand/Fill to Sand	9803-003
1	Chiphouse	Boring	SB-612A	16	Silty Clay	9803-003
1	Chiphouse	Monitoring Well	MW-613	14	Sand to Silty Sand	9803-003
1	Chiphouse	Monitoring Well	MW-614	15	Sand	9803-003
1	Chiphouse	Monitoring Well	MW-615	16	Sand to Silty Sand	9803-003
1	Chiphouse	Monitoring Well	MW-616/OB-1	15	Sand to Clay	9803-006
1	Chiphouse	Recovery Well	RW-1/PW	16	Sand to Clay	9803-006
2	Bay K-35	Monitoring Well	MW-701	11	Sand to Silty Sand	9803-007
2	Bay K-35	Monitoring Well	MW-702	13	Sd.-Silty Sd.-Silt	9803-007
2	Bay K-35	Monitoring Well	MW-703	13	Sd.-Silty Sd.-Silt	9803-007
2	Bay K-35	Monitoring Well	MW-704	11	Sand to Silty Sand	9803-007
2	Bay K-35	Monitoring Well	MW-705	13	Sand to Silty Clay	9803-007
2	Bay K-35	Monitoring Well	MW-201	12	Sand	9803-009
2	Bay K-35	Boring	TB-202	11	Silty Clay	9803-009
2	Bay K-35	Boring	TB-203	14	Silty Clay	9803-009
2	Bay K-35	Monitoring Well	MW-204	14	Sand	9803-009
2	Bay K-35	Boring	TB-205	13	Silty Clay	9803-009
2	Bay K-35	Monitoring Well	MW-206	12	Sand to Silty Clay	9803-009

TABLE B-1

SUMMARY OF SOIL BORING LOGS AND WELL DIAGRAMS

WILLOW RUN PLANT

Ypsilanti, Michigan

AOC#	AOC Name	Type	Boring/Well#	Total Depth (ft. below grade)	Geologic Unit	Source
2	Bay K-35	Monitoring Well	MW-207	12	Sand	9803-009
2	Bay K-35	Boring	TB-208	14	Silty Clay	9803-009
2	Bay K-35	Monitoring Well	MW-209	9	Sand to Silty Clay	9803-009
2	Bay K-35	Boring	TB-210	12	Silty Clay	9803-009
2	Bay K-35	Monitoring Well	MW-211	12	Silty Sand	9803-009
2	Bay K-35	Monitoring Well	MW-212	11	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-213	15	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-214	12	Sand to Silty Clay	9803-009
2	Bay K-35	Monitoring Well	MW-401	13	Sand - Silt - Sand	9803-009
2	Bay K-35	Monitoring Well	MW-402	12	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-403	12	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-404	12	Sand to Silty Clay	9803-009
2	Bay K-35	Monitoring Well	MW-405	12	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-406	12	Sd.-Silt-Silty Clay	9803-009
2	Bay K-35	Monitoring Well	MW-407	11	Sand	9803-009
2	Bay K-35	Monitoring Well (C)	MW-801	13.5	Sand	9803-009
2	Bay K-35	Monitoring Well (C)	MW-802	14	Sand	9803-009
2	Bay K-35	Monitoring Well (C)	MW-803	14	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-1A	14	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-2	12	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-3	12	Sand	9803-009
2	Bay K-35	Monitoring Well	MW-4	11	Sand	9803-009
2	Bay K-35	Observation Well	OW-1	14	Sand	9803-009
2	Bay K-35	Observation Well	OW-5	15	Fine Sd.-Silty Clay	9803-009
2	Bay K-35	Monitoring Well	MW-X	13	Silty Sd-Sd-Silty Clay	9803-103
2	Bay K-35	Monitoring Well	MW-Y	14	Silty Sd-Silty Clay	9803-103
2	Bay K-35	Monitoring Well	MW-Z	12	Silty Sd-Silty Clay	9803-103
3	Bay K-42	Monitoring Well	MW-1	14	Sand	9803-010
3	Bay K-42	Monitoring Well	MW-2	12	Sand	9803-010
3	Bay K-42	Monitoring Well	MW-3	12	Sand	9803-010
3	Bay K-42	Monitoring Well	MW-4	11	Sand	9803-010
3	Bay K-42	Monitoring Well	MW-1A	12.2	Sand	9803-010
4	Drum Handling	Boring	SB-1	9	Clay	9803-017
4	Drum Handling	Boring	SB-2	10.5	Silt	9803-017
4	Drum Handling	Boring	SB-3	7.5	Silty Clay	9803-017
4	Drum Handling	Boring	SB-4	8	Silty Clay	9803-017
4	Drum Handling	Monitoring Well	MW-1	16.5	Sd.-Silty Clay-Sd.	9803-017
4	Drum Handling	Monitoring Well	MW-2	17.5	Silty Clay-Sd.-Clay	9803-017
4	Drum Handling	Monitoring Well	MW-3	17.5	Silty Clay to Sand	9803-017

TABLE B-1

SUMMARY OF SOIL BORING LOGS AND WELL DIAGRAMS

WILLOW RUN PLANT

Ypsilanti, Michigan

AOC#	AOC Name	Type	Boring/Well#	Total Depth (ft. below grade)	Geologic Unit	Source
4	Drum Handling	Boring	HP-1/1A	12	Sand	9803-019
4	Drum Handling	Boring	HP-3	14.8	Sand	9803-019
4	Drum Handling	Boring	HP-5	14.2	Sand/Fill	9803-019
4	Drum Handling	Monitoring Well	HA-1/MW-4	8.5	Silty Sand	9803-019
4	Drum Handling	Boring	HP-4	14	Silt	9803-019
4	Drum Handling	Boring	HP-1B	16	Clay	9803-019
4	Drum Handling	Boring	SB-1/HP-4	24	Clay	9803-019
4	Drum Handling	Monitoring Well	MW-5	22	Sandy Silt	9803-019
4	Drum Handling	Monitoring Well	MW-6	22	Sandy Silt	9803-019
4	Drum Handling	Monitoring Well	MW-7	22	Silty Sand	9803-019
4	Drum Handling	Monitoring Well	MW-8	22	Sandy Silt	9803-019
4	Drum Handling	Monitoring Well	MW-9/HP-2	20	Sandy Silt	9803-019
4	Drum Handling	Monitoring Well	MW-10	19	Silty Sand	9803-019
4	Drum Handling	Monitoring Well	MW-11	18	Silty Sand	9803-019
4	Drum Handling	Monitoring Well	MW-12	20	Silty Sand	9803-019
5	Dept #263	Monitoring Well	MW-1	14	Sand to Clay	9803-021
5	Dept #263	Monitoring Well	MW-2	14	Sd.-Silty Sd.-Clay	9803-021
6	E-49	Monitoring Well	MW-801	14	Sand	9803-022
6	E-49	Monitoring Well	MW-802	12	Sand to Silty Clay	9803-022
6	E-49	Monitoring Well	MW-803	12	Sand to Silty Clay	9803-022
6	E-49	Monitoring Well	MW-804	16	Sand	9803-022
6	E-49	Monitoring Well	MW-805	10	Sand	9803-022
6	E-49	Monitoring Well	MW-806	14	Sand	9803-023
6	E-49	Monitoring Well	MW-807	15	Sand	9803-023
6	E-49	Monitoring Well	MW-808	12	Sand to Clay	9803-023
6	E-49	Monitoring Well	MW-809	12	Sand to Clay	9803-023
6	E-49	Monitoring Well	MW-810	12	Sand	9803-023
6	E-49	Monitoring Well	MW-811	12	Sand to Clay	9803-023
6	E-49	Monitoring Well	MW-812	12	Sand to Silt	9803-023
6	E-49	Monitoring Well	MW-813	12	Sand	9803-023
6	E-49	Monitoring Well	MW-814	15	Sand to Clay	9803-023
6	E-49	Monitoring Well	MW-815	15	Sand	9803-023
6	E-49	Monitoring Well	MW-816	14	Sand	9803-023
6	E-49	Monitoring Well	MW-817	12	Sand	9803-023
6	E-49	Monitoring Well	MW-818	12	Sand to Clay	9803-023
6	E-49	Monitoring Well	MW-819	14	Sand	9803-023
6	E-49	Monitoring Well	MW-820	15	Sand	9803-023
6	E-49	Monitoring Well	MW-821	10	Sand	9803-023
6	E-49	Boring	HA-1	10.5	Sand	9803-022

TABLE B-1

SUMMARY OF SOIL BORING LOGS AND WELL DIAGRAMS

WILLOW RUN PLANT

Ypsilanti, Michigan

AOC#	AOC Name	Type	Boring/Well#	Total Depth (ft. below grade)	Geologic Unit	Source
6	E-49	Boring	HA-2	6.5	Sand	9803-022
6	E-49	Boring	HA-3	7.2	Sand	9803-022
6	E-49	Boring	HA-5	10.5	Sand	9803-022
6	E-49	Boring	HA-6	11	Sand	9803-022
6	E-49	Boring	HA-7	3.5	Sand	9803-022
6	E-49	Boring	HA-8	10	Sand	9803-022
6	E-49	Boring	HA-9	10	Sand	9803-022
6	E-49	Boring	HA-10	2'6"	Clay	9803-023
6	E-49	Boring	HA-11	9	Sand	9803-023
6	E-49	Boring	HA-12	9	Sand	9803-023
9	Scrap Yard	Monitoring Well	SYMW-1	11	Sand to Clay	9803-027
9	Scrap Yard	Monitoring Well	SYMW-2	14	Sd.-Clay-Silty Clay	9803-027
10	ATF	Monitoring Well	Well #23	12.5	Sand	9803-031
11	Dynamometer	Monitoring Well	MW-18	12.5	Silty Sand to Clay	9803-037
11	Dynamometer	Monitoring Well	MW-19	11.5	Sand	9803-037
11	Dynamometer	Monitoring Well	MW-20	12.5	Sand to Clay	9803-037
11	Dynamometer	Recovery Well	RW-1	15	Sand to Clay	9803-037
12	Northyard	Monitoring Well	MW-301	11	Sand	9803-048
12	Northyard	Monitoring Well	MW-302	13	Sand to Clay	9803-048
12	Northyard	Monitoring Well	MW-303	13.5	Sand to Clay	9803-048
13	Building 17	Boring	HAB-1	7.6	Clayey Sand	9803-055
13	Building 17	Boring	HAB-2B	10.4	Sand	9803-055
13	Building 17	Boring	HAB-2C	1.9	Silty Sand	9803-055
13	Building 17	Boring	HAB-3	10.4	Sand	9803-055
13	Building 17	Boring	HAB-4	9.1	Clayey Sand	9803-055
13	Building 17	Observation Well	OW-1	14	Sand to Silty Clay	9803-055
13	Building 17	Observation Well	OW-2	12	Sand to Silty Clay	9803-055
13	Building 17	Observation Well	OW-3	14	Sand to Silty Clay	9803-055
13	Building 17	Observation Well	OW-4	12.5	Sand to Silty Clay	9803-055
13	Building 17	Observation Well	OW-5	15	Sand to Silty Clay	9803-055
14	Product Eng. Tank Farm	Monitoring Well	MW-1	17	Sand to Clay	9803-056
14	Product Eng. Tank Farm	Monitoring Well	MW-2	13	Sand to Clay	9803-056
14	Product Eng. Tank Farm	Monitoring Well	MW-3	10.5	Sand to Clay	9803-056
14	Product Eng. Tank Farm	Monitoring Well	MW-2D	12	Silt to Clay	9803-058
14	Product Eng. Tank Farm	Monitoring Well	MW-4S	9.5	Sand to Silt	9803-058
14	Product Eng. Tank Farm	Monitoring Well	MW-4D	18	Silt to Clay	9803-058
14	Product Eng. Tank Farm	Monitoring Well	MW-5S	6.5	Sand - Silt - Clay	9803-058
14	Product Eng. Tank Farm	Monitoring Well	MW-5D	12	Silt to Clay	9803-058
14	Product Eng. Tank Farm	Monitoring Well	MW-6S	8.5	Fine Sand & Silt	9803-058

TABLE B-1

SUMMARY OF SOIL BORING LOGS AND WELL DIAGRAMS

WILLOW RUN PLANT

Ypsilanti, Michigan

AOC#	AOC Name	Type	Boring/Well#	Total Depth (ft. below grade)	Geologic Unit	Source
14	Product Eng. Tank Farm	Monitoring Well	MW-6D	18	Clay - Silt - Clay	9803-058
14	Product Eng. Tank Farm	Boring	SB-1	13	Silt & Sand	9803-057
14	Product Eng. Tank Farm	Boring	SB-2	14	Sand	9803-059
14	Product Eng. Tank Farm	Boring	SB-3	12	Clay	9803-057
14	Product Eng. Tank Farm	Boring	SB-4	14	Gravel	9803-057
14	Product Eng. Tank Farm	Boring	SB-5	15	Sand	9803-057
15	Bay L-5	Boring	HA-1	3	Sand	9803-061
15	Bay L-5	Boring	HA-3	9	Clayey Silt	9803-061
15	Bay L-5	Boring	HA-5	14	Silty Sand	9803-061
15	Bay L-5	Boring	HA-11	14.5	Silty Sand	9803-061
15	Bay L-5	Boring	MW-904A	1.4	Fill Sand	9803-061
15	Bay L-5	Boring	MW-906A	8	Sand	9803-061
15	Bay L-5	Boring	MW-906C	4	Sand	9803-061
15	Bay E-5	Monitoring Well	MW-901	18	Silty Sd.- Silty Clay	9803-061
15	Bay E-5	Boring	MW-902A	3.5	Sand	9803-061
15	Bay E-5	Monitoring Well	MW-902	13	Sand - Silt - Sand	9803-061
15	Bay E-5	Boring	MW-903B	3.5	Sand	9803-061
15	Bay E-5	Monitoring Well	MW-903	10	Sand	9803-061
15	Bay E-5	Monitoring Well	MW-905	17.5	Silty Sand	9803-063
15	Bay E-5	Boring	MW-905B	8.5	Sand/Fill	9803-063
15	Bay E-5	Boring	MW-906B	8.5	Sand/Fill	9083-063
15	Bay E-5	Boring	HA-6	10	Clayey Silt	9803-061
15	Bay E-5	Boring	HA-8	3	Sand	9803-061
15	Bay E-5	Boring	HA-10	11	Sand	9803-063
15	Bay E-5	Boring	HA-12	9	Silty Clay	9803-063
15	Bay E-5	Boring	HA-14/SB-1	8	Sand	9803-063
15	Bay E-5	Boring	HA-16	9.5	Clay	9803-063
15	Bay E-5	Boring	SB-4	18	Silty Sand	9803-063
16	Tank #84	Boring	HA-001	7.4	Brown Sand	9803-064
16	Tank #84	Monitoring Well	MW-001	15	Silty Sand	9803-064
16	Tank #84	Monitoring Well	MW-002	15	Silty Sand	9803-064
16	Tank #84	Boring	SB-001	15	Silty Sand	9803-064
17	Building 19 Tank Farm	Monitoring Well	MW-101	13	Sand to Silty Sand	9803-065
17	Building 19 Tank Farm	Monitoring Well	MW-102	13	Silty Sand to Sand	9803-065
17	Building 19 Tank Farm	Monitoring Well	MW-103	13	Sand	9803-065
17	Building 19 Tank Farm	Monitoring Well	MW-104	13.5	Sd., Silt, Silty Clay	9803-065
17	Building 19 Tank Farm	Monitoring Well	MW-105	12.5	Sand	9803-067
17	Building 19 Tank Farm	Monitoring Well	MW-106	11.5	Sand	9803-067
17	Building 19 Tank Farm	Boring	SB-1	13	Clay	9803-066

TABLE B-1

SUMMARY OF SOIL BORING LOGS AND WELL DIAGRAMS

WILLOW RUN PLANT

Ypsilanti, Michigan

AOC#	AOC Name	Type	Boring/Well#	Total Depth (ft. below grade)	Geologic Unit	Source
17	Building 19 Tank Farm	Boring	SB-2	13	Clay	9803-066
17	Building 19 Tank Farm	Boring	SB-3	13	Clay	9803-066
17	Building 19 Tank Farm	Boring	SB-4	13	Clay	9803-066
17	Building 19 Tank Farm	Boring	SB-5	13	Clay	9803-066
17	Building 19 Tank Farm	Boring	SB-6	13	Clay	9803-066
17	Building 19 Tank Farm	Boring	SB-7	13	Clay	9803-066
17	Building 19 Tank Farm	Boring	SB-8	15	Sand	9803-066
18	Salvage Bldg. Tank Farm	Monitoring Well	MW-509	17	Sand	9803-071
18	Salvage Bldg. Tank Farm	Monitoring Well	MW-510	15	Sd.-Clay-Silty Sand	9803-071
18	Salvage Bldg. Tank Farm	Monitoring Well	MW-511	18	Silty Sand	9803-071
18	Salvage Bldg. Tank Farm	Boring	SB-10	17	Clay	9803-071
19	Bay C-40	Monitoring Well	C-40/MW-1	13	Sand to Clay	9803-075
19	Bay C-40	Monitoring Well	C-40/MW-2	12.5	Sand to Clay	9803-075
19	Bay C-40	Boring	HA-1	2	Sand/Fill	9803-075
19	Bay C-40	Boring	HA-2	1.5	Sand/Fill	9803-075
19	Bay C-40	Boring	HA-3	1.5	Sand/Fill	9803-075
19	Bay C-40	Boring	HA-4	1.3	Sand/Fill	9803-075
19	Bay C-40	Boring	HA-4A	7	Sand	9803-075
19	Bay C-40	Boring	HA-5	7	Sand	9803-075
19	Bay C-40	Boring	HA-6	8	Sand	9803-075
19	Bay C-40	Boring	HA-7	8.5	Sand	9803-075
19	Bay C-40	Boring	HA-8	8.5	Sand	9803-075
19	Bay C-40	Boring	HA-9	2	Sand/Fill	9803-075
19	Bay C-40	Boring	HA-10	8.5	Sand	9803-075
19	Bay C-40	Boring	SB-1	2	Sand/Fill	9803-075
19	Bay C-40	Boring	SB-2	14	Clay	9803-075
20	Bay Q-24	Boring	SB-401	11	Clay	9803-076
20	Bay Q-24	Boring	SB-402	11	Clay	9803-076
20	Bay Q-24	Monitoring Well	MW-401	11	Sand to Silty Sand	9803-076
20	Bay Q-24	Monitoring Well	MW-402	11	Sand	9803-076
20	Bay Q-24	Monitoring Well	MW-403	11	Sd.-Silty Sd.-Clay	9803-076
21	Bay E-28	Monitoring Well	MW-1	13	Sd.-Gravel-Clay	9803-078
21	Bay E-28	Monitoring Well	MW-2	13	Clay to Sand	9803-078
21	Bay E-28	Monitoring Well	MW-3	13	Sand to Clay	9803-078
21	Bay E-28	Boring	SB-1	7	Gravel and Sand	9803-078
21	Bay E-28	Boring	SB-2	6	Silty Clay	9803-078
21	Bay E-28	Boring	SB-3	7	Sand	9803-078
21	Bay E-28	Boring	SB-4	7	Sand	9803-078
21	Bay E-28	Boring	SB-5	7	Sand	9803-078

TABLE B-1

SUMMARY OF SOIL BORING LOGS AND WELL DIAGRAMS

WILLOW RUN PLANT

Ypsilanti, Michigan

AOC#	AOC Name	Type	Boring/Well#	Total Depth (ft. below grade)	Geologic Unit	Source
21	Bay E-28	Boring	SB-6	7	Sand	9803-078
21	Bay E-28	Boring	SB-7	7	Sand	9803-078
21	Bay E-28	Boring	SB-8	7	Sand	9803-078
21	Bay E-28	Monitoring Well	MW-4	12	Sand to Clay	9803-081
21	Bay E-28	Monitoring Well	MW-5	16	Clay - Sand - Clay	9803-081
21	Bay E-28	Monitoring Well	MW-6	12	Sand to Silt	9803-081
21	Bay E-28	Monitoring Well	MW-7	12	Sand to Clay	9803-081
21	Bay E-28	Monitoring Well	MW-8	12	Sand to Clay	9803-081
21	Bay E-28	Recovery Well	RW-9	15	Sand	9803-080
21	Bay E-28	Recovery Well	RW-10	14.5	Sand	9803-080
21	Bay E-28	Recovery Well	RW-11	19	Sand to Silt	9803-080
21	Bay E-28	Recovery Well	RW-12	13	Sand	9803-080
21	Bay E-28	Recovery Well	RW-14	13	Sand	9803-080
21	Bay E-28	Recovery Well	RW-15	10	Silty Sand	9803-080
21	Bay E-28	Recovery Well	RW-16	16	Clayey Sd. - Sand	9803-080
21	Bay E-28	Recovery Well	RW-17	20	Silty Sand	9803-080
21	Bay E-28	Recovery Well	RW-18	20	Sand	9803-080
22	Subtest Area	Monitoring Well	TMW-1	14	Sand to Clay	9803-088
22	Subtest Area	Monitoring Well	TMW-2	14	Sd.-Sd/Gravel-Clay	9803-088
22	Subtest Area	Monitoring Well	TMW-3	13	Sd.-Silty Sd.-Clay	9803-088
22	Subtest Area	Monitoring Well	TMW-4	13	Sand to Clay	9803-088
22	Subtest Area	Monitoring Well	TMW-6	12.5	Sand to Clay	9803-088
22	Subtest Area	Monitoring Well	TMW-7	12.5	Sand to Clay	9803-088
22	Subtest Area	Monitoring Well	TMW-8	12.5	Gravel to Sand	9803-088
22	Subtest Area	Monitoring Well	TMW-9	12.5	Sand to Clay	9803-089
22	Subtest Area	Monitoring Well	TMW-10	12.5	Sand to Clay	9803-089
22	Subtest Area	Monitoring Well	TMW-11	12	Sand to Clay	9803-089
22	Subtest Area	Monitoring Well	TMW-12	12.5	Sand to Clay	9803-089
22	Subtest Area	Monitoring Well	TMW-13	12.5	Sand to Clay	9803-089
22	Subtest Area	Monitoring Well	TMW-14	13.5	Sand to Clay	9803-089
22	Subtest Area	Monitoring Well	TMW-17	13	Sand to Silty Clay	9803-091
22	Subtest Area	Monitoring Well	TMW-18	13	Sand to Silty Clay	9803-091
22	Subtest Area	Monitoring Well	TMW-19	13.5	Sand to Silty Clay	9803-091
22	Subtest Area	Monitoring Well	TMW-20	14	Sand to Silty Clay	9803-091

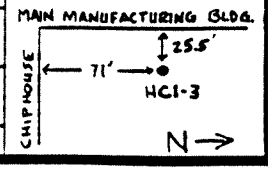
AREA 1

CHIP HOUSE TANK FARM

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI	BORING/WELL DESIGNATION: HCI-3	BORING/WELL LOCATION:
DRILLING CONTRACTOR: None	DRILLING METHOD: Hand-Auger	BOREHOLE SIZE: 3.25 IN.	BOREHOLE DEPTH: 8.5 FT.
DATE STARTED: 6/05/90	DATE COMPLETED: 6/05/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: FT.
RIG:	DRILLER: D.H. Belan	HELPER: T. Winebrenner	LOGGED BY: D.H. Belan



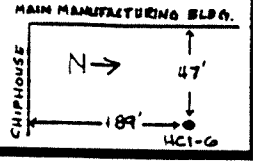
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						NO WELL INSTALLED
	SAND - yellow, fine grained						
	SAND - gray-brown, fine grained, damp, trace gravel, no odor				1		
2.5	SAND - light brown, fine grained, damp, trace fine gravel, slight odor				3		
5	SAND - gray, fine grained, slightly silty, some dark gray staining, moderate odor (groundwater at 6.5 feet)				10		
	SAND - gray, fine grained, slightly silty, strong petroleum odor				7		
7.5	HOLE CAVING END OF BORING AT 8.5 FEET						
10							

NOTES:

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI	BORING/WELL DESIGNATION: HCI-6		BORING/WELL LOCATION:
DRILLING CONTRACTOR: None		DRILLING METHOD: Hand-Auger	BOREHOLE SIZE: 3.25 IN.	BOREHOLE DEPTH: 9.0 FT.
DATE STARTED: 6/05/90	DATE COMPLETED: 6/05/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: None FT.
RIG:	DRILLER: D.H. Belan	HELPER: T. Winebrenner	LOGGED BY: D.H. Belan	



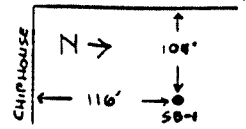
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	GRAVEL - (backfill) slight odor				30		NO WELL INSTALLED
2.5	SAND - brown, fine grained, trace gravel, some gray-black staining, strong petroleum odor				150		
5					90		
7.5	SAND - fine grained, slightly silty, medium dark gray, trace gravel, very moist at 7 feet, black staining, strong petroleum odor				20		
	(groundwater not encountered)				20		
	AUGER REFUSAL END OF BORING AT 9 FEET						
10							

NOTES:

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI		BORING/WELL DESIGNATION: SB-1	BORING/WELL LOCATION: MAIN MANUFACTURING BLDG.
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 7 IN.	BOREHOLE DEPTH: 25 FT.
DATE STARTED: 6/08/90	DATE COMPLETED: 6/08/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: None FT.
RIG: CME 55	DRILLER: P. Libbey	HELPER: M. Bond, R. Pool	LOGGED BY: D. Belan	



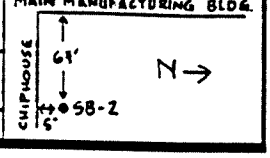
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						NO WELL INSTALLED
	GRAVEL - (railroad ballast), green, some clay and sand, black staining, slight petroleum odor	1.5-3'	REF	7-12-13	1		
	CLAY - gray, dry, slightly plastic	3-5'	REF	4-7-14-17	5		
5	SAND - gray, fine grained, some silt, trace odor and fine gravel (groundwater at 7 feet)	5-7'	LAB	8-16-20-26	3		
	SILTY SAND - gray, fine grained, wet, moderate petroleum odor	7-9'	REF	6-14-21-28	2		
10		9-11'	REF	4-9-11-15	1		
		11-13'	REF	4-9-18-12	1		
	CLAY - gray, slight-moderately plastic, interbedded with thin wet silty sand layers, trace gravel, no odor	13-15'	LAB	2-3-7-10	3		
15		15-17'	REF	2-4-8-12	BG		
		17-19'	LAB	2-6-15-15	BG		
20		19-21'	REF	6-9-15-23	BG		
		21-23'	REF	3-7-15-17	BG		
		23-25'	REF	3-4-11-16	BG		
25	END OF BORING AT 25 FEET BOREHOLE GROUTED TO 1-FOOT BELOW GRADE AND PATCHED WITH CONCRETE						

NOTES: REF - REFERENCE SAMPLES
LAB - LABORATORY SAMPLES
BG - BACKGROUND
ALL SAMPLES COLLECTED BY SPLIT-SPOON

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI		BORING/WELL DESIGNATION: SB-2/MW-601	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 6/12/90	DATE COMPLETED: 6/12/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: 99.49 FT.	WELL DEPTH: 14.0 FT.
RIG: CME 55	DRILLER: P. Libbey	HELPER: M. Bond, R. Pool	LOGGED BY: C. Kielty	



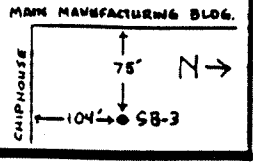
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE	0.5-2'	REF	9-13-13	2	FLUSH-MOUNT, SET IN CONCRETE	
	SAND - (FILL) brown, medium-coarse grained, trace fine gravel, odor	2-4'	REF	9-8-7-5	BG	BENTONITE	
5	SAND - gray-brown, fine-medium grained, wet, trace silt and fine gravel, petroleum odor (groundwater at 6.5 feet)	4-6'	LAB	4-12-16-24	6	2-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
		6-8'	LAB	4-8-12-17	5	SAND FILTER PACK	
	SAND - brown-gray, fine-medium grained, wet-oily, some silt	8-10'	REF	5-9-14-16	3		
10		10-12'	REF	4-8-12-13	0.5	2-INCH 10-SLOT PVC WELL SCREEN	
	SILTY CLAY - gray, plastic	12-14'	REF	2-2-3-4	BG		
15		14-16'	LAB	3-3-5-6	BG	NATIVE CLAY	
	END OF BORING AT 16 FEET						
20							

NOTES: REF - REFERENCE SAMPLES
LAB - LABORATORY SAMPLES
BG - BACKGROUND
ALL SAMPLES COLLECTED BY SPLIT-SPOON

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI	BORING/WELL DESIGNATION: SB-3	BORING/WELL LOCATION:	
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 7 IN.	BOREHOLE DEPTH: 16 FT.	
DATE STARTED: 6/12/90	DATE COMPLETED: 6/12/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: NONE FT.
RIG: CME 55	DRILLER: P. Libbey	HELPER: M. Bond, R. Pool	LOGGED BY: C. Kielty	



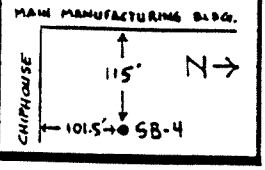
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	SAND - (FILL) brown, medium-coarse grained, some gravel	0-2'	REF	6-7-9-20	BG		NO WELL INSTALLED
	GRAVEL - (FILL) moist, some sand	2-4'	REF	9-10-10-8	BG		
5	SAND - gray-brown, fine-medium grained, some silt, slight odor (groundwater at 6 feet)	4-6'	LAB	3-6-9-14	2		
		6-8'	LAB	6-9-13-26	2		
		8-10'	REF	3-8-14-22	1		
10		10-12'	REF	5-10-14-17	0.5		
		12-14'	REF	15-6-8-6	0.5		
	CLAY - gray, plastic, silty	14-16'	LAB	4-7-4-5	BG		
15	END OF BORING AT 16 FEET BOREHOLE GROUTED TO SURFACE						
20							

NOTES: REF - REFERENCE SAMPLES
LAB - LABORATORY SAMPLES
BG - BACKGROUND
ALL SAMPLES COLLECTED BY SPLIT-SPOON

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI	BORING/WELL DESIGNATION: SB-4/MW-603	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 6/12/90	DATE COMPLETED: 6/12/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: 100.71 FT.
			WELL DEPTH: 13.5 FT.
RIG: CME 55	DRILLER: P. Libbey	HELPER: M. Bond, R. Pool	LOGGED BY: C. Kielty



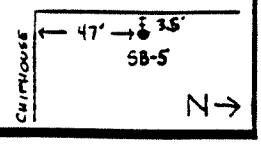
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					CONCRETE	XX / XXX
	SAND - (FILL) brown, medium-coarse grained, dark staining	0.5-2'	REF	6-8-9	1	BENTONITE	///
	SAND - brown, fine-medium grained, moist, trace fine gravel	2-4'	LAB	7-9-8-7	4	2-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	:::
5	SAND - gray-brown, medium grained, moist-wet, trace fine gravel, slight odor (groundwater at 6 feet	4-6'	REF	6-8-14-18	5		:::
	SAND - brown, fine-medium grained, wet, odor, some black stain just past 6 feet	6-8'	LAB	6-12-18-21	3	SAND FILTER PACK	:::
	SAND - brown-gray, fine-medium grained, wet, trace silt, rainbow sheen present, slight odor	8-10'	REF	5-10-14-15	1		:::
10	SAND - brown-gray, fine-medium grained, some silt, no sheen	10-12'	REF	6-9-15-33	0.5	2-INCH 10-SLOT PVC WELL SCREEN	:::
	SILTY SAND - gray, fine grained, wet	12-14'	REF	2-2-3-4	0.5		:::
	SILTY CLAY - gray, plastic, moist-wet						
15		14-16'	LAB	1-1-2-3	BG	NATIVE CLAY	///
	END OF BORING AT 16 FEET						
20							

NOTES: REF - REFERENCE SAMPLES
LAB - LABORATORY SAMPLES
BG - BACKGROUND
ALL SAMPLES COLLECTED BY SPLIT-SPOON
WELL COMPLETED ABOVE GRADE WITH LOCKING PROTECTOR AND FOUR GUARD POSTS.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI		BORING/WELL DESIGNATION: SB-5	BORING/WELL LOCATION: MAIN MANUFACTURING BLDG.
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 7 IN.	BOREHOLE DEPTH: 16 FT.	
DATE STARTED: 6/11/90	DATE COMPLETED: 6/11/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: None FT.
RIG: CME 55	DRILLER: P. Libbey	HELPER: M. Bond, R. Pool	LOGGED BY: C. Kielty	



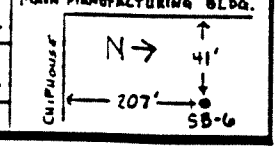
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE	0.5-2'	REF	10-13-12	BG		NO WELL INSTALLED
	SAND - brown, medium-coarse grained, dry, trace fine gravel	2-4'	LAB	6-5-5-8	BG		
5	SAND - gray-brown, fine-medium grained, trace fine gravel, slight stain and odor	4-6'	REF	5-3-4-8	BG		
	(groundwater at 6.5 feet)	6-8'	LAB	11-13-13-15	20		
		8-10'	REF	6-8-11-18	5		
10		10-12'	REF	3-9-13-20	3		
		12-14'	REF	3-9-13-20	3		
	SILTY CLAY - gray, plastic						
15		14-16'	LAB	3-2-2-3	BG		
	END OF BORING AT 16 FEET BOREHOLE GROUTED TO 1-FOOT BELOW GRADE AND PATCHED WITH CONCRETE						
20							

NOTES: REF - REFERENCE SAMPLES
LAB - LABORATORY SAMPLES
BG - BACKGROUND
ALL SAMPLES COLLECTED BY SPLIT-SPOON

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI	BORING/WELL DESIGNATION: SB-6/MW-602		BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 16 FT.	
DATE STARTED: 6/11/90	DATE COMPLETED: 6/11/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: 101.35 FT.	WELL DEPTH: 14.0 FT.
RIG: CME 55	DRILLER: P. Libbey	HELPER: M. Bond, R. Pool	LOGGED BY: C. Kielty	



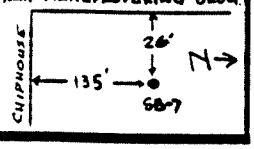
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE	0.5-2'	REF	8-10-10	1	CONCRETE	
	SAND - (FILL) brown, medium grained, slightly stained					BENTONITE	
	SAND - brown, fine-medium grained, moist	2-4'	REF	4-7-6-8	0.5	2-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
5		4-6'	LAB	7-10-9-9	6		
	SAND - brown, fine-medium grained, wet, odor, some black stain at 6 feet (groundwater at 6 feet)	6-8'	LAB	4-5-7-10	40	SAND FILTER PACK	
	SAND - brown-gray, fine-medium grained, wet, trace-some silt, slight odor	8-10'	REF	5-10-14-15	2		
10		10-12'	REF	3-5-13-15	2	2-INCH 10-SLOT PVC WELL SCREEN	
		12-14'	REF	2-2-3-4	0.5		
	SILTY CLAY - gray, plastic, moist-wet						
15		14-16'	LAB	1-1-2-3	BG	NATIVE CLAY	
	END OF BORING AT 16 FEET						
20							

NOTES: REF - REFERENCE SAMPLES
LAB - LABORATORY SAMPLES
BG - BACKGROUND
ALL SAMPLES COLLECTED BY SPLIT-SPOON
WELL COMPLETED ABOVE GRADE WITH LOCKING PROTECTOR AND FOUR GUARD POSTS

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 588305	PROJECT NAME: Hydra-matic, Ypsilanti, MI		BORING/WELL DESIGNATION: SB-7	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 7 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 6/11/90	DATE COMPLETED: 6/11/90	GROUND ELEV.: FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: None FT.
RIG: CME 55	DRILLER: P. Libbey	HELPER: M. Bond, R. Pool	LOGGED BY: C. Kielty	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE	0.5-2'	REF	5-11-13	BG		NO WELL INSTALLED
	SAND - brown, medium-coarse grained, dry, trace fine gravel						
	SAND - gray-brown, fine-coarse grained, moist, trace fine gravel, gasoline odor from 6-12 feet	2-4'	LAB	7-9-9-9	BG		
5		4-6'	REF	4-8-8-9	0.5		
	(groundwater at 7 feet)	6-8'	LAB	4-8-13-21	25		
		8-10'	REF	8-16-13-20	5		
10		10-12'	REF	4-8-16-22	0.5		
		12-14'	REF	8-13-20-16	BG		
	SILTY CLAY - gray, plastic, moist						
15		14-16'	LAB	8-7-5-3	BG		
	END OF BORING AT 16 FEET BOREHOLE GROUTED TO 1-FOOT BELOW GRADE AND PATCHED WITH CONCRETE						
20							

NOTES: REF - REFERENCE SAMPLES
LAB - LABORATORY SAMPLES
BG - BACKGROUND
ALL SAMPLES COLLECTED BY SPLIT-SPOON

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-8	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 15 FT.
DATE STARTED: 08-08-91	DATE COMPLETED: 08-08-91	GROUND ELEV.: 99.9 FT.	MEASURING POINT ELEV: N/A FT.
WELL DEPTH: N/A FT.	SEE FIGURE 3-1		
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	SAND - brown, medium grained, dense, dry, trace gravel	1-3'	SS	7-14-21-16	BG		
2.5	SAND - light brown, fine-medium grained, dense, trace silt	3-5'	LAB	15-20-21-23	BG		
5		5-7'	SS	15-20-20-23	BG		
	SILTY SAND - brown-gray, fine grained, dense-very dense	7-9'	SS	11-23-25-32	BG		
7.5		9-11'	LAB	7-16-18-20	BG		
10		11-13'	SS	25-30-50-61	BG		
12.5	SILTY CLAY	13-15'	SS	3-4-8-12	BG		
15	END OF BORING AT 15 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-9		BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 08-09-91	DATE COMPLETED: 08-09-91	GROUND ELEV.: 98.2 FT.	MEASURING POINT ELEV: N/A FT.	WELL DEPTH: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	
	CONCRETE						
	SAND - brown-gray, fine-medium grained, loose, dry, trace silt	1-3'	LAB	4-4-5-4	BG		NO WELL INSTALLED
2.5		3-5'	SS	2-3-2-3	BG		
	(groundwater at 4.5 feet)						
5	2" yellow-brown clay layer at 5 ft						
	SAND - gray, fine grained, loose, wet, some silt	5-7'	SS	2-3-1-10	BG		
	4" yellow-brown clay layer at 6 ft						
7.5	SILTY SAND - gray, fine grained, very firm-very dense, wet	7-9'	LAB	4-10-14-30	BG		
10		9-11'	SS	8-24-37-21	BG		
	SILTY CLAY - gray, moderately plastic, stiff, moist	11-13'	SS	2-6-8-6	BG		
12.5							
	END OF BORING AT 13 FEET						
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-10		BORING/WELL LOCATIC
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 08-09-91	DATE COMPLETED: 08-09-91	GROUND ELEV.: 100.0 FT.	MEASURING POINT ELEV: N/A FT.	WELL DEPTH: N/A FT.
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0						BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	SAND - brown-dark brown, medium-coarse grained, firm-very firm, moist, trace silt and fine gravel	1-3'	SS	6-12-14-14	5-15		
2.5	two 2" dark brown silty clay seams						
		3-5'	LAB	6-9-9-10	20-30		
5	SAND - light brown, medium grained, firm, trace silt	5-7'	SS	5-8-10-18	7-13		
7.5	SAND - gray, fine-medium grained, dense, wet, some silt, trace fine gravel	7-9'	LAB	8-19-24-37	9-13		
10		9-11'	SS	9-13-21-33	1-3		
	SILTY SAND - gray, fine-very fine grained, dense, wet	11-13'	SS	17-15-13-24	BG		
12.5	SILTY CLAY - gray, mod. plastic						
	END OF BORING AT 13 FEET						
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-11		BORING/WELL LOCATI
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 11 FT.	
DATE STARTED: 08-13-91	DATE COMPLETED: 08-13-91	GROUND ELEV.: 98.3 FT.	MEASURING POINT ELEV: N/A FT.	WELL DEPTH: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	ASPHALT/CONCRETE					BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
2.5	SAND - light brown, medium grained, very firm, trace silt and fine gravel	1-3'	LAB	8-12-11-11	BG		
	SAND - light brown-gray, fine-medium grained, loose-firm, moist-wet, trace-some silt	3-5'	SS	3-4-3-5	BG		
	(groundwater at 4.5 feet)						
5		5-7'	LAB	2-8-4-9	BG		
7.5	SILTY SAND - gray, fine grained, firm, wet	7-9'	SS	5-7-4-9	BG		
	SILTY CLAY - gray, moderately plastic, stiff						
10		9-11'	SS	3-5-10-14	BG		
	END OF BORING AT 11 FEET						
12.5							
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIPHOUSE)	BORING/WELL DESIGNATION: SB-12	BORING/WELL LOCAT
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 02-17-92	DATE COMPLETED: 02-17-92	GROUND ELEV.: 99.98 FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: N/A FT.	SEE FIGURE 3-1		
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
2.5	SAND - light brown, trace green, fine-medium grained, medium dense, moist	2-4'	SS	6-6-13-13	1		
5	SAND - light brown, trace green, fine-medium grained, medium dense, moist, odor present, sheen on tip of sampler	4-6'	LAB	6-10-13-15	1		
7.5	SAND - dark grey, fine-medium grained, dense, wet at 6 feet, odor present, sheen present	6-8'	LAB	9-15-19-22	3		
10	SILTY SAND - grey/dark grey, fine grained, medium dense, wet, odor present, sheen present, silt in tip of sampler	8-10'	SS	8-13-12-13	1		
		10-12'	SS	4-6-10-11	2		
12.5	SAND - grey, fine-medium grained, some silt, medium dense, wet, slight odor present, sheen present	12-14'	SS	5-10-12-9	BG		
15	SILTY CLAY - brown/grey, stiff, moist, moderately plastic, no apparent odor	14-16'	SS	6-5-6-10	BG		
	END OF BORING AT 16 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-13C	BORING/WELL LOCAT
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 02-18-92	DATE COMPLETED: 02-18-92	GROUND ELEV.: 99.48 FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: N/A FT.	SEE FIGURE 3-1		
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDOWELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DAT
0	CONCRETE				(ppm)	BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	SAND - grey/green, fine-medium grained, trace clay and silt, moist, odor present	1-2'	SS	4-5	1		
2.5	SAND - light brown, fine-medium grained, trace silt, medium dense, damp, slight odor present	2-4'	SS	4-8-10-14	BG		
	SAND - light brown, fine-medium grained, trace silt, medium dense, damp, no apparent odor	4-6'	SS	6-12-15-20	BG		
5							
	SILTY SAND - grey/some black staining, fine grained, medium dense, wet at 7 feet, odor present, sheen in tip of sampler	6-8'	LAB	5-10-17-19	1		
7.5		8-10'	SS	7-9-11-19	BG		
10	SILTY SAND - grey, fine grained, medium dense, wet, slight odor, sheen present	10-12'	SS	6-10-14-13	1		
12.5	(2" silt bed at 13.7 feet)	12-14'	SS	6-15-14-13	BG		
	SILTY CLAY - grey, trace pink/brown mottling, moderately plastic, stiff, moist, no apparent odor	14-16'	SS	3-4-5-6	BG		
15	END OF BORING AT 16 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-14	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 02-19-92	DATE COMPLETED: 02-19-92	GROUND ELEV.: 99.33 FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: N/A FT.	SEE FIGURE 3-1		
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	ASPHALT/CONCRETE				(ppm)	BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	SAND - yellow brown, medium-coarse grained, trace clay and silt, medium dense, damp, no apparent odor	1-2'	SS	6-11	BG		
2.5		2-4'	SS	3-7-14-16	BG		
	SAND - light brown, fine-medium grained, trace silt, medium dense-dense, damp, no apparent odor						
5		4-6'	SS	11-16-19-21	BG		
	(wet at 5 feet 10 inches)						
	SAND - light brown, fine grained, trace silt, dense, wet, no apparent odor	6-8'	LAB	7-18-22-23	BG		
7.5							
	SILTY SAND - grey, fine grained, dense, wet, no apparent odor	8-10'	SS	8-18-22-32	BG		
10		10-12'	ST			FULL RECOVERY	
12.5		12-14'	SS	6-12-20-24	BG		
	SILTY CLAY - grey, stiff, moist, moderately plastic, no apparent odor						
15		14-16'	SS	6-6-8-12	BG		
	END OF BORING AT 16 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE
ST - SHELBY TUBE SAMPLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-15	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 14 FT.
DATE STARTED: 02-19-92	DATE COMPLETED: 02-19-92	GROUND ELEV.: 98.40 FT.	MEASURING POINT ELEV: - - FT.
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	ASPHALT					BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	CRUSHED AGGREGATE SUB-BASE						
	SAND/FILL - yellow brown, medium grained, trace silt, medium dense, damp, no apparent odor	1-2'	SS	6-14	BG		
2.5		2-4'	SS	5-7-9-10	BG		
	SAND - light brown, fine-medium grained, trace silt, dense moist, no apparent odor	4-6'	SS	12-15-17-17	BG		
5	(wet at 5 feet 5 inches)						
		6-8'	LAB	8-16-17-17	BG		
7.5	SAND - grey brown, medium-coarse grained, trace clay, silt and fine gravel, medium dense, wet, no apparent odor	8-10'	SS	8-12-13-17	BG		
10	SILTY SAND - grey, fine grained, dense, wet, no apparent odor	10-12'	SS	10-20-23-27	BG		
12.5	SILTY CLAY - grey, stiff, moist, moderately plastic, no apparent odor	12-14'	SS	9-6-11-13	BG		
	END OF BORING AT 14 FEET						
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-16	BORING/WELL LOCATI
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN. / BOREHOLE DEPTH: 14 FT.	
DATE STARTED: 02-19-92 / DATE COMPLETED: 02-19-92	GROUND ELEV.: 100.00 FT. / MEASURING POINT ELEV: - - FT.	WELL DEPTH: N/A FT.	SEE FIGURE 3-1
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	SAND - yellow brown, medium grained, trace clay and fine gravel, loose, damp, no apparent odor	1-2'	SS	6-14-X-X	BG		
2.5		2-4'	SS	8-12-16-14	BG		
	SAND - light brown, fine-medium grained, trace silt, medium dense, damp, no apparent odor	4-6'	SS	9-17-14-15	BG		
5		6-8'	SS	9-19-19-16	BG		
7.5	(moist/wet at 7.5 feet)						
	SAND - grey/dark grey, fine-medium grained, trace silt, dense, wet, strong (sweet) odor present	8-10'	LAB	10-15-17-20	200-400	WORK AREA 2 ppm	
10	SAND - brown/grey, fine-medium grained, trace silt and gravel, medium dense, wet, odor present	10-12'	LAB	7-13-17-20	3-5		
12.5		12-14'	SS	3-6-12-25	BG	WORK AREA 8 ppm VERY STRONG ODOR PRESENT DRILLING DISCONTINUED	
	END OF BORING AT 14 FEET						
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-18	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 02-20-92	DATE COMPLETED: 02-20-92	GROUND ELEV.: 100.03 FT.	MEASURING POINT ELEV: - - FT.
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	ASPHALT/CONCRETE					BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	SAND - brown, fine-medium grained, trace silt and fine gravel, loose, becoming very loose at depth, damp, no apparent odor	0.8-2'	SS	3-5-6	BG		
2.5		2-4'	SS	3-3-3-2	BG		
5		4-6'	SS	1-1-1-1	BG		
		6-8'	LAB	1-0-0-0	BG		
7.5	SILTY SAND - grey, fine grained, medium dense-dense, wet at 8.2 feet, no apparent odor	8-10'	SS	4-8-18-24	BG		
10		10-12'	SS	7-18-23-24	BG		
12.5	SILT - grey, wet, no apparent odor	12-14'	SS	9-6-6-8	BG		
	SILTY CLAY - grey, very stiff, plastic, moist, no apparent odor						
15		14-16'	SS	5-8-11-15	BG		
	END OF BORING AT 16 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-19	BORING/WELL LOCATIC
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 18 FT.
DATE STARTED: 02-20-92	DATE COMPLETED: 02-20-92	GROUND ELEV.: 99.91 FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: N/A FT.	SEE FIGURE 3-1		
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	SAND - brown, medium grained, trace silt and gravel	1-2'	SS	5-15	BG		
2.5	SAND - brown/grey, fine-medium grained, trace silt, medium dense, damp, slight odor present	2-4'	SS	8-16-14-15	BG		
5		4-6'	LAB	9-13-10-10	BG		
	SAND - grey, fine-medium grained, some silt, medium dense, moist-wet at 7.8 feet, odor present, oily with some black staining at 9.5 feet	6-8'	SS	7-7-6-6	BG		
7.5		8-10'	LAB	9-13-17-20	BG		
10	SILTY SAND - grey, fine grained, medium dense, wet, odor present to 12 feet, sheen present below 10 feet	10-12'	SS	7-18-23-24	BG		
12.5		12-14'	SS	9-6-6-8	BG		
15		14-16'	SS	5-8-11-15	BG		
	SILTY CLAY - grey, stiff, plastic, moist, no apparent odor	16-18'	SS	3-7-7-8	BG		
17.5							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIPHOUSE)	BORING/WELL NUMBER: SB-19	BOREHOLE DEPTH: 18 F

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5	SILTY CLAY (continued)						
	END OF BORING AT 20 FEET						
20							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-21	BORING/WELL LOCATI
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 11.5 FT.
DATE STARTED: 02-24-91	DATE COMPLETED: 02-24-91	GROUND ELEV.: 99.99 FT.	MEASURING POINT ELEV: - - FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE				BG	BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	NO WELL INSTALLED
	SAND/FILL - light brown, medium grained, trace silt, loose, dry, no apparent odor	0.8-2'	SS	2-4	BG	CONCRETE OBSTRUCTION OVER HALF OF BOREHOLE, UNABLE TO ADVANCE AUGERS, REMAINDER OF BORING PERFORMED BY DRIVING SAMPLER	
2.5	SANDY CLAY - brown, firm, slightly plastic, damp, no apparent odor	2-4'	SS	4-3-2-4	BG		
	SAND/FILL - light brown, medium grained, trace silt, loose, moist-wet at 7.8 feet, no apparent odor	4-6'	SS	3-3-3-5	BG		
5		6-8'	SS	5-7-10-14	BG		
7.5		8-10'	LAB	10-20-18-20	BG		
10	SILTY SAND - grey, fine grained, dense, wet, no apparent odor	10-11.5'	SS	10-18-30	BG		
	END OF BORING AT 11.5 FEET						
12.5							
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-22	BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 02-24-92	DATE COMPLETED: 02-24-92	GROUND ELEV.: 98.72 FT.	MEASURING POINT ELEV: - - FT.
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	BOREHOLE WAS GROUTED TO THE SURFACE WITH CEMENT GROUT UPON COMPLETION	
	ASPHALT/CONCRETE						
	CLAYEY SAND - dark grey/green, medium grained, trace silt, dry, trace black staining, no apparent odor	0.8-2'	SS	5-8	3.5		NO WELL INSTALLED
2.5							
	SAND - yellow brown, medium grained, some silt, medium dense, dry, no apparent odor	2-4'	LAB	7-7-8-12	3		
	SAND - grey, fine-medium grained, trace silt, medium dense, moist/wet at 5 feet, no apparent odor (slight odor?)	4-6'	LAB	9-13-14-16	BG		
5							
		6-8'	SS	7-12-18-18	BG		
7.5							
		8-10'	ST				
10							
	SAND - grey, fine-medium grained, some silt, medium dense, wet, no apparent odor	10-12'	SS	2-9-13-15	BG		
	SILTY SAND - grey, fine grained, very dense, wet, no apparent odor						
12.5							
	SANDY SILT - grey, very fine sand, dense, wet, no apparent odor	12-14'	SS	12-22-30-23	BG		
	SILTY CLAY - grey, stiff, moist, moderately plastic, no apparent odor						
15		14-16'	SS	3-4-8-14	BG		
	END OF BORING AT 16 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE
ST - SHELBY TUBE SAMPLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: MW-604		BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 08-07-91	DATE COMPLETED: 08-07-91	GROUND ELEV.: 98.7 FT.	MEASURING POINT ELEV: 98.43 FT.	WELL DEPTH: 11.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0					(ppm)	
	ASPHALT/CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND - brown-black, medium-coarse, very firm, trace gravel	1-3'	SS	6-7-17-10	10	
2.5						BENTONITE SEAL
	SAND - brown-gray, fine-medium, loose-firm, trace silt and fine gravel	3-5'	LAB	8-8-9-13	7-12	2-INCH, SCHEDULE-40 PVC RISER PIPE
5						
	(groundwater at 6 ft, sheen present)	5-7'	LAB	3-4-4-5	25-30	SAND FILTER PACK
7.5	SILTY SAND - gray, fine, very firm, wet	7-9'	SS	6-11-16-29	3-5	
	2" fine gravel seam at 8.5 feet					2-INCH, 10-SLOT, PVC WELL SCREEN
10		9-11'	SS	4-11-10-15	2	
	SILT - gray, wet, some sand					
	SILTY CLAY - gray, moderately plastic	11-13'	SS	6-5-5-10	BG	NATIVE SILTY CLAY
12.5						
	END OF BORING AT 13 FEET					
15						

WELL DATA

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: MW-605		BORING/WELL LOCATI
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 08-07-91	DATE COMPLETED: 08-07-91	GROUND ELEV.: 99.6 FT.	MEASURING POINT ELEV: 99.15 FT.	WELL DEPTH: 11.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE				BG	WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND - brown, medium grained, dense, dry, trace fine gravel and silt	1-3'	SS	8-15-18-16	BG	
2.5						BENTONITE SEAL
	SAND - brown-gray, fine-medium grained, firm, moist, trace-some clay	3-5'	LAB	7-9-9-7	BG	2-INCH, SCHEDULE-40 PVC RISER PIPE
5	SAND - gray, fine-medium grained, very loose, moist-wet, trace silt and clay (groundwater at 6 feet)	5-7'	LAB	4-2-1-1	BG	SAND FILTER PACK
7.5		7-9'	SS	1-1-5-12	BG	
	SILTY SAND - gray, fine grained, very stiff, wet	9-11'	SS	7-9-12-11	BG	2-INCH, 10-SLOT, PVC WELL SCREEN
10						
	SILTY CLAY - gray, moderately plastic	11-13'	SS	2-3-5-9	BG	NATIVE SILTY CLAY
12.5						
	END OF BORING AT 13 FEET					
15						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: MW-606		BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 15 FT.	
DATE STARTED: 08-07-91	DATE COMPLETED: 08-07-91	GROUND ELEV.: 98.3 FT.	MEASURING POINT ELEV: 97.95 FT.	WELL DEPTH: 13.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0	ASPHALT/CONCRETE				(ppm)	WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND - brown, fine-medium grained, firm, moist-wet, trace silt	1-3'	LAB	4-6-7-10	BG	
2.5						BENTONITE SEAL
		3-5'	LAB	5-5-7-8	BG	2-INCH, SCHEDULE-40 PVC RISER PIPE
	(groundwater at 4.5 feet)					
5	SAND - brown-gray, fine-coarse grained, loose, wet, trace gravel and silt	5-7'	SS	2-2-3-5	BG	SAND FILTER PACK
	SANDY CLAY - gray, slightly plastic, with sand seams					
7.5	SILTY SAND - gray, fine grained, very firm-dense, wet	7-9'	SS	5-18-28-33	2	
						2-INCH, 10-SLOT, PVC WELL SCREEN
10		9-11'	SS	12-16-20-17	BG	
		11-13'	SS	10-18-11-13	BG	
12.5	SILTY CLAY - gray, moderately plastic, very stiff	13-15'	SS	2-8-10-12	BG	NATIVE SILTY CLAY
15	END OF BORING AT 15 FEET					

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: MW-607		BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 08-08-91	DATE COMPLETED: 08-08-91	GROUND ELEV.: 99.9 FT.	MEASURING POINT ELEV: 99.49 FT.	WELL DEPTH: 12.5 FT.
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND - brown, fine-medium grained, very firm, trace silt	1-3'	LAB	13-18-13-14	BG	
2.5	SAND - dark brown-black, medium-coarse grained, very firm, trace clay and fine gravel					BENTONITE SEAL
	SAND - light brown-gray, fine-medium grained, firm, moist, trace silt	3-5'	LAB	4-6-8-10	1	2-INCH, SCHEDULE-40 PVC RISER PIPE
5	(groundwater at 6 feet)	5-7'	SS	3-8-14-18	5-7	SAND FILTER PACK
7.5	SILTY SAND - gray, fine grained, dense, wet	7-9'	SS	10-20-20-23	1-2	
	SAND - gray-brown, fine-medium grained, very firm, some silt	9-11'	SS	9-11-15-15	1	2-INCH, 10-SLOT, PVC WELL SCREEN
10		11-13'	SS	8-8-11-12	BG	
12.5	SILTY CLAY - gray, mod. plastic					NATIVE SILTY CLAY
	END OF BORING AT 13 FEET					
15						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: MW-608		BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 20 FT.	
DATE STARTED: 08-12-91	DATE COMPLETED: 08-13-91	GROUND ELEV.: 100.4 FT.	MEASURING POINT ELEV: 100.03 FT.	WELL DEPTH: 18.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE	
2.5	SAND - brown-black, medium grained, firm, trace gravel	2-4'	LAB	5-6-11-19	1-2	BENTONITE SEAL	
						2-INCH, SCHEDULE-40 PVC RISER PIPE	
5	SAND - light brown-gray, fine-medium grained, very firm-very dense, moist-wet, trace gravel, some black staining	4-6'	LAB	65-31-21-22	2-4		
	(groundwater at 7 feet)	6-8'	SS	18-7-21-30	1	SAND FILTER PACK	
7.5							
		8-10'	SS	21-12-19-25	1	2-INCH, 10-SLOT, PVC WELL SCREEN	
10	SAND - gray and black, fine-medium grained, wet, sheen present						
	SILTY SAND - gray, fine grained, dense, wet	10-12'	SS	9-7-17-30	1		
12.5		12-14'	SS	10-19-24-39	BG		
15		14-16'	SS	3-12-26-34	BG		
		16-18'	SS	9-21-20-14	BG		
17.5							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIPHOUSE)	BORING/WELL NUMBER: MW-608	BOREHOLE DEPTH: 20

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5	SILTY SAND (continued)						
	SILTY CLAY - gray, moderately plastic, very stiff	18-20'	SS	4-6-10-13	BG	NATIVE SILTY CLAY	
20	END OF BORING AT 20 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: MW-609	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 02-17-91	DATE COMPLETED: 02-17-91	GROUND ELEV.: 98.22 FT.	MEASURING POINT ELEV: 99.93 FT.
WELL DEPTH: 13 FT.	SEE FIGURE 3-1		
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDOWELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	ASPHALT/CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND - brown, fine-medium grained, trace silt, loose, moist, no apparent odor					BENTONITE SEAL
2.5		2-4'	LAB	2-5-4-3	BG	2-INCH, SCHEDULE-40 PVC RISER PIPE
	(wet at 4.5 feet)					
5	SAND - grey to brown, fine-medium grained, trace silt and fine gravel, medium dense, wet, no apparent odor	4-6'	SS	3-5-9-12	BG	
		6-8'	SS	3-6-8-11	BG	SAND FILTER PACK
7.5	SAND - grey to brown, fine-medium grained, some silt, medium dense, wet, no apparent odor	8-10'	SS	3-12-18-27	BG	2-INCH, 10-SLOT, PVC WELL SCREEN
10	SILTY SAND - grey, fine grained, medium dense, wet, no apparent odor	10-12'	SS	5-12-18-14	BG	
12.5	SILTY CLAY - grey, firm, moderately plastic, moist, no apparent odor	12-13'	SS	2-4-6-10	BG	NATIVE SILTY CLAY
	END OF BORING AT 13 FEET					
15						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-17/MW610	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 16 FT.
DATE STARTED: 02-20-91	DATE COMPLETED: 02-20-91	GROUND ELEV.: 99.36 FT.	MEASURING POINT ELEV: 98.45 FT.
WELL DEPTH: 14 FT.	SEE FIGURE 3-1		
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0					(ppm)	
	ASPHALT/CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND/CLAY (fill) - brown, some gravel, stiff, damp, no apparent odor	0.8-2'	SS	3-7-7	BG	
2.5						BENTONITE SEAL
	GRAVELLY SAND - light brown, medium-coarse grained, medium dense, dry, no apparent odor	2-4'	SS	6-10-18-27	BG	
						2-INCH, SCHEDULE-40 PVC RISER PIPE
5		4-6'	SS	9-20-15-17	BG	
	SAND - light brown, fine grained, trace silt, dense, dry, no apparent odor, yellow discoloration upper 2 inches					SAND FILTER PACK
	SILTY SAND - gray, fine grained, dense, very dense at 12-14 feet, wet at 6 feet, no apparent odor	6-8'	LAB	11-15-17-18	BG	
7.5						
		8-10'	SS	10-19-22-24	BG	2-INCH, 10-SLOT, PVC WELL SCREEN
10						
		10-12'	SS	11-18-25-32	BG	
12.5						
		12-14'	SS	10-25-44-50	BG	
	SILTY CLAY - grey, stiff, moderately plastic, moist, no apparent odor					NATIVE SILTY CLAY
15		14-16'	SS	5-7-7-10	BG	
	END OF BORING AT 16 FEET					

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-20/MW611		BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 14 FT.	
DATE STARTED: 02-21-91	DATE COMPLETED: 02-21-91	GROUND ELEV.: 100.01 FT.	MEASURING POINT ELEV: 99.58 FT.	WELL DEPTH: 14 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE	
	SAND/FILL - yellow brown, medium grained, trace clay, silt, and gravel, medium dense-loose, dry, no apparent odor	1-2'	SS	5-7	BG		
2.5		2-4'	SS	5-5-5-4	BG	BENTONITE SEAL	
						2-INCH, SCHEDULE-40 PVC RISER PIPE	
5	SAND - light brown, fine grained, trace silt, dense, damp, no apparent odor	4-6'	SS	4-5-4-7	BG		
		6-8'	SS	9-16-22-26	BG	SAND FILTER PACK	
7.5	(wet at 7.8 feet)						
	SAND - light brown/grey, fine grained, trace silt, dense, wet, no apparent odor	8-10'	LAB	9-18-24-26	BG	2-INCH, 10-SLOT, PVC WELL SCREEN	
10		10-12'	SS	12-18-22-22	BG		
12.5		12-14'	ST		BG		
	CLAY						
	END OF BORING AT 14 FEET						
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
ST - SHELBY TUBE SAMPLE

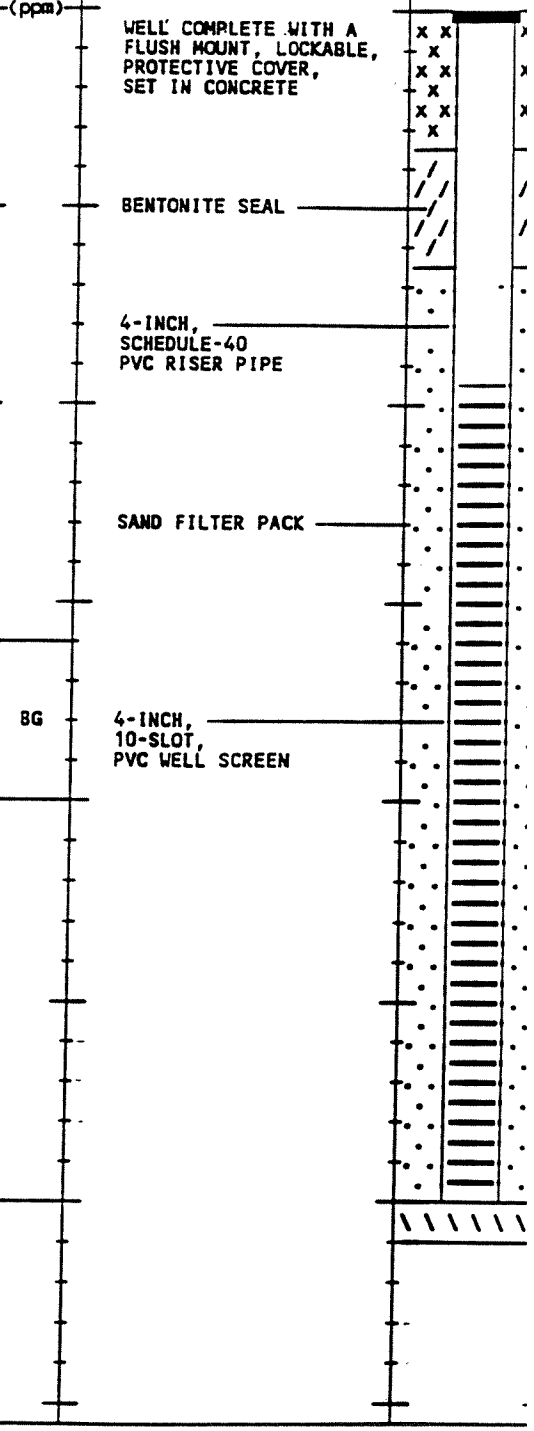
BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)		BORING/WELL DESIGNATION: MW-612	BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 15 FT.
DATE STARTED: 03-05-92	DATE COMPLETED: 03-05-92	GROUND ELEV.: FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: 15 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: A. BABB	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0	CONCRETE				(ppm)	WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND/FILL - brown, fine-medium grained, trace silt, dry-damp					
2.5						BENTONITE SEAL
						4-INCH, SCHEDULE-40 PVC RISER PIPE
5						
						SAND FILTER PACK
7.5						
	SAND - light grey, coarse -medium grained, trace gravel, medium dense, wet, no apparent odor	8-10'	SS	3-5-9-10	BG	4-INCH, 10-SLOT, PVC WELL SCREEN
10						
12.5						
15	END OF BORING AT 16 FEET					

WELL DATA



NOTES: SS - SPLIT-SPOON SAMPLE
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: SB-612A		BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 16 FT.	
DATE STARTED: 02-25-92	DATE COMPLETED: 02-25-92	GROUND ELEV.: 99.70 FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: N/A FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CRUSHED AGGREGATE						
	CONCRETE						
	SAND - grey/green, medium grained, trace silt, medium dense, damp, odor present						NO WELL INSTALLED
2.5		2-4'	SS	4-6-10-10	BG		
	SAND/FILL - yellow brown, medium grained, trace silt, damp, slight odor						
	SAND/FILL - light brown, medium grained, trace silt, medium dense, moist-wet at 7.8 feet, no apparent odor						
5		4-6'	LAB	2-5-9-13	BG		
		6-8'	SS	4-9-13-17	BG		
7.5							
	SAND - grey, medium grained, trace silt, medium dense, wet, no apparent odor	8-10'	LAB	3-7-15-17	BG		
10	(trace fine gravel)						
		10-12'	SS	2-9-13-15	BG		
	SILTY SAND - grey, very fine grained, very dense, wet, no apparent odor						
12.5		12-14'	SS	5-19-38-60	BG		
15		14-16'	SS	5-12-8-12	BG		
	SILTY CLAY - grey, stiff, moderately plastic, moist, no apparent odor						
	END OF BORING AT 16 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

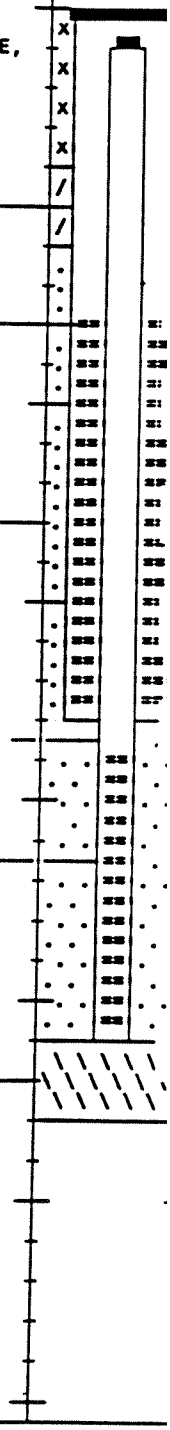
ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: MW-613	BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 14 FT.
DATE STARTED: 02-25-91	DATE COMPLETED: 02-25-91	GROUND ELEV.: 100.21 FT.	MEASURING POINT ELEV: 99.86 FT.
RIG: CME-55	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0					(ppm)	
	GRAVEL					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	CONCRETE DEBRIS					
	SAND/FILL - brown/black, medium grained, some gravel, trace silt, damp, odor present					
2.5						BENTONITE SEAL
	CLAYEY SAND - grey/green, some black staining, medium grained, medium dense, damp, odor present					4-INCH, SCHEDULE-40 PVC RISER PIPE AND WELL SCREEN
5		4-6'	SS	2-4-10-12	3-5	
	SAND - grey/black, fine-medium grained, trace silt, moist, odor present					
	SAND - grey, fine-medium grained, trace silt, medium dense, wet, strong odor present					SAND FILTER PACK
		6-8'	SS	3-6-11-17	5-9	
7.5						
10						1.5-INCH, SCHEDULE-40 PVC RISER PIPE
						1.5-INCH, 10-SLOT, PVC WELL SCREEN
12.5	SILTY SAND - grey, fine grained, loose, wet, slight odor, sheen present					
		12-14'	SS	4-6-4-6	1	
	SILTY CLAY - grey, stiff, moderately plastic, moist					NATIVE SILTY CLAY
	END OF BORING AT 14 FEET					
15						

WELL DATA



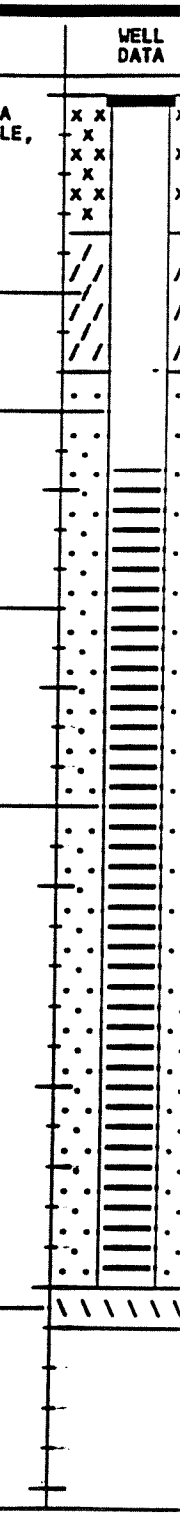
NOTES: SS - SPLIT-SPOON SAMPLE
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)	BORING/WELL DESIGNATION: MW-614	BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 15 FT.
DATE STARTED: 03-05-92	DATE COMPLETED: 03-05-92	GROUND ELEV.: FT.	MEASURING POINT ELEV: FT.
WELL DEPTH: 15 FT.	SEE FIGURE 3-1		
RIG: CME-45	DRILLER: M. BOND	HELPER: A.BABB	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0					(ppm)	
	CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND/FILL					
2.5						BENTONITE SEAL
	SAND - light to dark grey, fine-medium grained, trace clay and gravel, loose, dry, no apparent odor					4-INCH, SCHEDULE-40 PVC RISER PIPE
5		4-6'	SS	1-3-4-5	BG	
	SAND - light brown/grey, fine-medium grained, trace gravel, loose, dry-moist, oily appearence, odor present (wet at 7.4 feet approximately)					SAND FILTER PACK
		6-8'	SS	1-2-2-2	BG	
7.5						
						4-INCH, 10-SLOT, PVC WELL SCREEN
10						
12.5						
15	END OF BORING AT 15 FEET					NATIVE SILTY CLAY



NOTES: SS - SPLIT-SPOON SAMPLE
BG - BACKGROUND
REFER TO BORING SB-96 FOR DETAILED STRATIGRAPHIC DESCRIPTION

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-08	PROJECT NAME: GM POWERTRAIN (CHIP HOUSE)		BORING/WELL DESIGNATION: MW-615	BORING/WELL LOCATI
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 16 FT.	
DATE STARTED: 02-28-92	DATE COMPLETED: 02-28-92	GROUND ELEV.: 100.04 FT.	MEASURING POINT ELEV: 99.53 FT.	WELL DEPTH: 14 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND/FILL - dark brown, some black, medium grained, some silt, trace clay and fine gravel, medium dense, damp, odor present					
2.5		2-4'	SS	2-9-7-9	2	BENTONITE SEAL
	SAND - light brown, medium grained, trace silt and fine gravel, medium dense, dry, no apparent odor					4-INCH, SCHEDULE-40 PVC RISER PIPE
5		4-6'	SS	1-3-4-5	BG	
	(wet at 6 feet, product present, odor present)					SAND FILTER PACK
		6-8'	SS	2-12-18-23	2-5	
7.5	SAND - grey, fine-medium grained, some silt, medium dense, wet, slight odor					
		8-10'	SS	3-5-9-10	BG	4-INCH, 10-SLOT, PVC WELL SCREEN
10	SILTY SAND - grey, fine grained, loose, wet, no apparent odor					
		10-12'	SS	2-4-6-10	BG	
12.5	(possible clay present at 13 feet)	12-14'	SS	1-1-4-3	BG	
	SILTY CLAY - grey, firm, moderately plastic, moist, no apparent odor					NATIVE SILTY CLAY
15		14-16'	SS	1-2-3-5	BG	
	END OF BORING AT 16 FEET					

NOTES: SS - SPLIT-SPOON SAMPLE
BG - BACKGROUND

MW-6(16

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: OB-1
		SHEET 1 OF 1

CLIENT	GROUND WATER			
General Motor Corporation	DATE	DEPTH	ELEVATION	FILE No.: 2488.385
PROJECT LOCATION	NA	NA	NA	DRILLING METHOD: Hollow Stem Auger
Chip House Area, Powertrain Plant, Ypsilanti, MI				SAMPLER TYPE: 2" Splitspoon
				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING LOCATION: Approximately 5' north of Pumping well
BORING CO.: Professional Service Industries
GROUND ELEVATION: NA
FOREMAN: Keith Dantes
DATES: STARTED: 02/17/93 ENDED: 02/17/93

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'				Concrete						
						Loose, grey ,damp fine SAND, Strong petroleum odor	7"					
	2	2'-4'										
	3	4'-6'										
5												
	4	6'-8'										
	5	8'-10'				Same as above, wet, visible sheen in spoon						
10	6	10'-12'										
	7	12'-14'										
	8	14'-16'				Grey, damp CLAY, little silt	13'9"					
15						EOB @15fbg						
	9											
	10											
	11											

NOTES:

Monitoring Well constructed of 2" diameter schedule 40 PVC Well Casing with 5'of 0.010 inch slot well screen extending from 7'6" to 12'6". Installed with 6.25" ID hollw stem augers.

GMCHOBW

RW-1

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: PUMP WELL SHEET 1 OF 1

CLIENT	GROUND WATER			
General Motors Corporation	DATE	DEPTH	ELEVATION	FILE No.: 2488.385
PROJECT LOCATION	NA	NA	NA	DRILLING METHOD: Hollow Stem Auger
Chip House Area, Powertrain Plant, Ypsilanti, MI				SAMPLER TYPE: 2" Splitspoon
				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Professional Service Industries
FOREMAN: Keith Dantes

BORING LOCATION: Approximately 15' southwest of MW-602
GROUND ELEVATION: NA
DATES: STARTED: 02/17/93 ENDED: 02/17/93

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	REMARKS
0	1	0'-2'				Concrete						
						Loose, grey ,damp fine SAND. Strong petroleum odor	1'5"					
	2	2'-4'										
	3	4'-6'	4-5-5-7	24"/24"	10							
5												
	4	6'-8'	2-5-9-10	24"/24"	14							
	5	8'-10'	3-9-13-11	24"/24"	22	Same as above, wet, visible sheen in spoon						
						3" silt lens						
10	6	10'-12'	1-2-7-8	24"/24"	9							
	7	12'-14'	1-3-4-5	24"/24"	7							
	8	14'-16'	1-3-4-5	24"/24"	7	Grey, damp CLAY, little silt	13'9"					
15												
	9					EOB @16fbg						
	10											
	11											

NOTES:

Pumping Well constructed of 6" diameter schedule 40 PVC Well Casing with 10'6" of 0.020 inch slot well screen extending from 3 to 13'6".
Installed with 10.25" ID hollw stem augers.
No seal was installed at this time.

GMCHPW

AREA 2

BAY K-35

BORING LOG / MONITORING WELL DIAGRAM

ABB ENV

PROJECT NO.: 5883-10	PROJECT NAME: GM - BAY K-35			BORING/WELL DESIGNATION: MW-701
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 11 FT
DATE STARTED: 08-15-91	DATE COMPLETED: 08-15-91	GROUND ELEV.: 100.8 FT.	MEASURING POINT ELEV: 100.45 FT.	WELL DEPTH: 9.5 FT
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMME
0	CONCRETE					WELL COMPLE FLUSH MOUNT PROTECTIVE SET IN CONC
	SAND - light brown, medium grained, firm, trace silt and fine gravel	1-3'	SS	6-8-9-12	BG	
2.5						BENTONITE S
	SAND - light brown, medium grained, dense, some fine gravel	3-5'	LAB	7-14-21-18	BG	2-INCH, SCHEDULE-4 PVC RISER
5	(groundwater at 6 feet)	5-7'	LAB	13-12-15-20	BG	SAND FILTE
	4" gray silt layer at 6.8 ft.					
7.5	SILTY SAND - gray, fine, dense, wet	7-9'	LAB	10-13-18-21	3-4	2-INCH, 10-SLOT, PVC WELL S
	SILTY CLAY - gray, moderately plastic, stiff	9-11'	SS	3-6-6-9	BG	NATIVE SIL
10	END OF BORING AT 11 FEET					
12.5						
15						
17.5						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-10	PROJECT NAME: GM - BAY K-35		BORING/WELL DESIGNATION: MW-702	BORING/WELL LOCATIC
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 08-14-91	DATE COMPLETED: 08-14-91	GROUND ELEV.: 100.6 FT.	MEASURING POINT ELEV: 100.24 FT.	WELL DEPTH: 11.5 FT.
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE	
	SAND - light brown, medium grained, dense, moist, trace silt and fine gravel	1-3'	SS	7-20-20-16	BG		
2.5						BENTONITE SEAL	
		3-5'	LAB	13-15-21-40	BG	2-INCH, SCHEDULE-40 PVC RISER PIPE	
5	SAND - light brown, fine-coarse, dense, moist-wet 2" fine gravel seam at 6 ft. (groundwater at 6.5 feet)	5-7'	SS	7-14-24-34	2-4	SAND FILTER PACK	
7.5	SILTY SAND - gray, fine, very firm, wet, apparent free product	7-9'	LAB	5-10-15-24	4		
	SILT - gray, very stiff, wet, some fine sand					2-INCH, 10-SLOT, PVC WELL SCREEN	
10		9-11'	LAB	7-14-15-11	BG		
	SILTY CLAY - gray, moderately plastic, stiff, moist	11-13'	SS	2-4-7-8	BG	NATIVE SILTY CLAY	
12.5	END OF BORING AT 13 FEET						
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB EN

PROJECT NO.: 5883-10	PROJECT NAME: GM - BAY K-35			BORING/WELL DESIGNATION: MW-703	
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: HOLLOW-STEM AUGERS		BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 13 F
DATE STARTED: 08-14-91	DATE COMPLETED: 08-14-91	GROUND ELEV.: 100.5 FT.	MEASURING POINT ELEV: 100.22 FT.		WELL DEPTH: 10.75 F
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND		LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMME
0	CONCRETE					WELL COMPLE FLUSH MOUN PROTECTIVE SET IN CON
	SAND - brown-gray, fine-medium, loose-firm, moist-wet, trace silt and fine gravel	1-3'	LAB	6-11-10-8	4-6	
2.5						BENTONITE
		3-5'	SS	3-3-3-2	4-6	2-INCH, SCHEDULE-4 PVC RISER
5						
		5-7'	SS	2-3-4-2	4	
	(groundwater at 6.5 feet)					SAND FILTE
7.5	SILTY SAND - gray to black, fine, loose-firm, wet	7-9'	LAB	2-3-5-13	6	
						2-INCH, 10-SLOT, PVC WELL
10	SILT - gray, stiff, wet	9-11'	LAB	5-7-8-8	3	NATIVE
	SILTY CLAY - gray, moderately plastic, firm	11-13'	SS	2-3-5-7	3	
12.5	END OF BORING AT 13 FEET					
15						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-10	PROJECT NAME: GM - BAY K-35		BORING/WELL DESIGNATION: MW-704	BORING/WELL LOCATIC
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS		BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 11 FT.
DATE STARTED: 08-15-91	DATE COMPLETED: 08-16-91	GROUND ELEV.: 100.0 FT.	MEASURING POINT ELEV: 99.70 FT.	WELL DEPTH: 10.5 FT.
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE	
	SAND - dark brown, medium-coarse, loose, trace fine gravel	1-3'	SS	3-4-5-7	BG		
2.5						BENTONITE SEAL	
		3-5'	LAB	6-4-4-10	BG	2-INCH, SCHEDULE-40 PVC RISER PIPE	
5	SAND - brown, medium-coarse, very firm, wet, some fine gravel	5-7'	SS	6-11-18-21	2-3		
	(groundwater at 6.5 feet)					SAND FILTER PACK	
	some black discoloration below 7 feet						
7.5		7-9'	LAB	17-19-24-35	2-3		
	SILTY SAND - gray, firm, wet					2-INCH, 10-SLOT, PVC WELL SCREEN	
10		9-11'	LAB	6-11-5-5	BG		
	SILTY CLAY - gray, mod. plastic					NATIVE SILTY CLAY	
	END OF BORING AT 11 FEET						
12.5							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENV

PROJECT NO.: 5883-10	PROJECT NAME: GM - BAY K-35		BORING/WELL DESIGNATION: MW-705	
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS		BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 13 F
DATE STARTED: 08-15-91	DATE COMPLETED: 08-15-91	GROUND ELEV.: 110.5 FT.	MEASURING POINT ELEV: 100.19 FT.	WELL DEPTH: 11.5 F
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMME
0	CONCRETE					WELL COMPLE FLUSH MOUNT PROTECTIVE SET IN CONC
	SAND - dk. brown, fine-coarse, trace clay and fine gravel					
	SAND - light brown, fine-medium, very firm-dense, some silt	1-3'	SS	4-11-9-10	BG	
2.5						BENTONITE
		3-5'	LAB	4-7-24-18	BG	2-INCH, SCHEDULE-4 PVC RISER
5						
		5-7'	SS	7-9-13-13	BG	SAND FILTE
	(groundwater at 7 feet)					
	SAND - brown, fine-medium, very firm, wet, trace silt					
7.5		7-9'	LAB	6-11-18-23	4-6	
						2-INCH, 10-SLOT, PVC WELL
10		9-11'	LAB	6-13-14-14	3	
	SILTY CLAY - gray, moderately plastic, stiff-very stiff, trace fine sand	11-13'	SS	4-6-8-10	BG	NATIVE SI
12.5						
	END OF BORING AT 13 FEET					
15						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-201

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.5 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: WOOD BLOCKS — 0.2	
		CONCRETE — 1.0	
		FILL: MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT, TRACE OF CLAY & TRACE OF GRAVEL — 3.5	
		COMPACT BROWN SAND WITH TRACE OF SILT & TRACE OF GRAVEL — 5.0	5
95		MEDIUM COMPACT GRAY SAND WITH TRACE OF SILT [BLACK STAINING FROM 5.4' TO 6.2'] — 10.0	10
90		VERY STIFF GRAY SILTY CLAY — 12.0	
		END OF BORING	15
85			
			20
80			

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	5 9 9	18	-	-	2
S-2	16 19 16	35	-	-	1
S-3	7 11 7	18	-	-	<1
S-4	7 12 10	22	-	-	<1
S-5	3 4 6	10	-	-	<1

Total Depth : 12.0 FT
Drilling Date : 09/01/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-201 INSTALLED IN BORING WITH SCREEN TIP SET @ 10.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 7.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-1

NTH Consultants, Ltd.

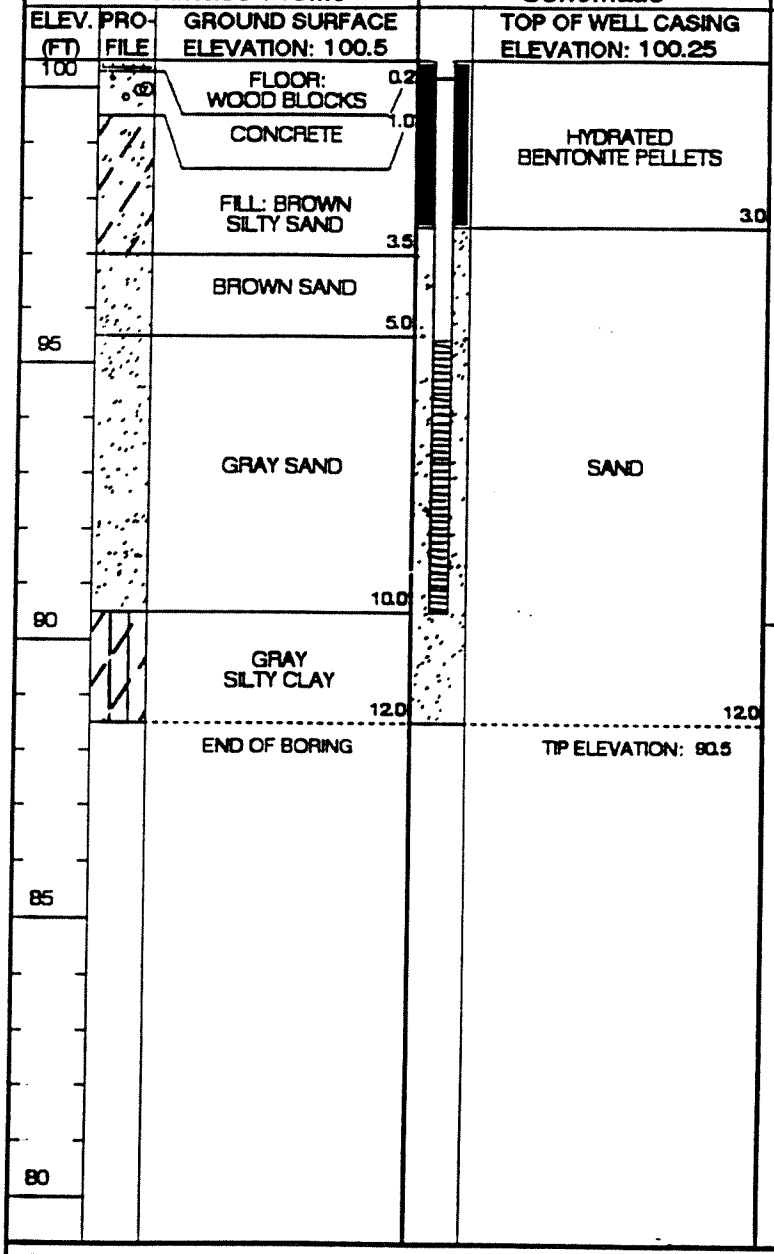
MONITORING WELL NO. MW-201

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL

Generalized Subsurface Profile / Installation Schematic



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
10/28/92	93.60	WATER
03/18/93	93.73	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-201 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	09/01/92
Completed:	09/01/92
Inspector:	M. DUEWEKE
Driller:	G. QUALLS
Contractor:	GEO-TEK DRILLING COMPANY
Equipment:	DIEDRICH D-50
Well Type:	MONITORING

Casing Diameter:	2.0"
Casing Length:	5.0'
Casing Type:	PVC
Screen Diameter:	2.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-25

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-202

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.8 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: CONCRETE 1.0	
		FILL: MEDIUM COMPACT BROWN SILTY SAND WITH TRACE OF CLAY & TRACE OF GRAVEL 3.7	
			5
95		MEDIUM COMPACT TO COMPACT BROWN SAND WITH TRACE OF SILT 7.0	
		MEDIUM COMPACT GRAY SAND [SATURATED WITH OIL AT 7.5'] 9.9	10
90		STIFF GRAY SILTY CLAY 11.0	
		END OF BORING	
			15
85			
			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	4 12 13	25	-	-	2
S-2	19 16 16	32	-	-	1
S-3	15 13 13	26	-	-	3
S-4	11 11 10	21	-	-	2
S-5	3 6 6	12	-	-	-

Total Depth : 11.0 FT
Drilling Date : 09/01/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
BOREHOLE BACKFILLED WITH HYDRATED BENTONITE PELLETS.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 9.5 FT BELOW GROUND SURFACE DURING DRILLING.

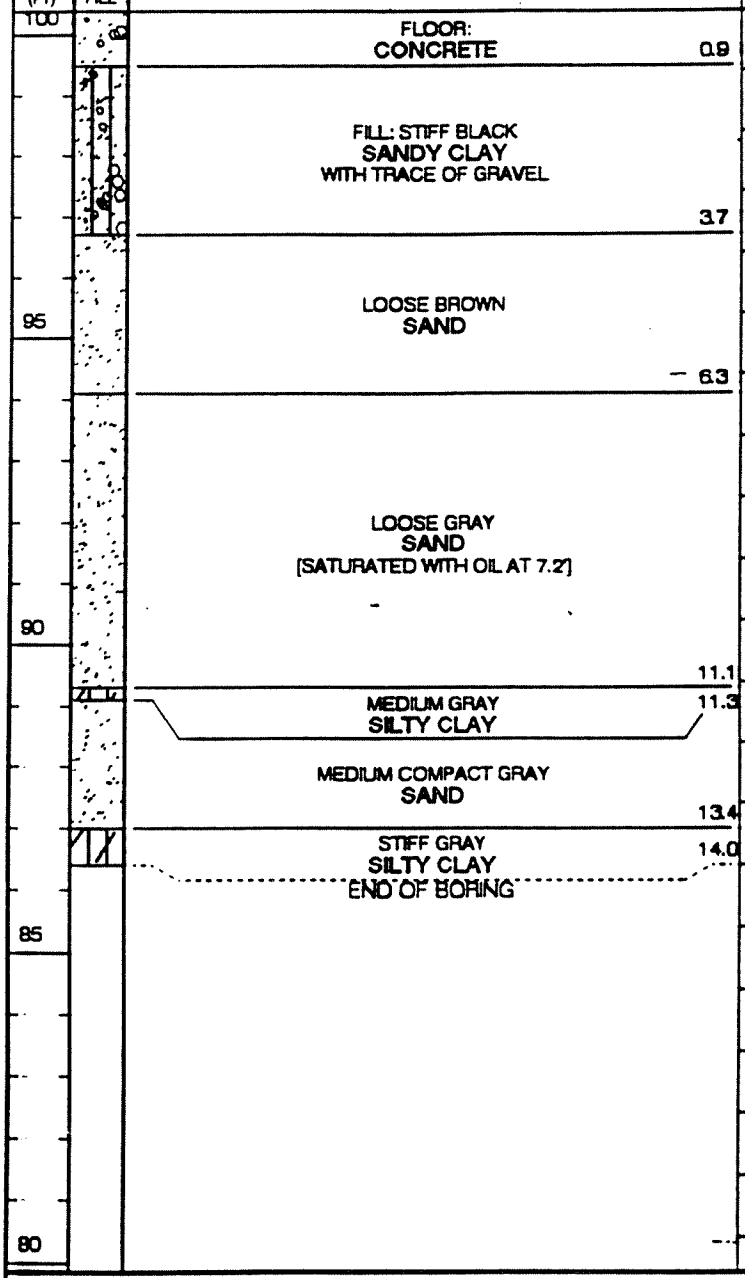
Figure No. A-2

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-208

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :



SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	7 4 4	8	-	-	4
S-2	8 9 7	16	-	-	5
S-3	1 2 2	4	-	-	2
S-4	6 5 5	10	-	-	1
S-5	5 9 10	19	-	-	1
S-6	4 5 6	11	-	-	<1

Total Depth : 14.0 FT
Drilling Date : 09/03/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
BOREHOLE BACKFILLED WITH HYDRATED BENTONITE PELLETS.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 8.5 FT BELOW GROUND SURFACE DURING DRILLING; @ 9.0 FT UPON COMPLETION.

Figure No. A-3

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-204

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 101.0 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
100		FLOOR: CONCRETE 1.0							
		FILL: DARK BROWN SAND & CLAY 1.8		S-1	8 16 12	28	-	-	1
		FILL: COMPACT BROWN SAND WITH TRACE OF SILT & TRACE OF GRAVEL 4.7	5	S-2	9 11 15	26	-	-	<1
95		MEDIUM COMPACT BROWN SAND 8.0		S-3	11 12 15	27	-	-	2
				S-4	12 20 22	42	-	-	3
		COMPACT GRAY SAND [SATURATED WITH OIL @ 8.0']	10						
90		12.0		S-5	12 17 22	39	-	-	2
		STIFF GRAY SILTY CLAY WITH OCCASIONAL SILT PARTINGS 14.0		S-6	4 5 6	11	-	-	1
		END OF BORING	15						
85									
			20						

Total Depth : 14.0 FT
Drilling Date : 09/03/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-204 INSTALLED IN BORING WITH SCREEN TIP SET @ 12.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 10.0 FT BELOW GROUND SURFACE DURING DRILLING.

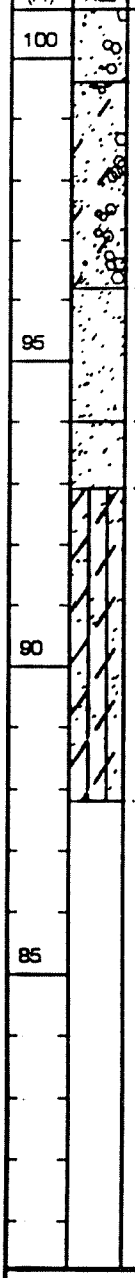
Figure No. A-4

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-205

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :



SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 100.8 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
		FLOOR: CONCRETE 1.2							
		FILL: MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT & TRACE OF GRAVEL 4.6		S-1	7 7 9	16	-	-	<1
			5	S-2	10 11 13	24	-	-	<1
		MEDIUM COMPACT BROWN SAND 6.8		S-3	10 11 12	23	-	-	<1
		MEDIUM COMPACT GRAYISH-BROWN SAND 7.9		S-4	2 2 3	5	-	-	<1
			10	S-5	3 5 7	12	-	-	<1
		STIFF GRAY SILTY CLAY WITH TRACE OF SAND 13.0		S-6	8 9 8	17	-	-	-
		END OF BORING	15						
			20						

Total Depth : 13.0 FT
Drilling Date : 09/17/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 10-1/4 INCH INSIDE DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
BOREHOLE BACKFILLED WITH HYDRATED BENTONITE PELLETS.

Water Level Observation :
NO GROUNDWATER ENCOUNTERED--BOREHOLE DRY UPON COMPLETION.

Figure No. A-5

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-206

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.9 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: WOOD BLOCKS — 0.2	
		CONCRETE — 0.9	
		FILL: COMPACT DARK BROWN TO BLACK SILTY SAND — 2.3	
		FILL: COMPACT GRAY SILTY SAND WITH TRACE OF WOOD, RUBBER & STEEL FRAGMENTS	5
95		— 5.5	
		LOOSE TO MEDIUM COMPACT GRAY SAND — 9.6	10
90		MEDIUM GRAY SILTY CLAY — 12.0	
		END OF BORING	15
85			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	25 17 18	35	-	-	2
S-2	14 3 10	13	-	-	12
S-3	7 6 5	11	-	-	3
S-4	8 5 4	9	-	-	4
S-5	4 5 6	11	-	-	-

Total Depth : 12.0 FT
Drilling Date : 03/16/93
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : S. QUALLS

Drilling Method :
DIEDRICH D-50 SKID-MOUNTED DRILL RIG 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-206 INSTALLED IN BOREHOLE WITH SCREEN TIP SET AT 12.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 6.7 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-6

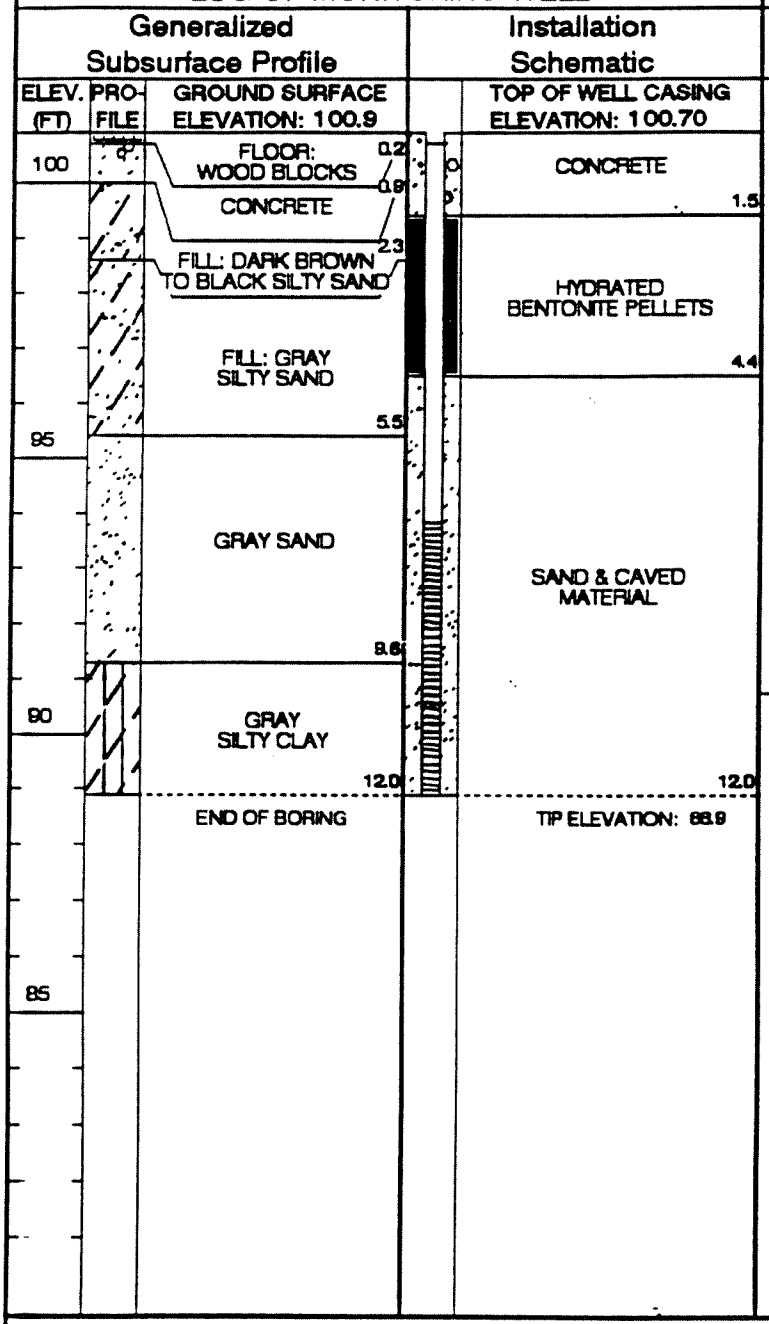
NTH Consultants, Ltd.

MONITORING WELL NO. MW-206

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
03/18/93	94.21	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-206 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	03/16/93
Completed:	03/16/93
Inspector:	M. DUEWEKE
Driller:	S. QUALLS
Contractor:	GEO-TEK,INC.
Equipment:	DIEDRICH D-50 SKID-MOUNTED DRILL RIG
Well Type:	MONITORING

Casing Diameter:	2.0"
Casing Length:	7.0'
Casing Type:	PVC
Screen Diameter:	2.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-27

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-207

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 101.2 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
100		FLOOR: CONCRETE 1.3							
		FILL: MEDIUM COMPACT BROWN SILTY SAND WITH TRACE OF GRAVEL 4.2		S-1	6 7 9	16	-	-	<1
			5	S-2	14 19 17	36	-	-	<1
95		MEDIUM COMPACT TO COMPACT BROWN SAND 8.0		S-3	10 12 13	25	-	-	<1
		MEDIUM COMPACT GRAY SAND 10.6	10	S-4	10 13 12	25	-	-	<1
90		MEDIUM TO STIFF GRAY SILTY CLAY WITH OCCASIONAL SILT PARTINGS 12.0		S-5	4 4 6	10	-	-	<1
		END OF BORING	15						
85									
			20						

Total Depth : 12.0 FT
Drilling Date : 03/17/93
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : S. QUALLS

Drilling Method :
DIEDRICH D-50 SKID-MOUNTED DRILL RIG 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-207 INSTALLED IN BOREHOLE WITH SCREEN TIP SET AT 10.5 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 7.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-7

NTH Consultants, Ltd.

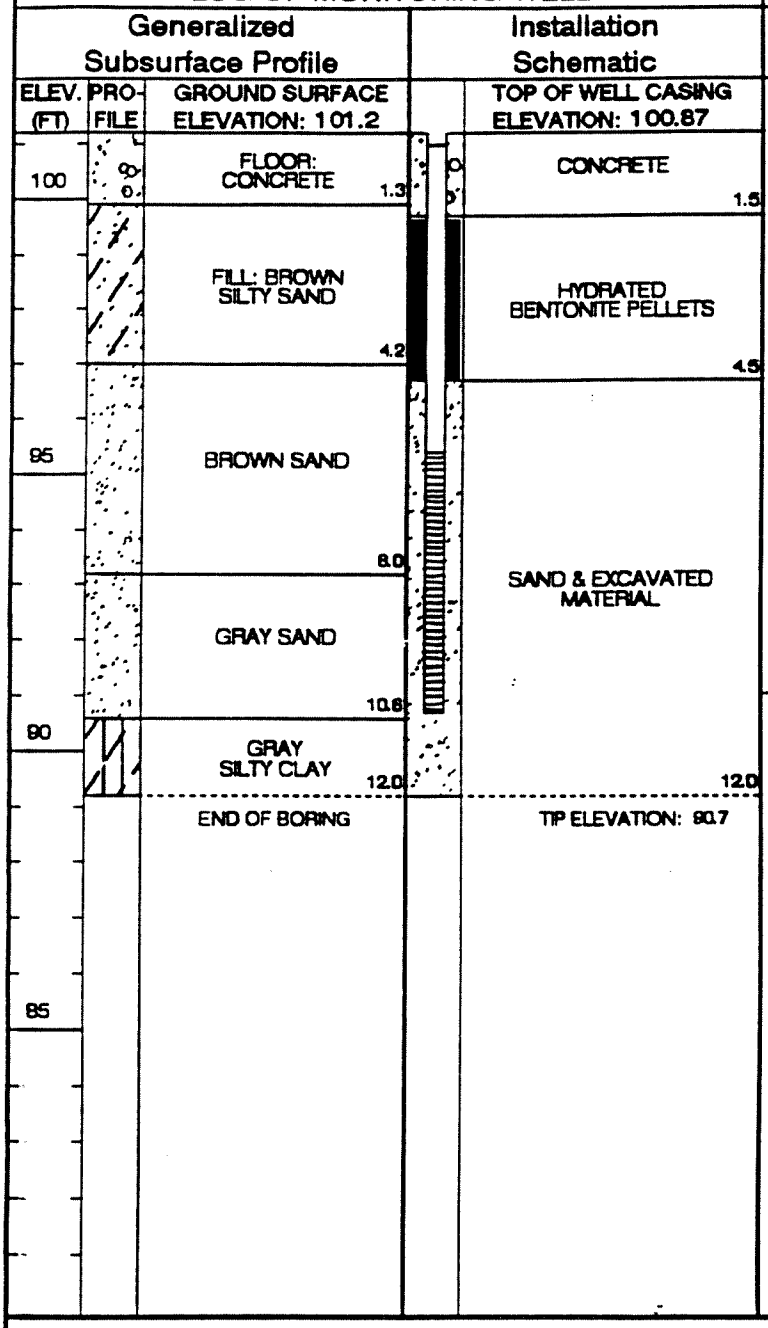
DRAFT

MONITORING WELL NO. MW-207

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
03/18/93	94.22	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-207 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	03/17/93
Completed:	03/17/93
Inspector:	M. DUEWEKE
Driller:	S. QUALLS
Contractor:	GEO-TEK,INC.
Equipment:	DIEDRICH D-50 SKID-MOUNTED DRILL RIG
Well Type:	MONITORING

Casing Diameter:	2.0"
Casing Length:	5.5'
Casing Type:	PVC
Screen Diameter:	2.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-28

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-208

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.0 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: WOOD BLOCKS	0.2
		CONCRETE	0.9
		FILL: LOOSE BROWN SAND WITH TRACE OF GRAVEL	
			3.5
		CONCRETE	4.2
95		MEDIUM COMPACT BROWN SAND WITH LITTLE GRAVEL	5
			7.0
		MEDIUM COMPACT GRAY SAND WITH LITTLE TO SOME GRAVEL [SATURATED WITH OIL @ 8.0']	
90			10
			11.0
		MEDIUM COMPACT GRAY SILT	12.0
		MEDIUM COMPACT GRAY SAND	13.8
		STIFF TO VERY STIFF GRAY SILTY CLAY WITH LITTLE SAND	14.0
85		END OF BORING	15
80			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	3 5 6	11	-	-	<1
S-2	– – 4	4/6"	-	-	<1
S-3	10 12 15	27	-	-	<1
S-4	15 22 18	40	-	-	2
S-5	9 9 12	21	-	-	<1
S-6	9 7 4	11	-	-	<1

Total Depth : 14.0 FT
Drilling Date : 09/10/92
Inspector : A. ERICKSON
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
BOREHOLE BACKFILLED WITH HYDRATED BENTONITE PELLETS.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 10.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-8

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-209

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 101.2 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
100		FLOOR: CONCRETE 1.1							
		FILL: MEDIUM COMPACT TO VERY COMPACT BROWN SILTY SAND WITH TRACE TO LITTLE GRAVEL 5.0	5	S-1	15 30 30	60	-	-	1
				S-2	22 14 5	19	-	-	<1
95		STIFF MOTTLED BROWN & GRAY SILTY CLAY WITH LITTLE SAND 5.6		S-3	7 10 12	22	-	-	<1
		MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT 8.2		S-4	4 3 5	8	-	-	<1
		STIFF GRAY SILTY CLAY WITH TRACE OF SAND & TRACE OF GRAVEL 9.0							
		END OF BORING	10						
90									
			15						
85									
			20						

Total Depth : 9.0 FT
Drilling Date : 09/11/92
Inspector : A. ERICKSON
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-209 INSTALLED IN BORING WITH SCREEN TIP SET @ 9.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 6.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-9

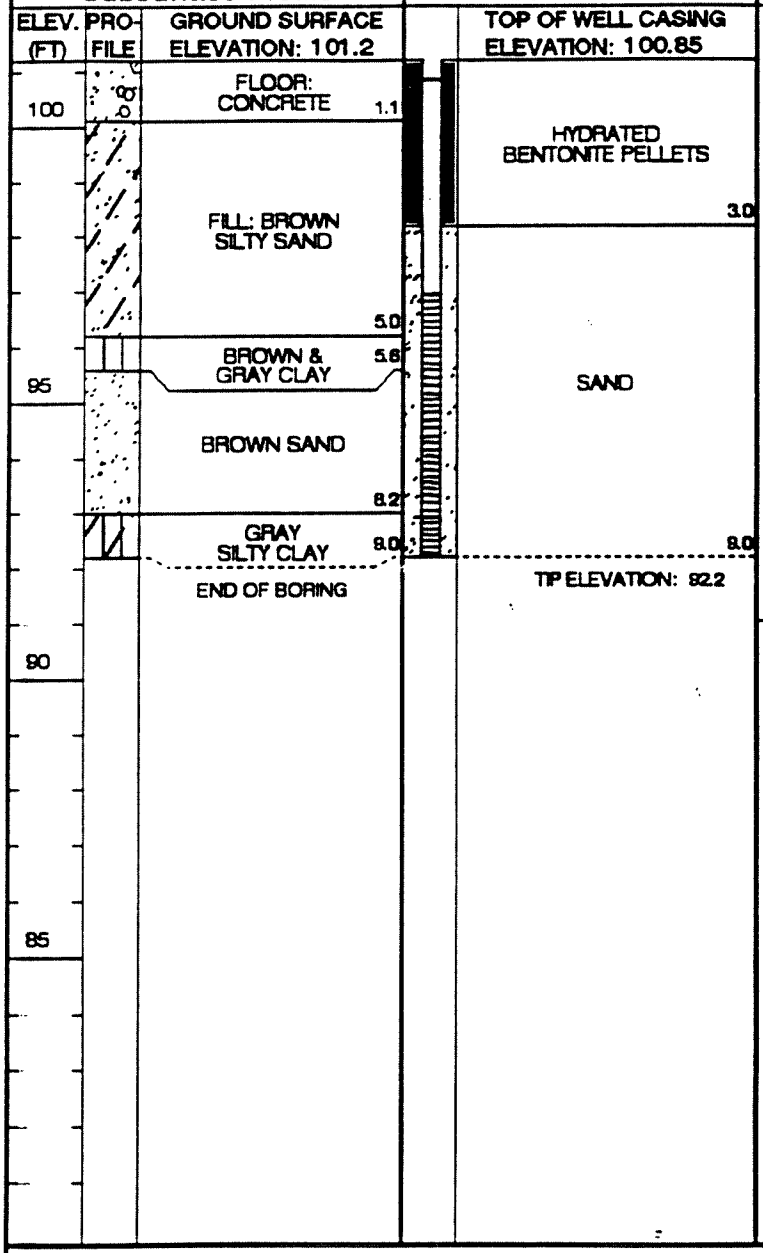
NTH Consultants, Ltd.

MONITORING WELL NO. MW-209

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
10/28/92	94.22	WATER
03/18/93	94.16	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-209 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started: 09/11/92
Completed: 09/11/92
Inspector: A. ERICKSON
Driller: G. QUALLS
Contractor: GEO-TEK DRILLING COMPANY
Equipment: DIEDRICH D-50
Well Type: MONITORING

Casing Diameter: 2.0"
Casing Length: 4.0'
Casing Type: PVC
Screen Diameter: 2.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-29

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-210

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 100.4 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
100		FLOOR: CONCRETE 0.9							
		FILL: MEDIUM COMPACT BROWN & BLACK SILTY SAND WITH TRACE OF GRAVEL		S-1	9 12 13	25	-	-	<1
		4.5	5	S-2	13 14 17	31	-	-	<1
95				S-3	11 18 18	36	-	-	<1
		COMPACT GRAY SAND WITH TRACE OF SILT & TRACE OF GRAVEL [SATURATED WITH OIL AT 8.0']		S-4	11 15 18	33	-	-	<1
90			10						
		11.1		S-5	4 4 6	10	-	-	<1
		STIFF GRAY SILTY CLAY 12.0 WITH TRACE OF SAND END OF BORING							
85			15						
80			20						

Total Depth : 12.0 FT
Drilling Date : 09/11/92
Inspector : A. ERICKSON
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
BOREHOLE BACKFILLED WITH HYDRATED BENTONITE PELLETS.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 8.5 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-10

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-211

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]

NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN

Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.4 FT

ELEV. (FT)	PROFILE	DEPTH (FT)
100		
	FLOOR: CONCRETE — 1.0	
	FILL: MEDIUM COMPACT TO COMPACT BROWN SILTY SAND WITH TRACE OF GRAVEL — 4.8	5
95		
	MEDIUM COMPACT GRAY SILTY SAND WITH TRACE OF GRAVEL [PETROLEUM ODOR NOTED AT 7.5'] — 11.3	10
90		
	STIFF GRAY SILTY CLAY WITH LITTLE SAND — 12.0	15
85	END OF BORING	
		20
80		

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	10 21 19	40	-	-	<1
S-2	9 9 8	17	-	-	<1
S-3	11 11 7	18	-	-	<1
S-4	10 12 14	26	-	-	<1
S-5	4 4 4	8	-	-	<1

Total Depth : 12.0 FT
Drilling Date : 09/11/92
Inspector : A. ERICKSON
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-211 INSTALLED IN BORING WITH SCREEN TIP SET @ 11.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 7.5 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-11

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-212

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]

NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN

Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.8 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: CONCRETE — 0.7	
		FILL: MEDIUM COMPACT DARK BROWN SILTY SAND WITH TRACE OF CLAY & TRACE OF GRAVEL — 4.5	5
95		MEDIUM COMPACT BROWN SAND — 6.0	
		COMPACT GRAY SAND — 10.5	10
90		STIFF GRAY SILTY CLAY — 11.0	
		END OF BORING	15
85			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	9 10 12	22	-	-	1
S-2	10 7 12	19	-	-	<1
S-3	15 16 22	38	-	-	2
S-4	16 17 20	37	-	-	1
S-5	11 5 5	10	-	-	<1

Total Depth : 11.0 FT
Drilling Date : 09/14/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-212 INSTALLED IN BORING WITH SCREEN TIP SET @ 10.5 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 8.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-12

NTH Consultants, Ltd.

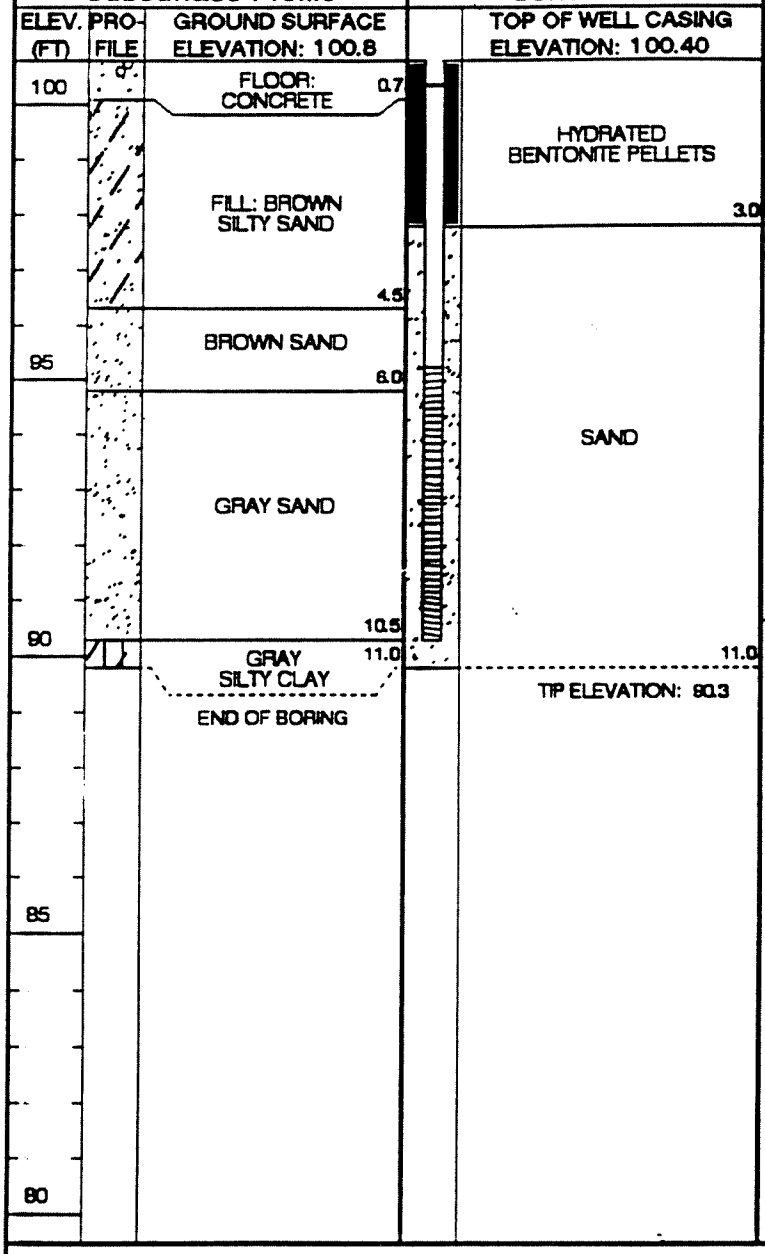
DRAFT

MONITORING WELL NO. MW-212

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
10/28/92	92.31	WATER
03/18/93	92.30	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-212 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	09/14/92
Completed:	09/14/92
Inspector:	M. DUEWEKE
Driller:	G. QUALLS
Contractor:	GEO-TEK DRILLING COMPANY
Equipment:	DIEDRICH D-50
Well Type:	MONITORING

Casing Diameter:	2.0"
Casing Length:	5.5'
Casing Type:	PVC
Screen Diameter:	2.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-31

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-213

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 100.0 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
100		FLOOR: CONCRETE 1.0							
		FILL: MEDIUM COMPACT DARK BROWN SILTY SAND WITH TRACE OF CLAY & TRACE OF GRAVEL		S-1	12 13 5	18	-	-	3
95		4.7	5	S-2	8 6 5	11	-	-	1
		MEDIUM COMPACT BROWN SAND		S-3	5 8 8	16	-	-	1
		8.0		S-4	12 15 11	26	-	-	1
90			10						
		MEDIUM COMPACT TO COMPACT GRAY SAND		S-5	12 15 17	32	-	-	1
				S-6	14 21 18	39	-	-	<1
		13.2							
85		STIFF GRAY SILTY CLAY		S-7	4 3 6	9	-	-	<1
		15.0	15						
		END OF BORING							
80			20						

Total Depth : 15.0 FT
Drilling Date : 09/14/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-213 INSTALLED IN BORING WITH SCREEN TIP SET @ 11.5 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 8.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-13

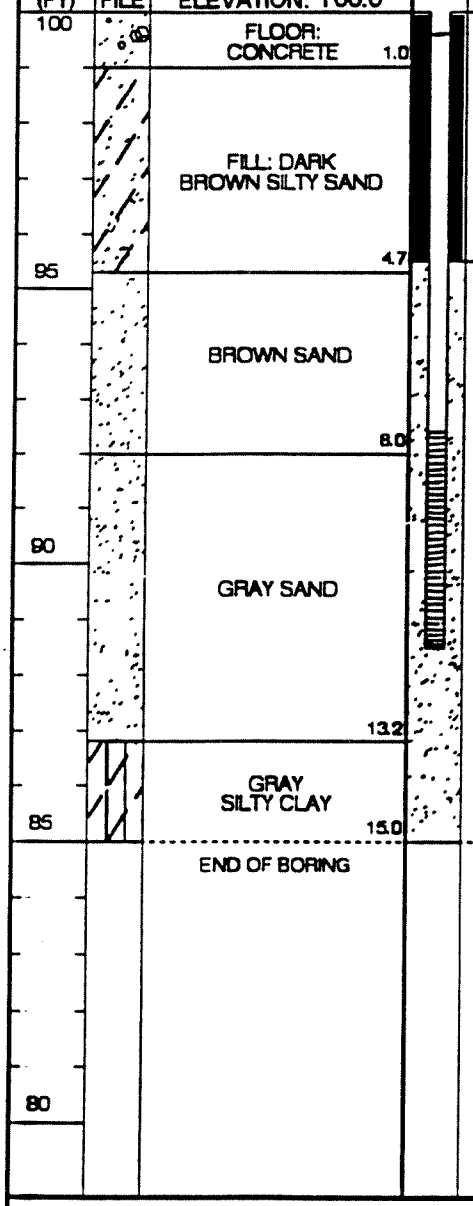
NTH Consultants, Ltd.

MONITORING WELL NO. MW-213

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
10/28/92	91.43	WATER
03/18/93	91.13	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-213 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	09/14/92
Completed:	09/14/92
Inspector:	M. DUEWEKE
Driller:	G. QUALLS
Contractor:	GEO-TEK DRILLING COMPANY
Equipment:	DIEDRICH D-50
Well Type:	MONITORING

Casing Diameter:	2.0"
Casing Length:	6.5'
Casing Type:	PVC
Screen Diameter:	2.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-32

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-214

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.0 FT

ELEV. (FT)	DEPTH (FT)	
100	0	FLOOR: CONCRETE — 1.0
		FILL: LOOSE BROWN SILTY SAND WITH OCCASIONAL CLAY LENSE — 3.0
95	5	LOOSE BROWN SILTY SAND — 7.0
		MEDIUM COMPACT BROWN TO GRAY SAND — 8.0
90	10	MEDIUM COMPACT GRAY SAND — 11.8
		MEDIUM GRAY SILTY CLAY — 12.0
85	15	END OF BORING
80	20	

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	6 3 6	9	-	-	<1
S-2	2 3 6	9	-	-	<1
S-3	11 14 16	30	-	-	<1
S-4	10 10 12	22	-	-	4
S-5	9 4 4	8	-	-	4

Total Depth : 12.0 FT
Drilling Date : 03/16/93
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 3-3/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-214 INSTALLED IN BORING WITH SCREEN TIP SET @ 12.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 9.1 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-14

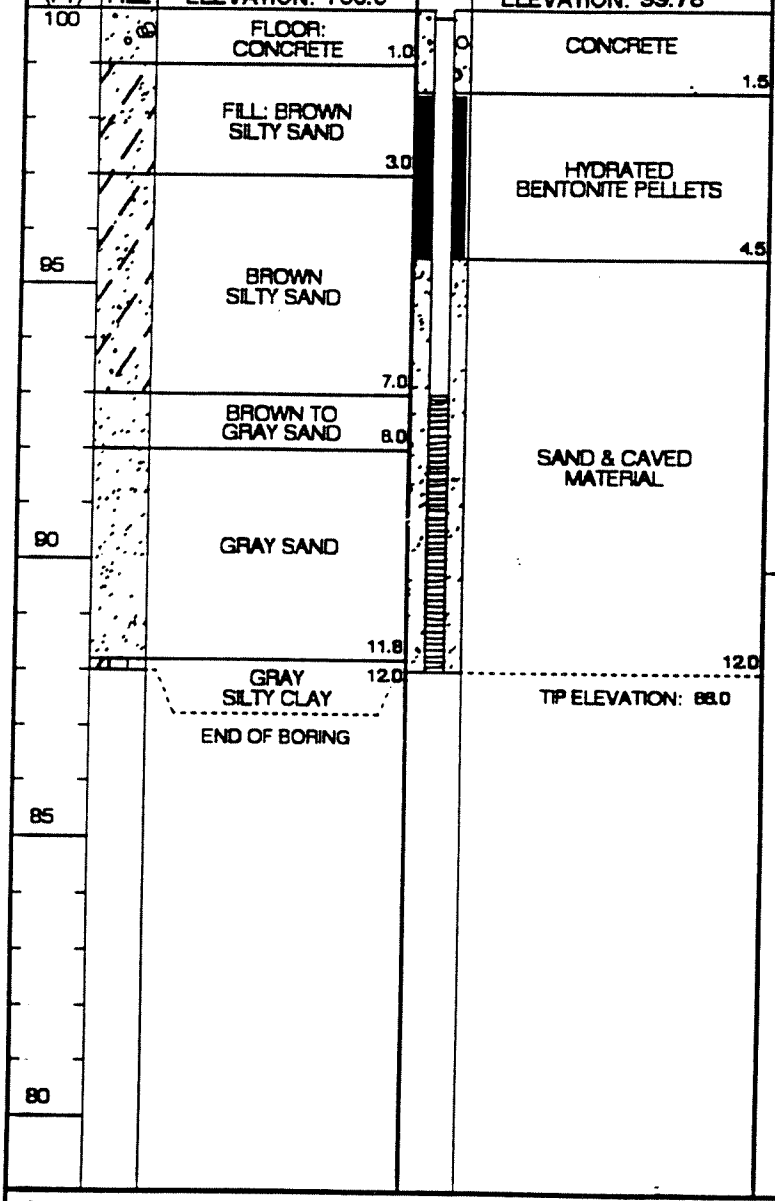
NTH Consultants, Ltd.

MONITORING WELL NO. MW-214

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
03/18/93	91.35	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-214 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started: 03/16/93
Completed: 03/16/93
Inspector: M. DUEWEKE
Driller: S. QUALLS
Contractor: GEO-TEK, INC.
Equipment: DIEDRICH D-50 SKID-MOUNTED DRILL RIG
Well Type: MONITORING

Casing Diameter: 2.0"
Casing Length: 7.0'
Casing Type: PVC
Screen Diameter: 2.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-33

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-401

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.7 FT

ELEV. (FT)	DEPTH (FT)	Description
100		FLOOR: CONCRETE
	1.1	
		FILL: LOOSE BROWN SILTY SAND WITH TRACE OF GRAVEL & TRACE OF CLAY
	3.5	
		LOOSE BROWN SAND TRACE OF SILT & TRACE OF GRAVEL
	5.2	
95		SOFT GRAY SILTY CLAY
	6.3	
		LOOSE GRAY SAND [SATURATED WITH OIL @ 6.3]
	8.3	
	8.7	MEDIUM COMPACT GRAY SILT
		MEDIUM COMPACT GRAY SAND
90	11.0	
		STIFF GRAY SILTY CLAY
	13.0	END OF BORING
85		

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	3 4 6	10	-	-	2
S-2	3 3 5	8	-	-	1
S-3	3 3 5	8	-	-	3
S-4	6 7 6	13	-	-	3
S-5	5 10 7	17	-	-	2
S-6	5 6 8	14	-	-	-

Total Depth : 13.0 FT
Drilling Date : 09/01/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 6-1/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-401 INSTALLED IN BORING WITH SCREEN TIP SET @ 11.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 9.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-15

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-402

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.6 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: CONCRETE	
		1.1	
		FILL: LOOSE BROWN SILTY SAND WITH TRACE OF GRAVEL	
			5
95		5.5	
		LOOSE BROWN SILTY SAND [SATURATED WITH OIL AT 6.3']	
		7.5	
		LOOSE BROWN SAND WITH TRACE OF SILT	10
90		10.7	
		MEDIUM TO STIFF GRAY SILTY CLAY	
		12.0	
		END OF BORING	
			15
85			
			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	6 7 7	14	-	-	<1
S-2	4 4 3	7	-	-	<1
S-3	3 2 3	5	-	-	2
S-4	1 2 5	7	-	-	4
S-5	2 3 4	7	-	-	-

Total Depth : 12.0 FT
Drilling Date : 09/02/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 6-1/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-402 INSTALLED IN BORING WITH SCREEN TIP SET @ 10.7 FT BELOW GROUND SURFACE.

Water Level Observation :

Figure No. A-16

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-403

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.0 FT

ELEV. (FT)	DEPTH (FT)	
100		FLOOR: CONCRETE — 1.1
		FILL: VERY LOOSE BROWN SAND WITH TRACE OF GRAVEL — 5.0
95	5	
		VERY LOOSE BROWN SAND — 7.0
		VERY LOOSE GRAY SAND — 10.2
90	10	
		MEDIUM TO STIFF GRAY SILTY CLAY — 12.0
		END OF BORING
85	15	
80	20	

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	1 1 1	2	-	-	3
S-2	2 2 2	4	-	-	2
S-3	2 1 1	2	-	-	2
S-4	1 1 1	2	-	-	2
S-5	3 3 4	7	-	-	-

Total Depth : 12.0 FT
Drilling Date : 09/02/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 6-1/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-403 INSTALLED IN BORING WITH SCREEN TIP SET @ 10.1 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER LEVEL @ 7.9 FT BELOW GROUND SURFACE UPON COMPLETION.

Figure No. A-17

NTH Consultants, Ltd.

LOG OF TEST BORING NO: TB-404

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.6 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: CONCRETE — 0.8	
		FILL: MEDIUM COMPACT BROWN SILTY SAND WITH TRACE OF CLAY & TRACE OF GRAVEL — 3.5	
		MEDIUM COMPACT BROWN SAND — 5.0	5
95		MEDIUM COMPACT LIGHT BROWN SAND WITH TRACE OF SILT — 7.5	
		MEDIUM COMPACT GRAY - SAND [SATURATED WITH OIL AT 8.0'] — 11.8	10
90		STIFF GRAY SILTY CLAY — 12.0	
		END OF BORING	15
85			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	8 7 7	14	-	-	2
S-2	9 10 10	20	-	-	2
S-3	5 7 9	16	-	-	3
S-4	6 9 12	21	-	-	6
S-5	13 10 8	18	-	-	1

Total Depth : 12.0 FT
Drilling Date : 09/03/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 6-1/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-404 INSTALLED IN BORING WITH SCREEN TIP SET @ 12.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 10.0 FT BELOW GROUNDSURFACE DURING DRILLING.

Figure No. A-18

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-405

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.7 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: WOOD BLOCKS	0.2
		CONCRETE	1.0
		FILL: MEDIUM COMPACT BROWN SILTY SAND WITH TRACE OF CLAY & TRACE OF GRAVEL	
			4.5
			5
95		MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT	
			8.6
		MEDIUM COMPACT GRAY SAND [SATURATED WITH OIL AT 8.6]	10.0
			10
90		STIFF GRAY SILTY CLAY	
			12.0
		END OF BORING	
			15
85			
			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNU READING (PPM)
S-1	4 5 7	12	-	-	<1
S-2	2 3 5	8	-	-	<1
S-3	8 9 12	21	-	-	<1
S-4	7 10 12	22	-	-	2
S-5	2 4 5	9	-	-	<1

Total Depth : 12.0 FT
Drilling Date : 09/04/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 6-1/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO: MW-405 INSTALLED IN BORING WITH SCREEN TIP SET @ 10.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 9.5 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-19

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-406

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]

NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN

Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.0 FT

ELEV. (FT)	DEPTH (FT)	
100	0	FLOOR: WOOD BLOCKS
	0.2	CONCRETE
	0.9	FILL: LOOSE BROWN SAND
	1.5	CONCRETE
	1.7	FILL: LOOSE BROWN SAND WITH TRACE OF GRAVEL
95	5.0	MEDIUM COMPACT GRAY SAND WITH TRACE OF GRAVEL [SATURATED WITH OIL AT 8.5']
90	10	
	10.9	MEDIUM COMPACT GRAY SILT
	11.8	GRAY SILTY CLAY WITH SOME SAND
85	15	
	12.0	END OF BORING
80	20	

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	2 1 6	7	-	-	<1
S-2	9 11 15	26	-	-	<1
S-3	11 15 20	35	-	-	<1
S-4	5 6 – –	6/6"	-	-	<1
S-5	8 12	20	-	-	<1

Total Depth : 12.0 FT
Drilling Date : 09/10/92
Inspector : A. ERICKSON
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 6-1/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-406 INSTALLED IN BORING WITH SCREEN TIP SET @ 12.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 10.5 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-20

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-407

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.8 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: CONCRETE 0.9	
		FILL: MEDIUM COMPACT BROWN SILTY SAND WITH TRACE OF CLAY & TRACE OF GRAVEL 4.2	5
95		MEDIUM COMPACT BROWN SAND [BROWN CLAY SEAM FROM 5.9' TO 6.0'] 10.2	10
90		STIFF GRAY SILTY CLAY 11.0 END OF BORING	15
85			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	4 6 9	15	-	-	2
S-2	5 7 7	14	-	-	1
S-3	5 7 11	18	-	-	1
S-4	6 8 11	19	-	-	<1
S-5	6 3 4	7	-	-	<1

Total Depth : 11.0 FT
Drilling Date : 09/18/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 10-1/4 INCH INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. MW-407 INSTALLED IN BORING WITH SCREEN TIP SET @ 10.2 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 8.5 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-21

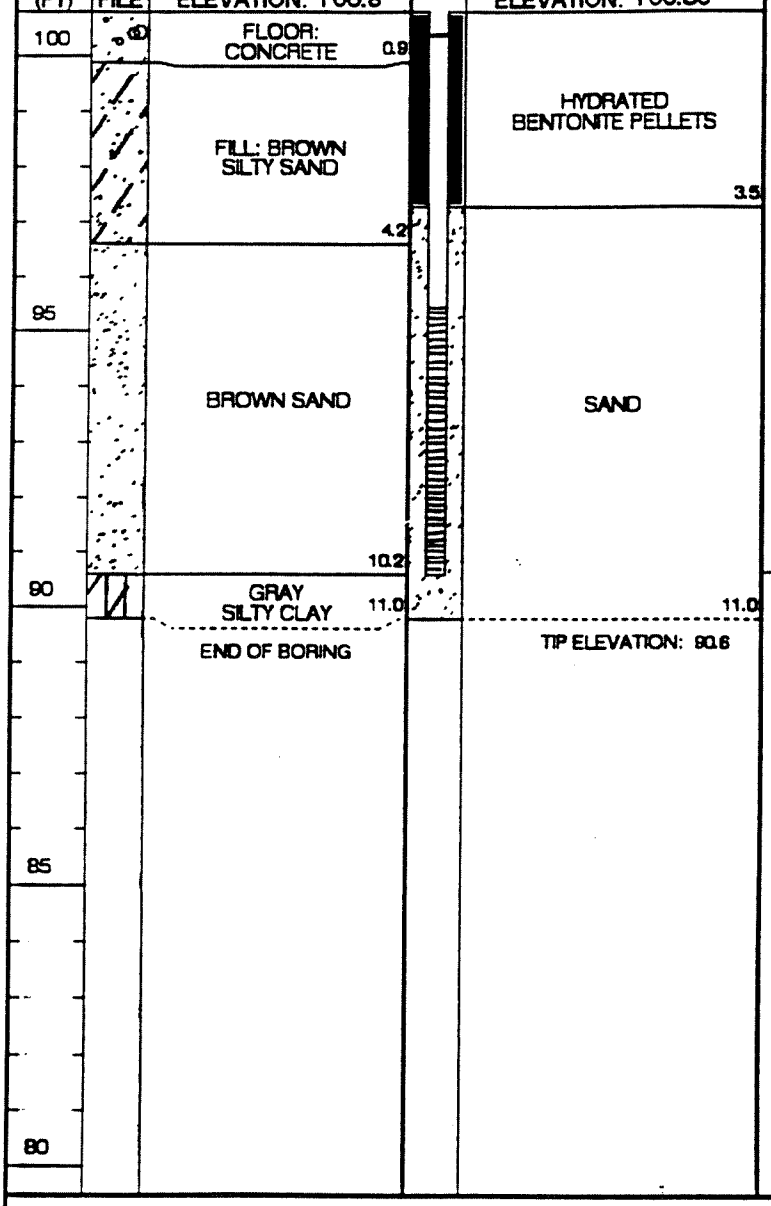
NTH Consultants, Ltd.

MONITORING WELL NO. MW-407

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
10/28/92	92.14	PRODUCT
10/28/92	92.06	WATER
03/18/93	92.14	PRODUCT
03/18/93	92.80	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-407 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	09/18/92
Completed:	09/18/92
Inspector:	M. DUEWEKE
Driller:	G. QUALLS
Contractor:	GEO-TEK DRILLING COMPANY
Equipment:	DIEDRICH D-50
Well Type:	MONITORING

Casing Diameter:	4.0"
Casing Length:	5.2'
Casing Type:	PVC
Screen Diameter:	4.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-40

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-801

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 100.0 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
100		FLOOR: CONCRETE 1.0							
		FILL: VERY LOOSE BROWN SILTY SAND WITH TRACE OF GRAVEL		S-1	- 1 1	2	-	-	3
95			5	S-2	2 1 WOH	1	-	-	--
		5.5							
		MEDIUM COMPACT BROWN SAND 6.7		S-3	5 6 8	14	-	-	6
				S-4	8 12 13	25	-	-	3
90		MEDIUM COMPACT GRAY SAND	10	S-5	7 9 12	21	-	-	1
		12.0							
		SOFT GRAY SILTY CLAY 13.5		S-6	2 2 2	4	-	-	<1
		END OF BORING							
85			15						
80			20						

Total Depth : 13.5 FT
Drilling Date : 09/17/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 10-1/4 INCH INSIDE DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
COMBINATION MONITORING WELL MW-801 INSTALLED IN BORING WITH SCREEN TIPS SET @ 13.5 FT (2') & 10.0 FT (8') BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 8.5 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-22

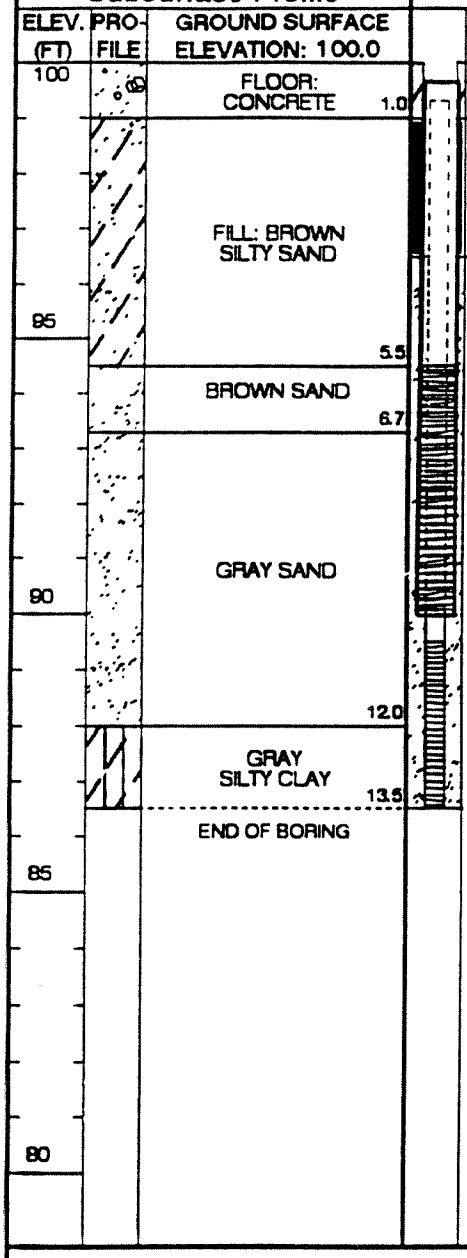
NTH Consultants, Ltd.

MONITORING WELL NO. MW-801

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
10/28/92	92.11	WATER (2" CASING)
10/28/92	92.34	PRODUCT (8" CASING)
10/28/92	91.00	WATER (8" CASING)
03/18/93	91.71	WATER (2" CASING)
03/18/93	92.10	PRODUCT (8" CASING)
03/18/93	90.47	WATER (8" CASING)

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-801 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING ELEVATIONS:
2-INCH CASING – 99.30 FT.
8-INCH CASING – 99.64 FT.

[3] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	09/17/92
Completed:	09/17/92
Inspector:	M. DUEWEKE
Driller:	G. QUALLS
Contractor:	GEO-TEK DRILLING COMPANY
Equipment:	DIEDRICH D-50
Well Type:	COMBINATION

Casing Diameter:	2.0" / 8.0"
Casing Length:	9.8' / 5.1'
Casing Type:	PVC
Screen Diameter:	2.0" / 8.0"
Screen Length:	3.0' / 4.5'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-41

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-802

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492]
NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.8 FT

ELEV. (FT)	DEPTH (FT)	
100	0.2	FLOOR: WOOD BLOCKS
	1.0	CONCRETE
		FILL: MEDIUM COMPACT BROWN SILTY SAND WITH TRACE OF CLAY & TRACE OF GRAVEL
	3.5	
95	5	MEDIUM COMPACT BROWN SAND
	7.6	
90	10	MEDIUM COMPACT GRAY SAND
	12.0	
		STIFF GRAY SILTY CLAY
85	14.0	END OF BORING
	15	
	20	

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	13 9 7	16	-	-	1
S-2	4 7 7	14	-	-	1
S-3	8 9 10	19	-	-	3
S-4	7 10 12	22	-	-	1
S-5	8 8 8	16	-	-	2
S-6	2 4 7	11	-	-	-

Total Depth : 14.0 FT
Drilling Date : 09/15/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 10-1/4 INCH INSIDE DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
COMBINATION MONITORING WELL MW-802 INSTALLED IN BORING WITH SCREEN TIPS SET @ 14.0 FT (2') & 10.5 FT (8') BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 8.9 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-23

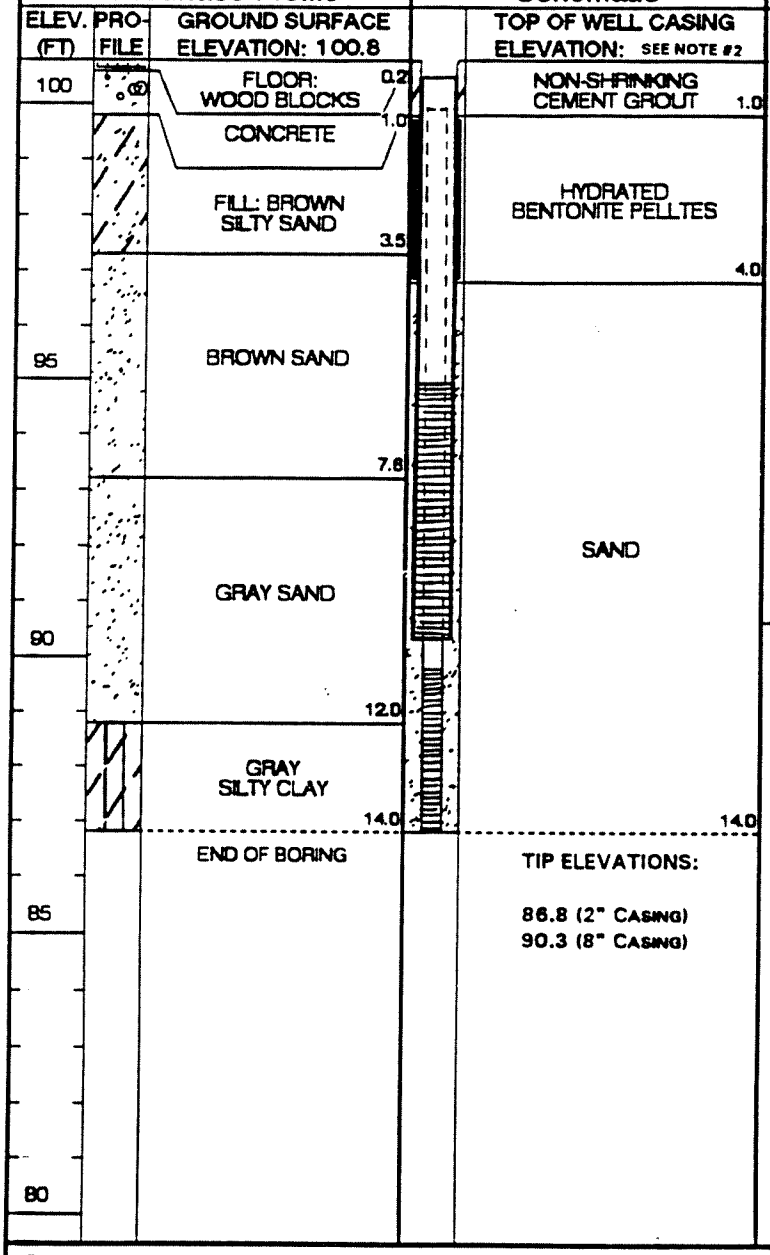
NTH Consultants, Ltd.

MONITORING WELL NO. MW-802

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
10/28/92	92.57	WATER (2" CASING)
10/28/92	92.68	PRODUCT (8" CASING)
10/28/92	91.71	WATER (8" CASING)
03/18/93	92.48	WATER (2" CASING)
03/18/93	92.49	PRODUCT (8" CASING)
03/18/93	91.38	WATER (8" CASING)

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-802 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING ELEVATIONS:
2-INCH CASING – 99.83 FT.
8-INCH CASING – 100.29 FT.

[3] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	09/15/92
Completed:	09/15/92
Inspector:	M. DUEWEKE
Driller:	G. QUALLS
Contractor:	GEO-TEK DRILLING COMPANY
Equipment:	DIEDRICH D-50
Well Type:	COMBINATION

Casing Diameter:	2.0" / 8.0"
Casing Length:	10.1' / 5.5'
Casing Type:	PVC
Screen Diameter:	2.0" / 8.0"
Screen Length:	3.0' / 4.5'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-42

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-803

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.4 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		FLOOR: CONCRETE 0.9	
		FILL: BROWN TO BLACK SANDY CLAY WITH TRACE OF GRAVEL 3.7	
95		MEDIUM COMPACT BROWN SAND 6.4	5
90		MEDIUM COMPACT GRAY SAND 13.0	10
85		STIFF GRAY SILTY CLAY 14.0 END OF BORING	15
80			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	9 12 14	26	-	-	5
S-2	11 12 14	26	-	-	2
S-3	3 3 7	10	-	-	-

Total Depth : 14.0 FT
Drilling Date : 09/16/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK DRILLING COMPANY
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 DRILL RIG WITH 10-1/4 INCH INSIDE DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
COMBINATION MONITORING WELL MW-803 INSTALLED IN BORING WITH SCREEN TIPS SET @ 14.0 FT (2') & 10.5 FT (8') BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED @ 9.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-24

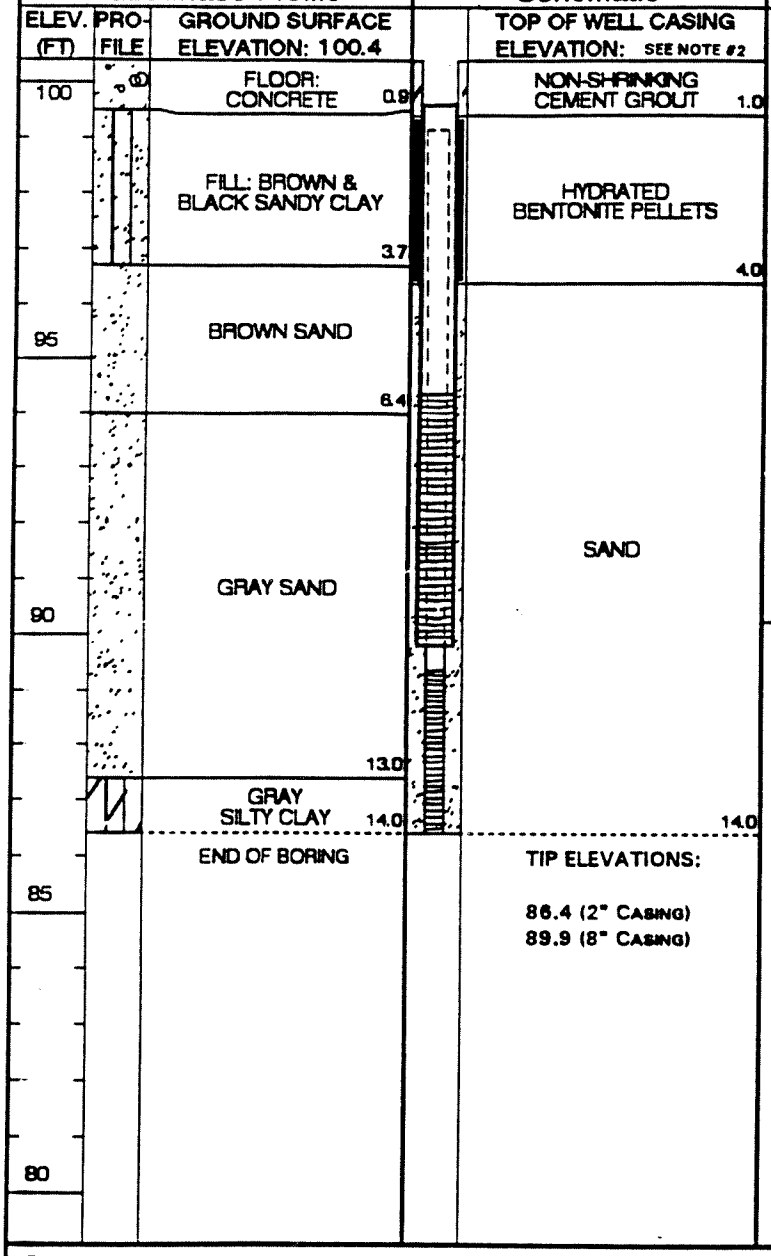
NTH Consultants, Ltd.

MONITORING WELL NO. MW-803

Project Name : GM POWERTRAIN WILLOW RUN [K-35 PE #2492] NTH Proj. No: 13-2377 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
10/28/92	92.16	WATER (2" CASING)
10/28/92	92.18	PRODUCT (8" CASING)
10/28/92	92.03	WATER (8" CASING)
03/18/93	91.93	WATER (2" CASING)
03/18/93	91.99	PRODUCT (8" CASING)
03/18/93	91.55	WATER (8" CASING)

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-803 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[2] TOP OF CASING ELEVATIONS:
2-INCH CASING – 99.20 FT.
8-INCH CASING – 99.58 FT.

[3] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

Started:	09/16/92
Completed:	09/16/92
Inspector:	M. DUEWEKE
Driller:	G. QUALLS
Contractor:	GEO-TEK DRILLING COMPANY
Equipment:	DIEDRICH D-50
Well Type:	COMBINATION

Casing Diameter:	2.0" / 8.0"
Casing Length:	9.8' / 5.2'
Casing Type:	PVC
Screen Diameter:	2.0" / 8.0"
Screen Length:	3.0' / 4.5'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-43

NTH Consultants, Ltd.

LOG OF PROFILE BORING NO: MW-1A

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]
NTH Proj. No: 13-2016 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.0 FT

ELEV. (FT)	DEPTH (FT)	
100	0	
	0.2	FLOOR: WOOD BLOCKS
	1.0	CONCRETE
		LOOSE BROWN SILTY SAND WITH TRACE OF CLAY & TRACE OF GRAVEL
	4.0	
95	5	
		MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT & TRACE OF GRAVEL [SATURATED WITH OIL AT 8.5']
90	10	
	10.5	
		LOOSE GRAY SAND WITH TRACE OF SILT
	13.0	
	13.5	LOOSE GRAY SILT
	14.0	STIFF GRAY SILTY CLAY
85	15	END OF BORING
80	20	

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)

Total Depth : 14.0 FT
Drilling Date : 02/04/92
Inspector : M. DUEWEKE
Contractor : MATECO DRILLING COMPANY
Driller : S. TAYLOR

Drilling Method :
CME-45 TRAILER-MOUNTED DRILLING RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. 1A CONSTRUCTED IN BORING WITH SCREEN TIP SET AT 11.7 FEET BELOW FLOOR SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 9.0 FEET BELOW FLOOR SURFACE DURING DRILLING.

Figure No. B-1

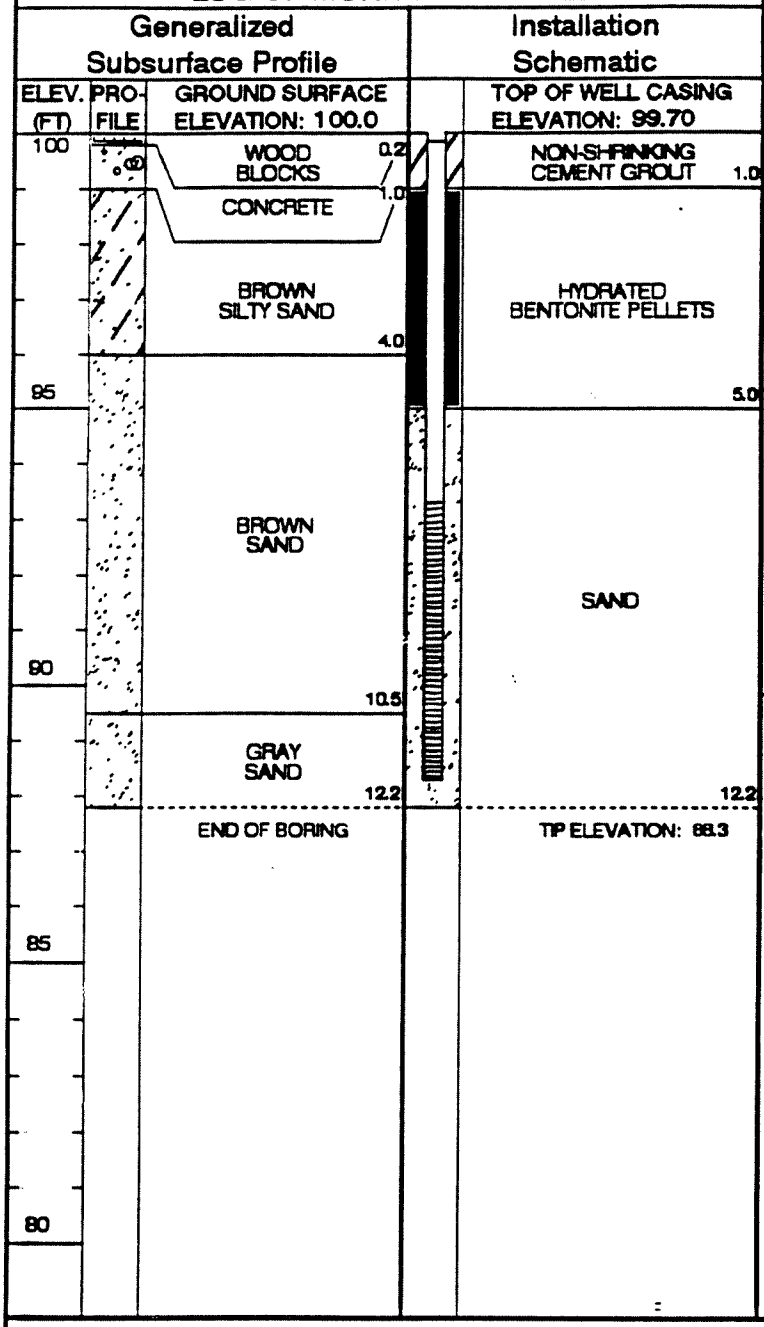
NTH Consultants, Ltd.

MONITORING WELL NO. 1A

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891] NTH Proj. No: 13-2016 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/10/92	92.85	PRODUCT
02/10/92	90.76	WATER
02/17/92	92.82	PRODUCT
02/17/92	90.56	WATER
02/28/92	92.89	PRODUCT
02/29/92	90.64	WATER
10/28/92	93.11	PRODUCT
10/28/92	91.12	WATER
03/18/93	92.91	PRODUCT
03/18/93	90.67	WATER

NOTES :

[1] MONITORING WELL NO. 1A WAS CONSTRUCTED IN PROFILE BORING 4 FT EAST OF TEST BORING NO. MW-1.

[2] REFER TO LOG OF TEST BORING NO. MW-1 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

[3] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.
BENCHMARK: PROTECTIVE COVER RIM OF MW-214.

Started:	02/07/92
Completed:	02/07/92
Inspector:	M. DUEWEKE
Driller:	S. TAYLOR
Contractor:	MATECO DRILLING COMPANY
Equipment:	CME-45
Well Type:	MONITORING

Casing Diameter:	4.0"
Casing Length:	6.4'
Casing Type:	PVC
Screen Diameter:	4.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. B-5

NTH Consultants, Ltd.

LOG OF TEST BORING NO: MW-2

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]
NTH Proj. No: 13-2016 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.0 FT

ELEV. (FT)	DEPTH (FT)	
100	0	
	0.2	FLOOR: WOOD BLOCKS
	1.0	CONCRETE
	1.5	MEDIUM COMPACT BROWN SILTY SAND [PETROLEUM ODOR NOTED]
	2.5	MEDIUM COMPACT BROWN CLAYEY SAND WITH TRACE OF GRAVEL
95	4.5	MEDIUM COMPACT BROWN SILTY SAND WITH LITTLE GRAVEL
	5	
		MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT & TRACE OF GRAVEL
90	10	
	10.5	MEDIUM COMPACT GRAY SAND WITH TRACE OF SILT
	12.0	END OF BORING
85	15	
80	20	

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
SS-1	7 10 13	23	-	-	4.0
SS-2	10 12 10	22	-	-	4.0
SS-3	7 10 11	21	-	-	4.0
SS-4	9 12 15	27	-	-	3.0
SS-5	8 11 13	24	-	-	2.5

Total Depth : 12.0 FT
Drilling Date : 02/05/92
Inspector : M. DUEWEKE
Contractor : MATECO DRILLING COMPANY
Driller : S. TAYLOR

Drilling Method :
CME-45 TRAILER-MOUNTED DRILLING RIG WITH 4-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. 2 CONSTRUCTED IN BORING WITH SCREEN TIP SET AT 11.9 FEET BELOW FLOOR SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 7.5 FEET BELOW FLOOR SURFACE DURING DRILLING.

Figure No. B-2

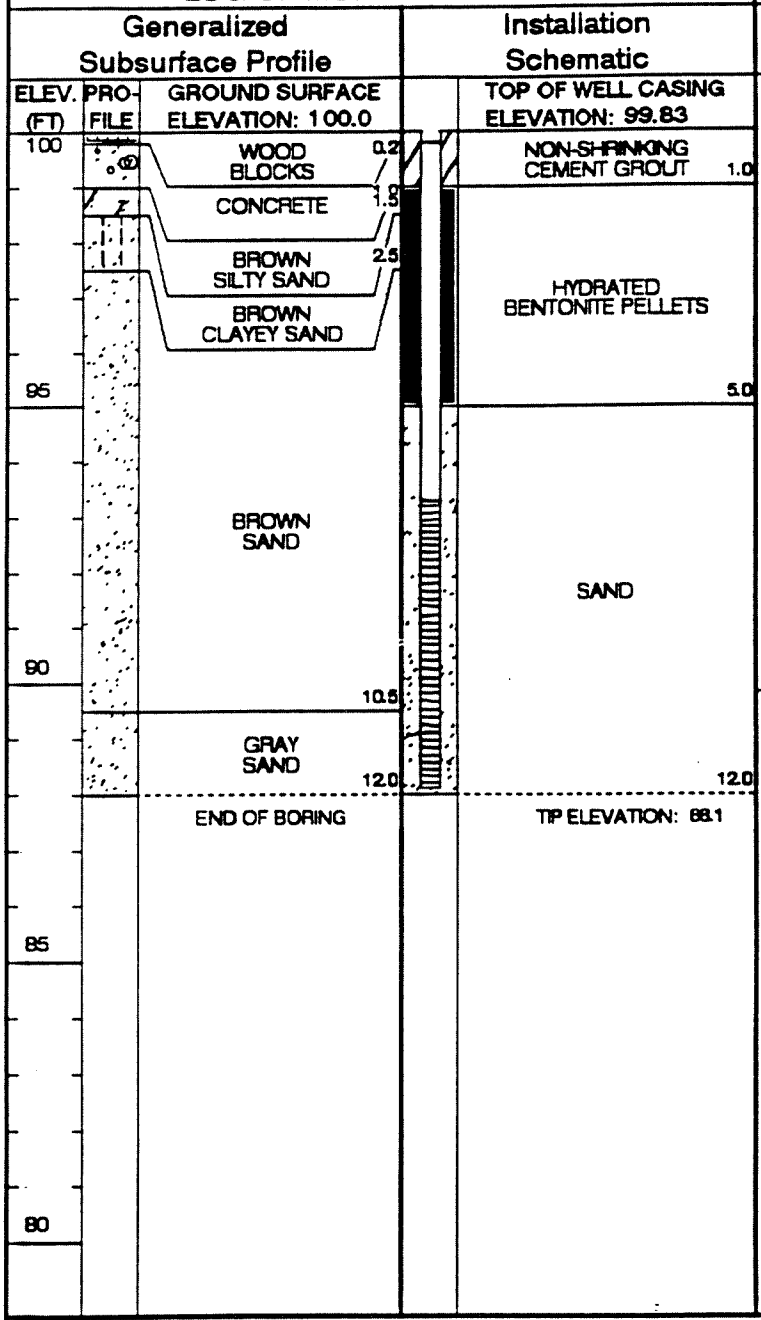
NTH Consultants, Ltd.

MONITORING WELL NO. 2

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891] NTH Proj. No: 13-2016 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/06/92	92.59	WATER
02/07/92	92.53	WATER
02/10/92	92.99	PRODUCT
02/10/92	92.17	WATER
02/17/92	92.62	PRODUCT
02/17/92	91.76	WATER
02/28/92	92.72	PRODUCT
02/29/92	91.66	WATER
10/28/92	92.96	PRODUCT
10/28/92	92.31	WATER
03/18/93	92.79	PRODUCT
03/18/93	91.48	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. MW-2 FOR DETAILS OF SUBSURFACE STARTIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.
BENCHMARK: PROTECTIVE COVER RIM OF MW-214

Started:	02/05/92
Completed:	02/05/92
Inspector:	M. DUEWEKE
Driller:	S. TAYLOR
Contractor:	MATECO DRILLING COMPANY
Equipment:	CME-45
Well Type:	MONITORING

Casing Diameter:	2.0"
Casing Length:	6.7'
Casing Type:	PVC
Screen Diameter:	2.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. B-6

NTH Consultants, Ltd.

LOG OF TEST BORING NO:MW-3

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]
NTH Proj. No: 13-2016 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 100.0 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
100		FLOOR: WOOD BLOCKS 0.2 CONCRETE 1.0 MEDIUM COMPACT DARK BROWN CLAYEY SAND WITH LITTLE GRAVEL 2.5		SS-1	7 11 12	23	-	-	<1.0
		MEDIUM COMPACT BROWN SILTY SAND WITH TRACE OF GRAVEL 4.5	5	SS-2	10 11 12	23	-	-	<1.0
95				SS-3	6 7 10	17	-	-	<1.0
		MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT		SS-4	5 7 11	18	-	-	4.0
90		10.5	10	SS-5	3 4 2	6	-	-	2.0
		MEDIUM COMPACT GRAY SAND WITH TRACE OF SILT 12.0 END OF BORING		SS-6	5 5	10	-	-	2.0
85			15						
80			20						

Total Depth : 12.0 FT
Drilling Date : 02/06/92
Inspector : M. DUEWEKE
Contractor : MATECO DRILLING COMPANY
Driller : S. TAYLOR

Drilling Method :
CME-45 TRAILER-MOUNTED DRILLING RIG WITH 4-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. 3 CONSTRUCTED IN BORING WITH SCREEN TIP SET AT 11.8 FEET BELOW FLOOR SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 7.5 FEET BELOW FLOOR SURFACE DURING DRILLING.

Figure No. B-3

NTH Consultants, Ltd.

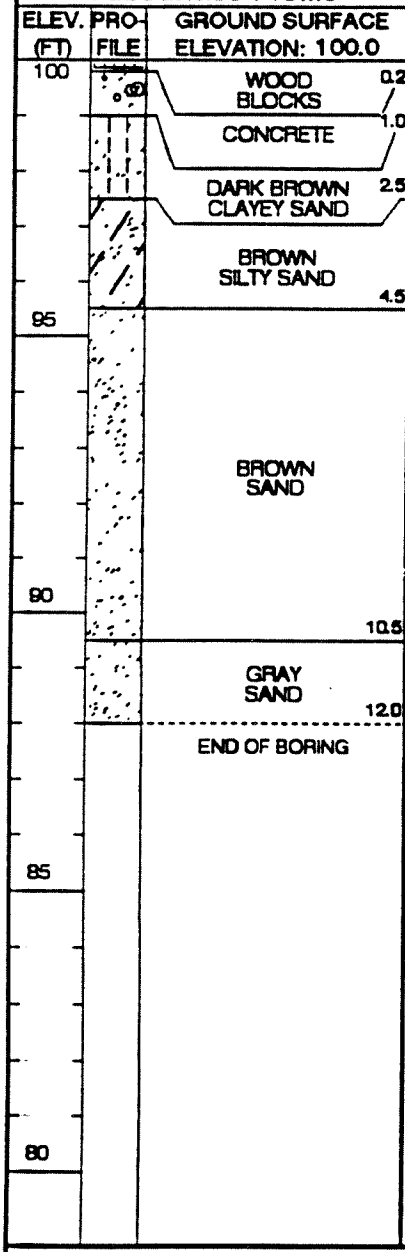
MONITORING WELL NO. 3

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891] NTH Proj. No: 13-201600

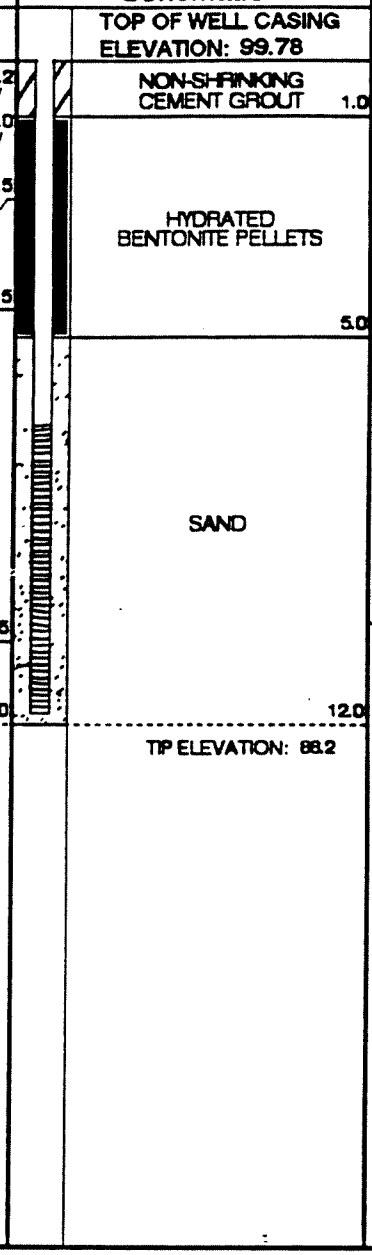
Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL

Generalized Subsurface Profile



Installation Schematic



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/07/92	92.40	WATER
02/10/92	92.52	PRODUCT
02/10/92	91.96	WATER
02/17/92	92.52	PRODUCT
02/17/92	91.77	WATER
02/28/92	92.57	PRODUCT
02/29/92	91.85	WATER
10/28/92	92.81	PRODUCT
10/28/92	91.90	WATER
03/18/93	92.67	PRODUCT
03/18/93	91.97	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. MW-3 FOR DETAILS OF SUBSURFACE STARTIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.
BENCHMARK: PROTECTIVE COVER RIM OF MW-214

Started:	02/06/92
Completed:	02/06/92
Inspector:	M. DUEWEKE
Driller:	S. TAYLOR
Contractor:	MATECO DRILLING COMPANY
Equipment:	CME-45
Well Type:	MONITORING

Casing Diameter:	2.0"
Casing Length:	6.6'
Casing Type:	PVC
Screen Diameter:	2.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

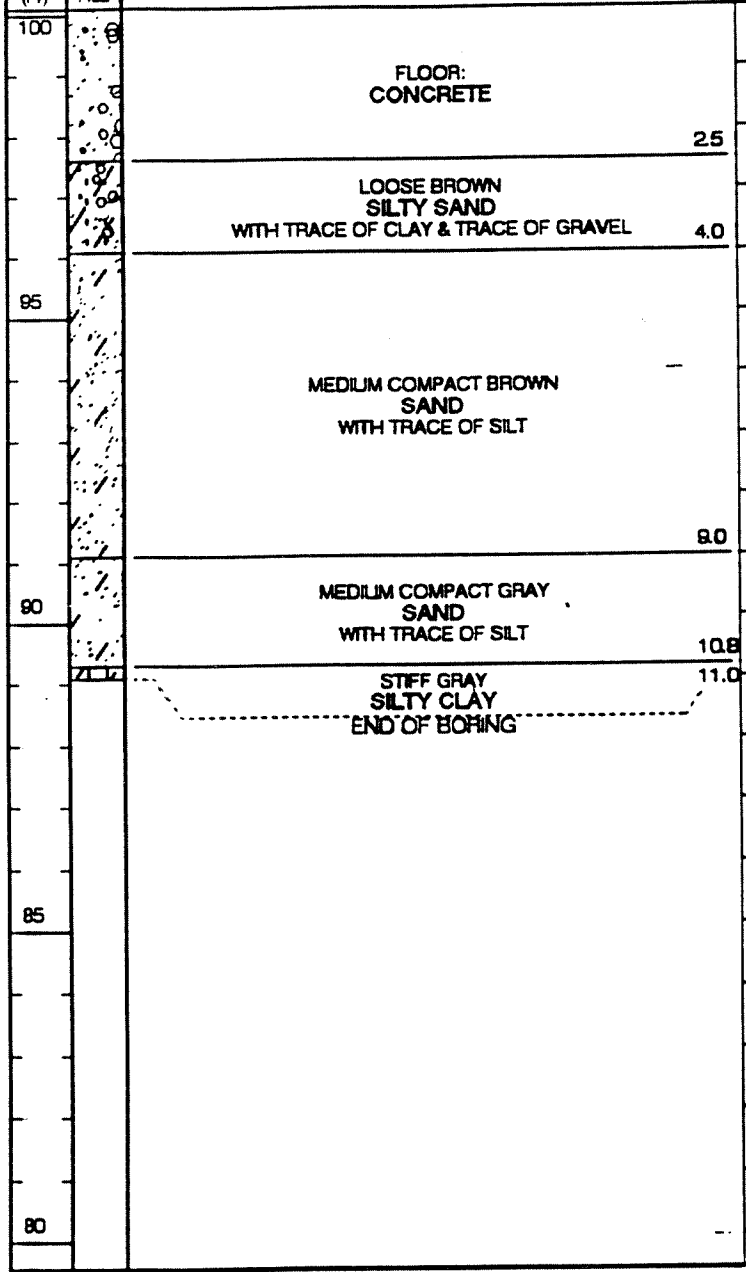
Figure No. B-7

NTH Consultants, Ltd.

LOG OF TEST BORING NO: MW-4

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]
NTH Proj. No: 13-2016 00

Project Location : YPSILANTI, MICHIGAN
Checked By :



SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
SS-1	5 4 5	9	-	-	<1.0
SS-2	5 7 8	15	-	-	<1.0
SS-3	5 7 10	17	-	-	<1.0
SS-4	6 7 4	11	-	-	<1.0

Total Depth : 11.0 FT
Drilling Date : 02/10/91
Inspector : M. DUEWEKE
Contractor : MATECO DRILLING COMPANY
Driller : J. MASKELL

Drilling Method :
CME-45 TRAILER-MOUNTED DRILLING RIG WITH 4-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. 4 CONSTRUCTED IN BORING WITH SCREEN TIP SET AT 10.6 FEET BELOW FLOOR SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 6.5 FEET BELOW FLOOR SURFACE DURING DRILLING.

Figure No. B-4

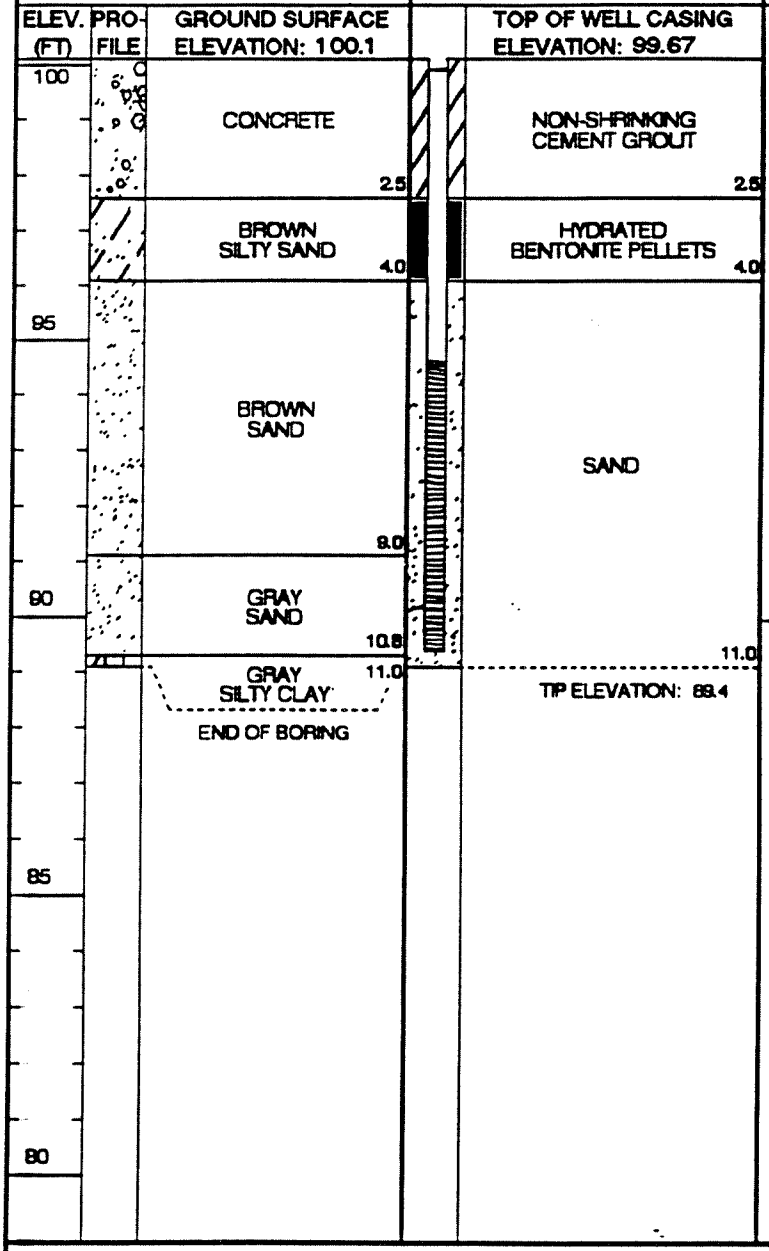
NTH Consultants, Ltd.

MONITORING WELL NO. 4

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891] NTH Proj. No: 13-2016 00

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev.(ft)	Comments
02/10/92	92.58	WATER
02/17/92	92.60	WATER
02/28/92	92.65	WATER
10/28/92	93.00	WATER
03/18/93	92.73	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. MW-4 FOR DETAILS OF SUBSURFACE STARTIGRAPHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.
BENCHMARK: PROTECTIVE COVER RIM OF MW-214

Started: 02/10/92
Completed: 02/11/92
Inspector: M. DUEWEKE
Driller: J. MASKELL
Contractor: MATECO DRILLING COMPANY
Equipment: CME-45
Well Type: MONITORING

Casing Diameter: 2.0"
Casing Length: 5.3'
Casing Type: PVC
Screen Diameter: 2.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. B-8

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-1

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]

NTH Proj. No: 13-2370 00

Project Location : YPSILANTI, MICHIGAN

Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.6 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
100		PAVEMENT: CONCRETE 0.8	
		FILL: MEDIUM COMPACT BROWN SAND WITH TRACE OF CLAY & TRACE OF GRAVEL	5
95		6.5	
		COMPACT BROWN SAND WITH TRACE OF SILT	10
90		10.0	
		MEDIUM COMPACT GRAY SAND 11.7	
		MEDIUM TO STIFF GRAY SILTY CLAY WITH TRACE OF SAND 14.0	15
85		END OF BORING	20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNU READING (PPM)
S-1	3 6 8	14	-	-	<1
S-2	7 6 8	14	-	-	<1
S-3	3 4 10	14	-	-	<1
S-4	13 14 17	31	-	-	<1
S-5	11 11 12	23	-	-	<1
S-6	8 8 4	12	-	-	<1
S-7	4 6 8	14	-	-	<1

Total Depth : 14.0 FT
Drilling Date : 08/27/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 TRAILER-MOUNTED DRILL RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
OBSERVATION WELL NO. OW-1 INSTALLED IN BOREHOLE WITH SCREEN TIP SET @ 11.7 FEET BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 10.0 FEET BELOW GROUND SURFACE DURING DRILLING.

Figure No. B-9

NTH Consultants, Ltd.

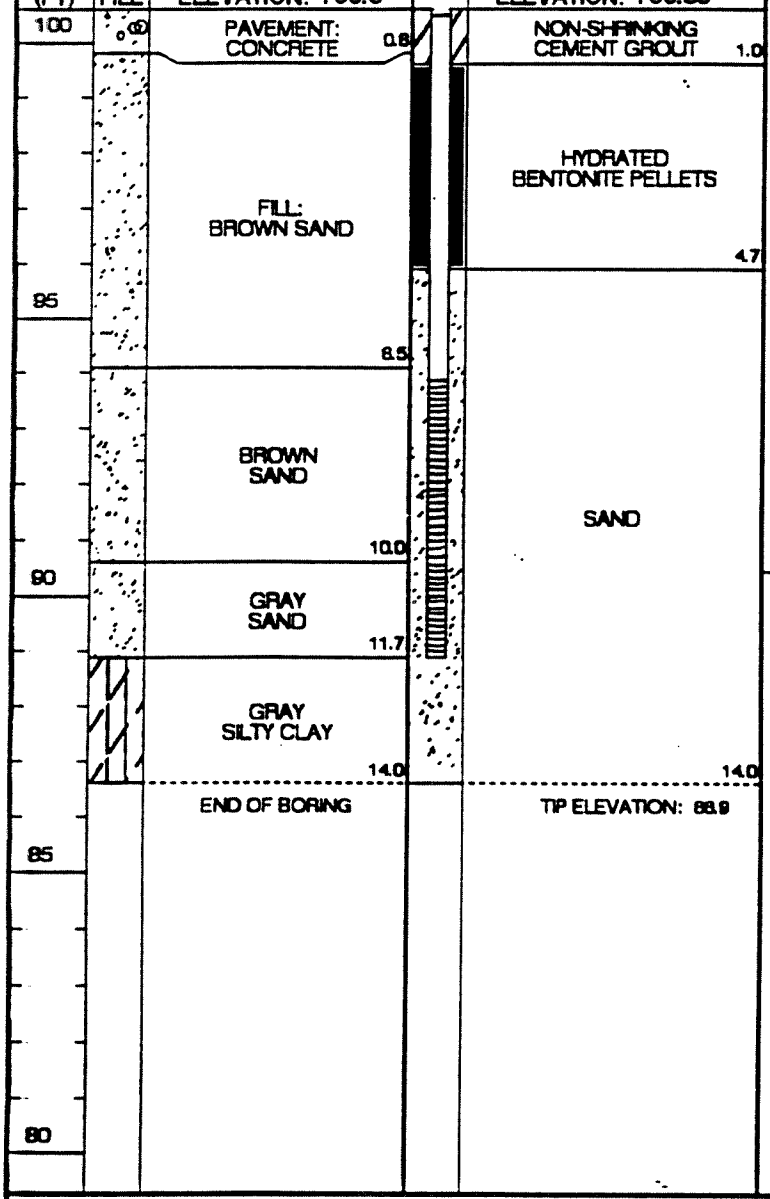
DRAFT

OBSERVATION WELL NO. OW-1

Project Name : GM POWERTRAIN [BLDG-17 PE #2392] **NTH Proj. No:** 13-2370 00

Project Location : YPSILANTI, MICHIGAN **Checked By :**

LOG OF OBSERVATION WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
03/18/93	91.10	WATER

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-1 FOR DETAILS OF SUBSURFACE STRATIGRAPGHY.

[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.
BENCHMARK: PROTECTIVE COVER RIM OF MW-214.

Started:	08/27/92	**Casing Diameter:**	4.0"
Completed:	08/27/92	**Casing Length:**	6.5'
Inspector:	M. DUEWEKE	**Casing Type:**	PVC
Driller:	G. QUALLS	**Screen Diameter:**	4.0"
Contractor:	GEO-TEK, INC.	**Screen Length:**	5.0'
Equipment:	DIEDRICH D-50	**Screen Mesh:**	0.010"
Well Type:	OBSERVATION	**Screen Type:**	PVC

Figure No. B-11

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-5

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
NTH Proj. No: 13-2370 02

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 100.3 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	UNCONF. COMP.ST. (PSF)
100		PAVEMENT: CONCRETE 0.8							
		FILL: MEDIUM COMPACT GRAY SAND WITH LITTLE GRAVEL 1.8		S-1	6 4 8	12	-	-	<1
		FILL: MEDIUM COMPACT BROWN SAND & GRAVEL 3.7							
		FILL: LOOSE GRAY PEA GRAVEL 4.8	5	S-2	2 2 6	8	-	-	<1
95		FILL: LOOSE BROWN SAND 6.2							
		MEDIUM COMPACT BROWN TO GRAY SAND WITH TRACE OF GRAVEL 7.8		S-3	8 11 13	24	-	-	<1
		MEDIUM COMPACT BROWN FINE SAND	10	S-4	7 10 11	21	-	-	5
90		10.5							
		MEDIUM COMPACT GRAY FINE SAND 13.0		S-5	11 11 9	20	-	-	1
		STIFF GRAY SILTY CLAY 15.0	15	S-6	4 6 7	13	-	-	-
85		END OF BORING							
			20						
80									

Total Depth : 15.0 FT
Drilling Date : 02/09/93
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : C. WITHERELL

Drilling Method :
DIEDRICH D-50 TRAILER-MOUNTED DRILLING RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
OBSERVATION WELL NO. OW-5 INSTALLED IN BOREHOLE WITH SCREEN TIP SET AT 14.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 9.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. B-10

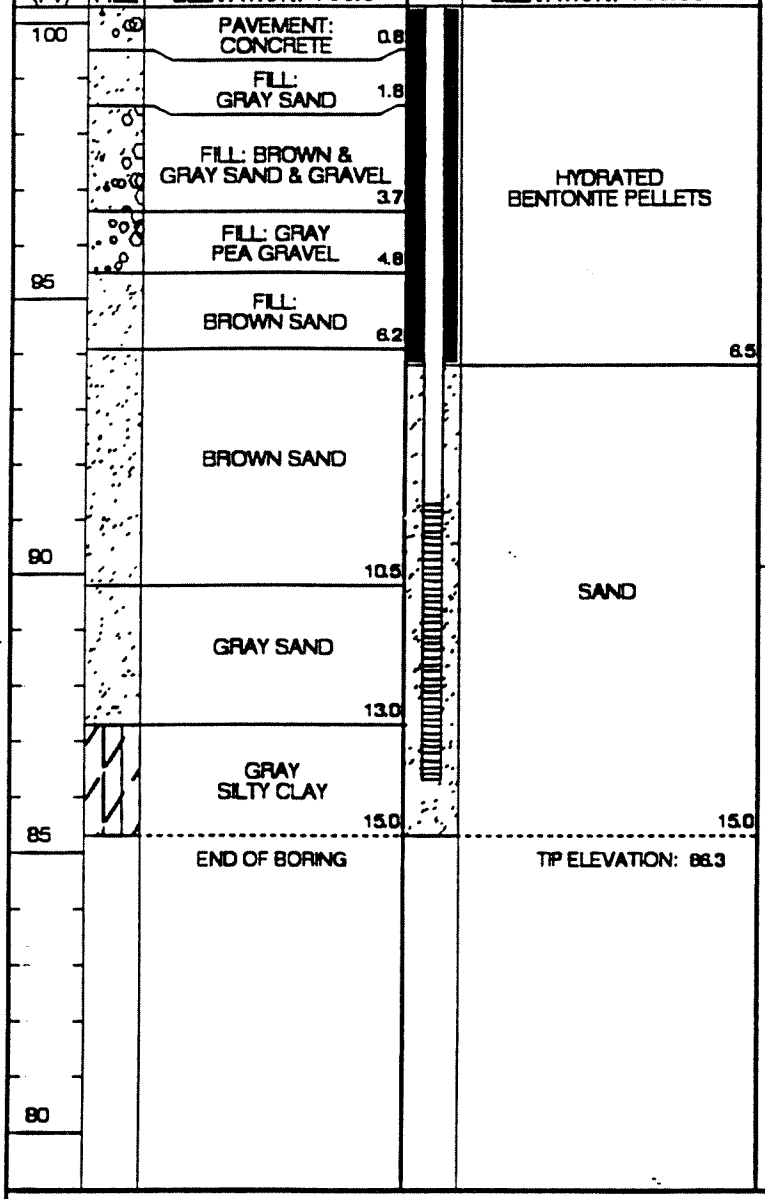
NTH Consultants, Ltd.

OBSERVATION WELL NO. OW-5

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
NTH Proj. No: 13-2370 02

Project Location : YPSILANTI, MICHIGAN
Checked By :

LOG OF OBSERVATION WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/09/93	91.26	BEFORE DEVELOPMENT
03/10/93	91.43	

NOTES :

[1] REFER TO LOG OF TEST BORING NO. TB-5 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.
[2] TOP OF CASING & GROUND SURFACE ELEVATIONS ESTABLISHED BY AYRES, LEWIS, NORRIS & MAY, INC. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.
BENCHMARK: PROTECTIVE COVER RIM OF MW-214.

Started:	02/09/93
Completed:	02/09/93
Inspector:	M. DUEWEKE
Driller:	C. WITHERELL
Contractor:	GEO-TEK, INC.
Equipment:	DIEDRICH D-50, TRAILER-MOUNTED
Well Type:	OBSERVATION

Casing Diameter:	4.0"
Casing Length:	8.7'
Casing Type:	PVC
Screen Diameter:	4.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. B-12

PROJECT NO.: 9803-05	PROJECT NAME: GM - POWERTRAIN (K-35)	BORING/WELL DESIGNATION: MW-X	BORING/WELL LOCATION
DRILLING CONTRACTOR: CARLO ENVIRONMENTAL	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 02/08/96	DATE COMPLETED: 02/08/96	GROUND ELEV.: 719.13 FT.	MEASURING POINT ELEV: FT.
WELL DEPTH: 12.5 FT.	EASTERN WELL		
RIG: SKID RIG	DRILLER: P. LIBBY	HELPER: M. BOND, D.BOND	LOGGED BY: B. HARDY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	PI METER	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A LOCKABLE STEEL PROTECTIVE COVER, SET IN CONCRETE
	SILTY SAND - trace gravel, very fine-medium grained, well graded, dry, dark brown, no odor, SM - logged from auger flights					CEMENT 6" PVC RISER PIPE
2.5						BENTONITE HOLE PLUG
5.0	SILTY SAND - some gravel, very fine-medium grained, well graded, medium dense, moist, medium brown to black, petroleum-like odor, SM		SS	4 8 8 6	4.5	
7.5	SAND - fine-medium grained, moderately graded, loose, wet, medium brown and black, petroleum-like odor and staining, SW		SS	3 4 6 7	NA	
10.0			SS	3 5 3 2	5	SILICA SAND FILTER PACK
	SILTY CLAY - moderately plastic, stiff, moist, dark gray, petroleum-like odor, CL		SS	3 5 5 10	4	6", 10-SLOT, PVC WELL SCREEN
12.5	END OF BORING AT 13 FEET					
15.0						
17.5						

WELL DATA

NOTES: SS - Split Spoon
NA - Not Applicable

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 9803-05	PROJECT NAME: GM - POWERTRAIN (K-35)	BORING/WELL DESIGNATION: MW-Y		BORING/WELL LOCATION
DRILLING CONTRACTOR: CARLO ENVIRONMENTAL	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 14 FT.	CENTRAL WELL
DATE STARTED: 02/09/96	DATE COMPLETED: 02/09/96	GROUND ELEV.: 719.33 FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: 13.5 FT.
RIG: SKID RIG	DRILLER: P. LIBBY	HELPER: M. BOND, D.BOND	LOGGED BY: B. HARDY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	PI METER	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED WITH A LOCKABLE STEEL PROTECTIVE COVER, SET IN CONCRETE	
						CEMENT	
						6" PVC RISER PIPE	
2.5	SILTY SAND - trace gravel, very fine medium grained, well graded, dry, dark brown no odor, SM - logged from auger flights					BENTONITE HOLE PLUG	
5.0	SILTY SAND - trace gravel, very fine-medium grained, well graded, moist, dark brown and black, petroleum-like odor, SM - logged from auger flights						
7.5							
10.0						SILICA SAND FILTER PACK	
	SILTY SAND - fine-medium grained, well graded, loose, moist, dark brown and black, petroleum-like odor and sheen, SM		SS	3 4 4 3		6", 10-SLOT, PVC WELL SCREEN	
	SILTY CLAY - plastic, firm, moist, medium gray, petroleum-like odor, CL						
12.5			SS	2 2 4 4			
	END OF BORING AT 14 FEET						
15.0							
17.5							

NOTES: SS - Split Spoon

PI-LOG1

MI445

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 9803-05	PROJECT NAME: GM - POWERTRAIN (K-35)	BORING/WELL DESIGNATION: MW-Z		BORING/WELL LOCATI
DRILLING CONTRACTOR: CARLO ENVIRONMENTAL	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 12 FT.	WESTERN WELL
DATE STARTED: 02/09/96	DATE COMPLETED: 02/09/96	GROUND ELEV.: 719.40 FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: 12 FT.
RIG: SKID RIG	DRILLER: P. LIBBY	HELPER: M. BOND, D.BOND	LOGGED BY: B. HARDY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	PI METER	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED WITH A LOCKABLE STEEL PROTECTIVE COVER, SET IN CONCRETE	
						CEMENT	
						6" PVC RISER PIPE	
2.5	SILTY SAND - trace gravel, very fine medium grained, well graded, dry, dark brown no odor, SM - logged from auger flights					BENTONITE HOLE PLUG	
5.0	SILTY SANDY GRAVEL - well graded, moist to wet, dark brown and black, petroleum-like odor and sheen, GM - logged from auger flights						
7.5							
10.0						SILICA SAND FILTER PACK	
	SILTY CLAY - moderately plastic, soft, moist, medium gray, petroleum-like odor, CL		SS	2 2 2 4		6", 10-SLOT, PVC WELL SCREEN	
12.5	END OF BORING AT 12 FEET						
15.0							
17.5							

NOTES: SS - Split Spoon

PI-LOG1

MI44

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 9803-05	PROJECT NAME: GM - POWERTRAIN (K-35)	BORING/WELL DESIGNATION: MW-Z		BORING/WELL LOCATION: WESTERN WELL
DRILLING CONTRACTOR: CARLO ENVIRONMENTAL	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 12 FT.	
DATE STARTED: 02/09/96	DATE COMPLETED: 02/09/96	GROUND ELEV.: 719.40 FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: 12 FT.
RIG: SKID RIG	DRILLER: P. LIBBY	HELPER: M. BOND, D.BOND	LOGGED BY: B. HARDY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	PI METER	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED WITH A LOCKABLE STEEL PROTECTIVE COVER, SET IN CONCRETE	
	SILTY SAND - trace gravel, very fine medium grained, well graded, dry, dark brown no odor, SM - logged from auger flights					CEMENT; 6" PVC RISER PIPE	
2.5						BENTONITE HOLE PLUG	
5.0	SILTY SANDY GRAVEL - well graded, moist to wet, dark brown and black, petroleum-like odor and sheen, GM - logged from auger flights						
7.5							
10.0	SILTY CLAY - moderately plastic, soft, moist, medium gray, petroleum-like odor, CL		SS	2 2 2 4		SILICA SAND FILTER PACK; 6", 10-SLOT, PVC WELL SCREEN	
	END OF BORING AT 12 FEET						
12.5							
15.0							
17.5							

NOTES: SS - Split Spoon

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 9803-05	PROJECT NAME: GM - POWERTRAIN (K-35)	BORING/WELL DESIGNATION: MW-X		BORING/WELL LOCATIC
DRILLING CONTRACTOR: CARLO ENVIRONMENTAL	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 13 FT.	EASTERN WELL
DATE STARTED: 02/08/96	DATE COMPLETED: 02/08/96	GROUND ELEV.: 719.13 FT.	MEASURING POINT ELEV: FT.	WELL DEPTH: 12.5 FT.
RIG: SKID RIG	DRILLER: P. LIBBY	HELPER: M. BOND, D.BOND	LOGGED BY: B. HARDY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	PI METER	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A LOCKABLE STEEL PROTECTIVE COVER, SET IN CONCRETE
2.5	SILTY SAND - trace gravel, very fine-medium grained, well graded, dry, dark brown, no odor, SM - logged from auger flights					CEMENT; 6" PVC RISER PIPE; BENTONITE HOLE PLUG
5.0	SILTY SAND - some gravel, very fine-medium grained, well graded, medium dense, moist, medium brown to black, petroleum-like odor, SM		SS	4 8 8 6	4.5	
7.5	SAND - fine-medium grained, moderately graded, loose, wet, medium brown and black, petroleum-like odor and staining, SW		SS	3 4 6 7	NA	
10.0	SILTY CLAY - moderately plastic, stiff, moist, dark gray, petroleum-like odor, CL		SS	3 5 3 2	5	SILICA SAND FILTER PACK; 6", 10-SLOT, PVC WELL SCREEN
12.5			SS	3 5 5 10	4	
	END OF BORING AT 13 FEET					
15.0						
17.5						

NOTES: SS - Split Spoon
NA - Not Applicable

PI-LOG1

MI445

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 9803-05	PROJECT NAME: GM - POWERTRAIN (K-35)	BORING/WELL DESIGNATION: MW-Y	BORING/WELL LOCATION: CENTRAL WELL
DRILLING CONTRACTOR: CARLO ENVIRONMENTAL	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 14 FT.
DATE STARTED: 02/09/96	DATE COMPLETED: 02/09/96	GROUND ELEV.: 719.33 FT.	MEASURING POINT ELEV: FT.
			WELL DEPTH: 13.5 FT.
RIG: SKID RIG	DRILLER: P. LIBBY	HELPER: M. BOND, D.BOND	LOGGED BY: B. HARDY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	PI METER	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A LOCKABLE STEEL PROTECTIVE COVER, SET IN CONCRETE
	SILTY SAND - trace gravel, very fine medium grained, well graded, dry, dark brown no odor, SM - logged from auger flights					CEMENT; 6" PVC RISER PIPE; BENTONITE HOLE PLUG
2.5						
5.0	SILTY SAND - trace gravel, very fine-medium grained, well graded, moist, dark brown and black, petroleum-like odor, SM - logged from auger flights					
7.5						
10.0	SILTY SAND - fine-medium grained, well graded, loose, moist, dark brown and black, petroleum-like odor and sheen, SM		SS	3 4 4 3		SILICA SAND FILTER PACK; 6", 10-SLOT, PVC WELL SCREEN
	SILTY CLAY - plastic, firm, moist, medium gray, petroleum-like odor, CL					
12.5			SS	2 2 4 4		
	END OF BORING AT 14 FEET					
15.0						
17.5						

NOTES: SS - Split Spoon

PI-LOG1

M1445

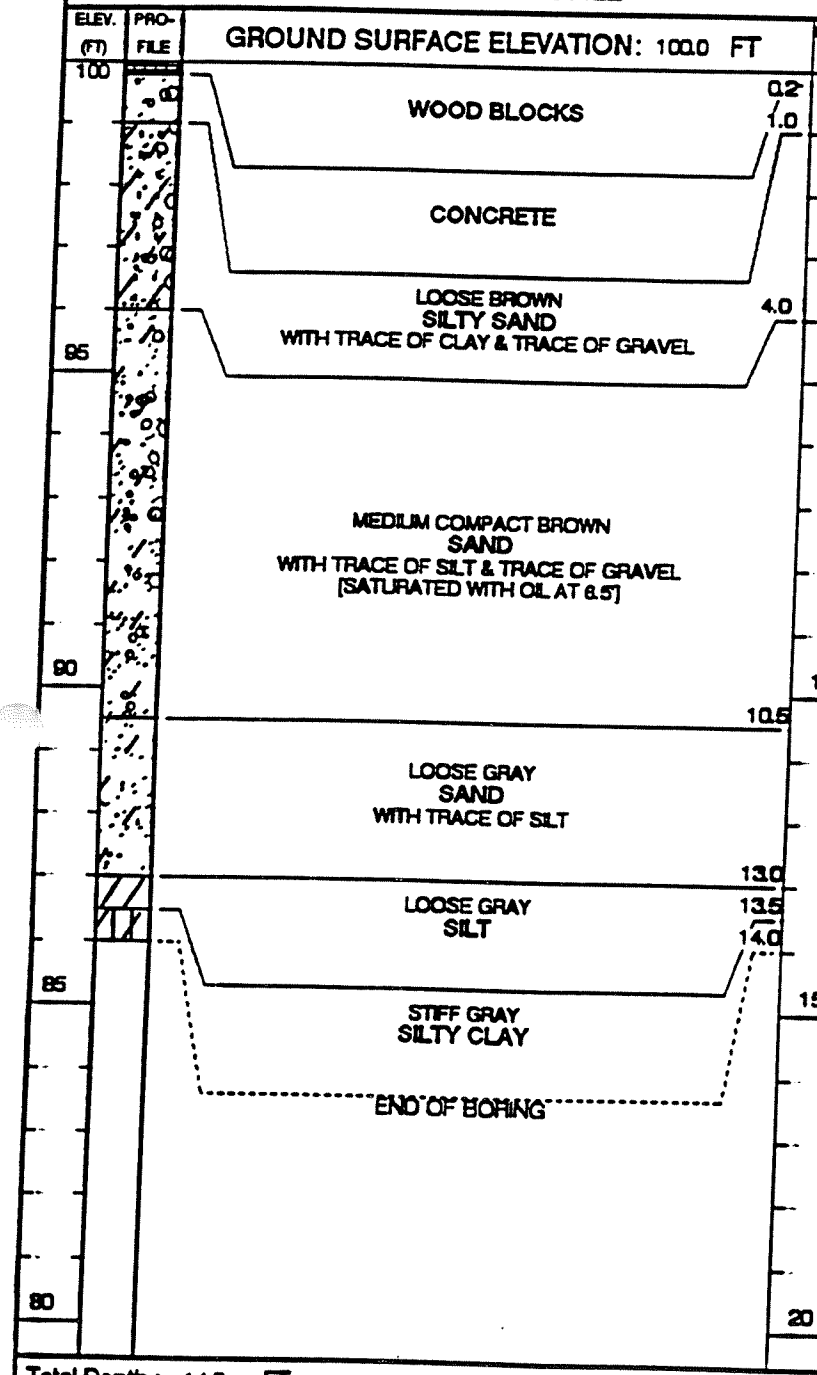
BAY 3

BAY K-42

NTH Consultants, Ltd.

LOG OF TEST BORING NO:MW-1

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]
NTH Proj. No: 13-2016 00
Project Location : YPSILANTI, MICHIGAN
Checked By :



SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNU READING (PPM)
SS-1	6 4 3	7	-	-	<1.0
SS-2	5 6 9	15	-	-	<1.0
SS-3	7 10 11	21	-	-	3.0
SS-4	3 5 10	15	-	-	1.5
SS-5	4 7 10	17	-	-	-
SS-6	3 5	8	-	-	-
SS-7	2 3 4	7	-	-	-

Total Depth : 14.0 FT
Drilling Date : 02/04/92
Inspector : M. DUEWEKE
Contractor : MATECO DRILLING COMPANY
Driller : S. TAYLOR

Drilling Method :
CME-45 TRAILER-MOUNTED DRILLING RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. 1 CONSTRUCTED IN BORING WITH SCREEN TIP SET AT 12.7 FEET BELOW FLOOR SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 9.0 FEET BELOW FLOOR SURFACE DURING DRILLING.

Figure No. A-1

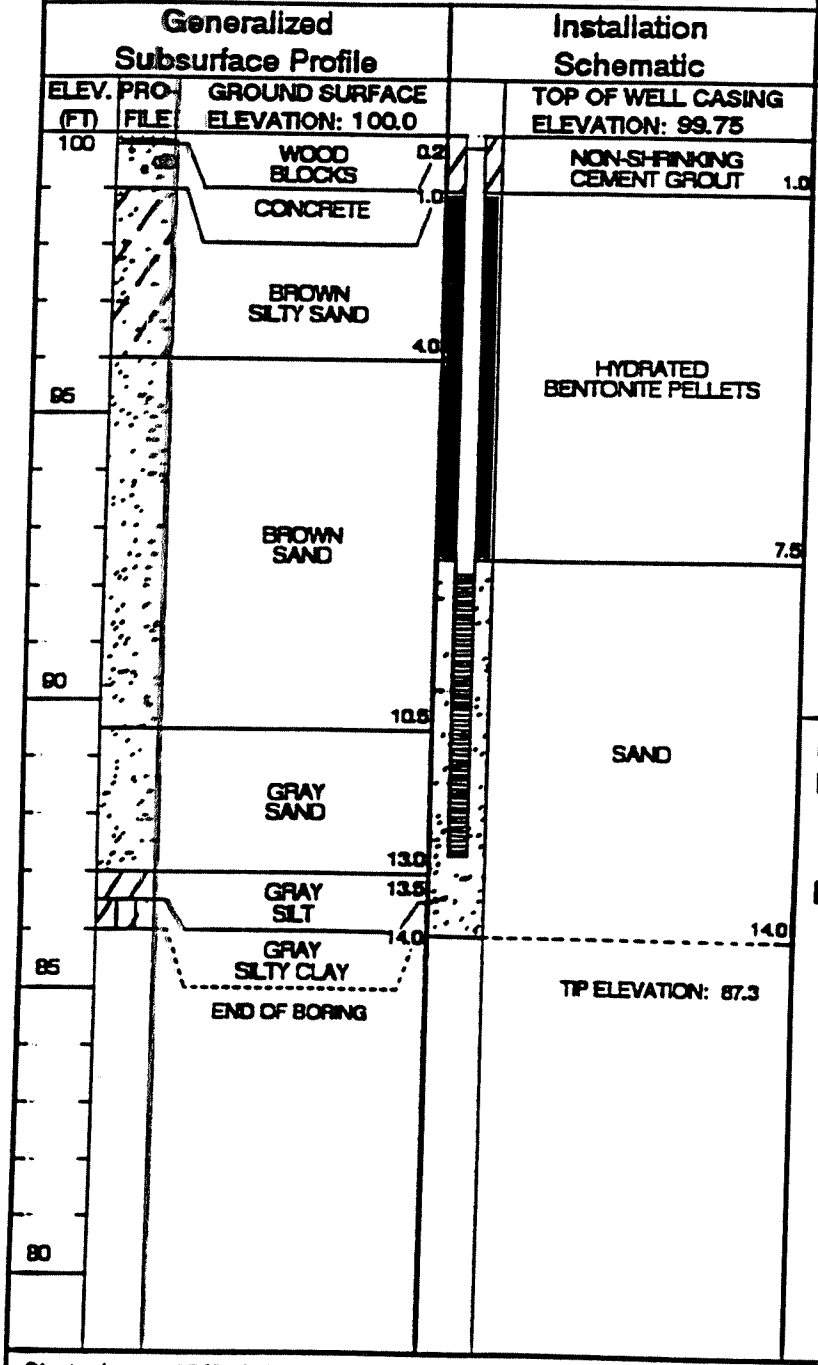
NTH Consultants, Ltd.

MONITORING WELL NO. 1

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]
NTH Proj. No: 13-2016 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/05/92	92.47	WATER
02/17/92	92.56	WATER
02/28/92	92.63	WATER

NOTES :

[1] TOP OF CASING & FLOOR SURFACE ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

[2] REFER TO LOG OF TEST BORING NO. MW-1 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

Started: 02/04/92
Completed: 02/04/92
Inspector: M. DUEWEKE
Driller: S. TAYLOR
Contractor: MATECO DRILLING COMPANY
Equipment: CME-45
Well Type: MONITORING

Casing Diameter: 4.0"
Casing Length: 7.5'
Casing Type: PVC
Screen Diameter: 4.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-5

NTH Consultants, Ltd.

LOG OF TEST BORING NO:MW-2

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]
NTH Proj. No: 13-2016 00
Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.0 FT

ELEV. (FT)	DEPTH (FT)	
100	0	
	0.2	WOOD BLOCKS
	1.0	
	1.5	CONCRETE
	2.5	
95	5	MEDIUM COMPACT BROWN SILTY SAND [PETROLEUM ODOR NOTED]
	4.5	
		MEDIUM COMPACT BROWN CLAYEY SAND WITH TRACE OF GRAVEL
		MEDIUM COMPACT BROWN SILTY SAND WITH LITTLE GRAVEL
90	10	MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT & TRACE OF GRAVEL
	10.5	
		MEDIUM COMPACT GRAY SAND WITH TRACE OF SILT
	12.0	END OF BORING
85	15	
80	20	

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNU READING (PPM)
SS-1	7 10 13	23	-	-	4.0
SS-2	10 12 10	22	-	-	4.0
SS-3	7 10 11	21	-	-	4.0
SS-4	9 12 15	27	-	-	3.0
SS-5	8 11 13	24	-	-	2.5

Total Depth : 12.0 FT
Drilling Date : 02/05/92
Inspector : M. DUEWEKE
Contractor : MATECO DRILLING COMPANY
Driller : S. TAYLOR

Drilling Method :
CME-45 TRAILER-MOUNTED DRILLING RIG WITH 4-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. 2 CONSTRUCTED IN BORING WITH SCREEN TIP SET AT 11.9 FEET BELOW FLOOR SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 7.5 FEET BELOW FLOOR SURFACE DURING DRILLING.

Figure No. A-2

NTH Consultants, Ltd.

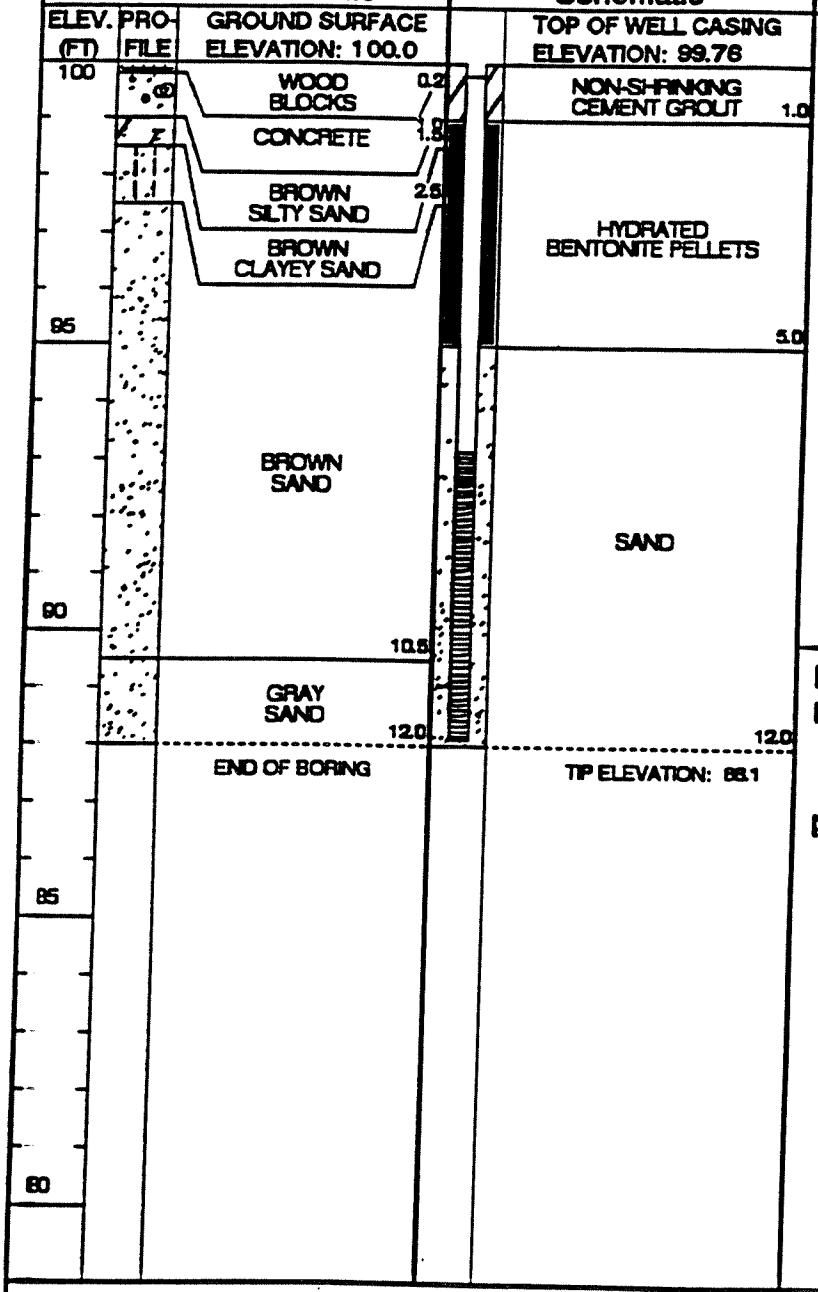
MONITORING WELL NO. 2

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891] **NTH Proj. No:** 13-201600

Project Location : YPSILANTI, MICHIGAN **Checked By :**

LOG OF MONITORING WELL

Generalized Subsurface Profile



Installation Schematic

GROUNDWATER DATA

Date	Ground-water Elev.(ft)	Comments
02/06/92	92.52	WATER
02/07/92	92.46	WATER
02/10/92	92.53	PRODUCT
	92.10	WATER
02/17/92	92.56	PRODUCT
	91.69	WATER
02/28/92	92.66	PRODUCT
	91.59	WATER

NOTES :

[1] TOP OF CASING & FLOOR SURFACE ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

[2] REFER TO LOG OF TEST BORING NO. MW-2 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

Started: 02/05/92
Completed: 02/05/92
Inspector: M. DUEWEKE
Driller: S. TAYLOR
Contractor: MATECO DRILLING COMPANY
Equipment: CME-45
Well Type: MONITORING

Casing Diameter: 2.0"
Casing Length: 6.7'
Casing Type: PVC
Screen Diameter: 2.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-7

NTH Consultants, Ltd.

LOG OF TEST BORING NO:MW-3

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891] **NTH Proj. No:** 13-2016 00

Project Location : YPSILANTI, MICHIGAN **Checked By :**

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 100.0 FT

ELEV. (FT)	DEPTH (FT)	
100	0	
	0.2	WOOD BLOCKS
	1.0	
	2.5	CONCRETE
95	5	MEDIUM COMPACT DARK BROWN CLAYEY SAND WITH LITTLE GRAVEL
	4.5	
		MEDIUM COMPACT BROWN SILTY SAND WITH TRACE OF GRAVEL
90	10	MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT
	10.5	
		MEDIUM COMPACT GRAY SAND WITH TRACE OF SILT
	12.0	END OF BORING
85	15	
80	20	

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNU READING (PPM)
SS-1	7 11 12	23	-	-	<1.0
SS-2	10 11 12	23	-	-	<1.0
SS-3	6 7 10	17	-	-	<1.0
SS-4	5 7 11	18	-	-	4.0
SS-5	3 4 2	6	-	-	2.0
SS-6	5 5	10	-	-	2.0

Total Depth : 12.0 FT
Drilling Date : 02/06/92
Inspector : M. DUEWEKE
Contractor : MATECO DRILLING COMPANY
Driller : S. TAYLOR

Drilling Method :
CME-45 TRAILER-MOUNTED DRILLING RIG WITH 4-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. 3 CONSTRUCTED IN BORING WITH SCREEN TIP SET AT 11.8 FEET BELOW FLOOR SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 7.5 FEET BELOW FLOOR SURFACE DURING DRILLING.

Figure No. A-3

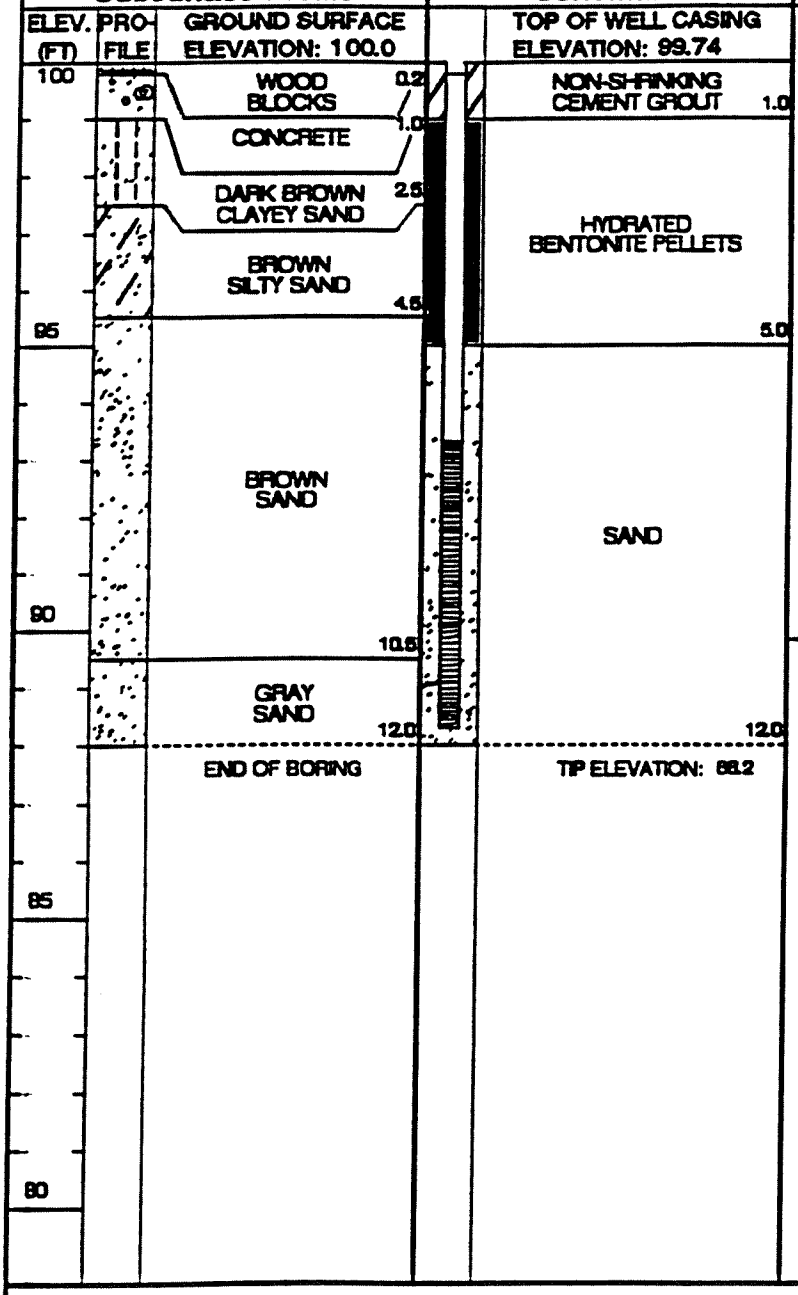
NTH Consultants, Ltd.

MONITORING WELL NO. 3

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891] NTH Proj. No: 13-201600

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/07/92	92.36	WATER
02/10/92	92.49	PRODUCT
02/10/92	91.92	WATER
02/17/92	92.49	PRODUCT
02/17/92	91.73	WATER
02/28/92	92.54	PRODUCT
	91.81	WATER

NOTES :

[1] TOP OF CASING & FLOOR SURFACE ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

[2] REFER TO LOG OF TEST BORING NO. MW-3 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

Started:	02/06/92
Completed:	02/06/92
Inspector:	M. DUEWEKE
Driller:	S. TAYLOR
Contractor:	MATECO DRILLING COMPANY
Equipment:	CME-45
Well Type:	MONITORING

Casing Diameter:	2.0"
Casing Length:	6.4'
Casing Type:	PVC
Screen Diameter:	2.0"
Screen Length:	5.0'
Screen Mesh:	0.010"
Screen Type:	PVC

Figure No. A-8

NTH Consultants, Ltd.

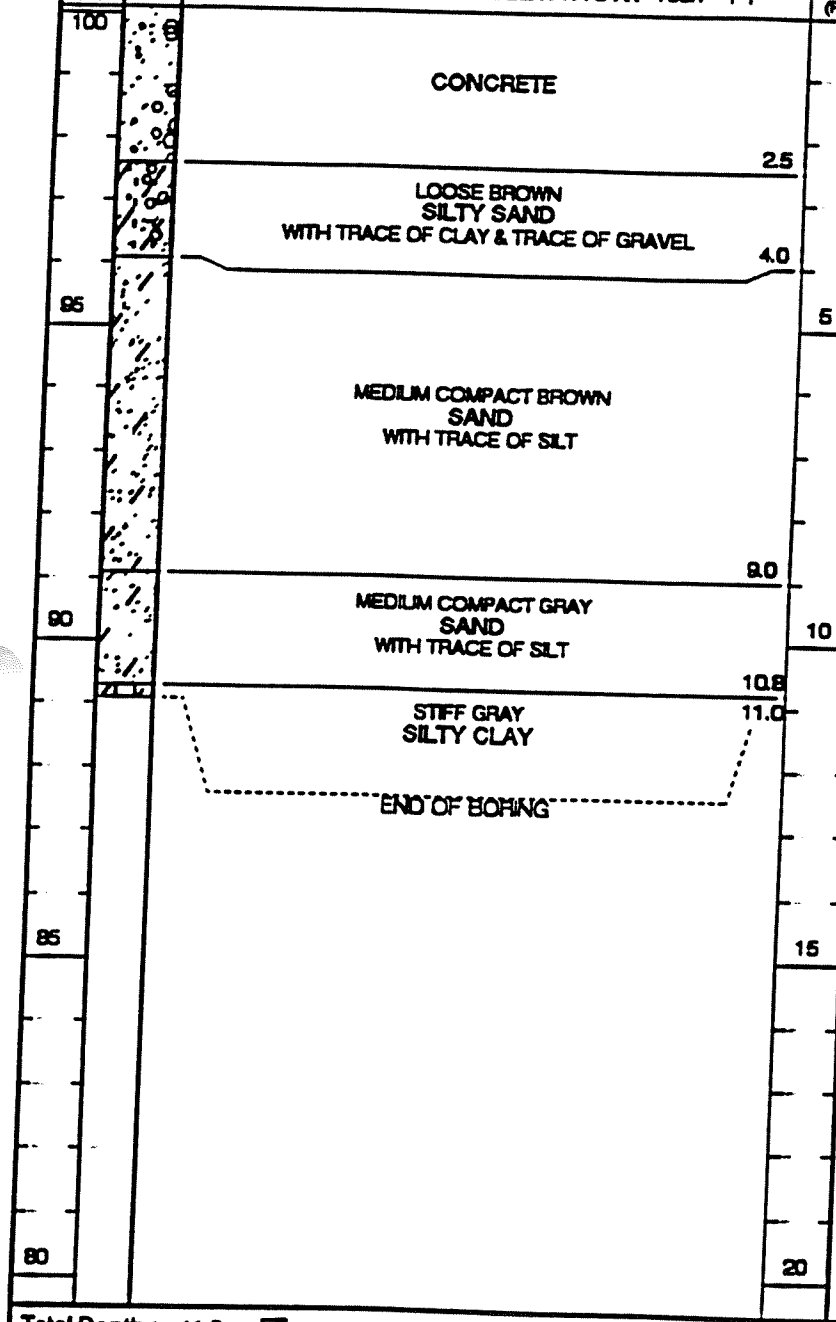
LOG OF TEST BORING NO:MW-4

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]

Project Location : YPSILANTI, MICHIGAN

NTH Proj. No: 13-2016 00

Checked By :



SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNU READING (PPM)
SS-1	5 4 5	9	-	-	<1.0
SS-2	5 7 8	15	-	-	<1.0
SS-3	5 7 10	17	-	-	<1.0
SS-4	6 7 4	11	-	-	<1.0

Total Depth : 11.0 FT
Drilling Date : 02/10/91
Inspector : M. DUEWEKE
Contractor : MATECO DRILLING COMPANY
Driller : J. MASKELL

Drilling Method :
CME-45 TRAILER-MOUNTED DRILLING RIG WITH 4-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
MONITORING WELL NO. 4 CONSTRUCTED IN BORING WITH SCREEN TIP SET AT 10.6 FEET BELOW FLOOR SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 6.5 FEET BELOW FLOOR SURFACE DURING DRILLING.

Figure No. A-4

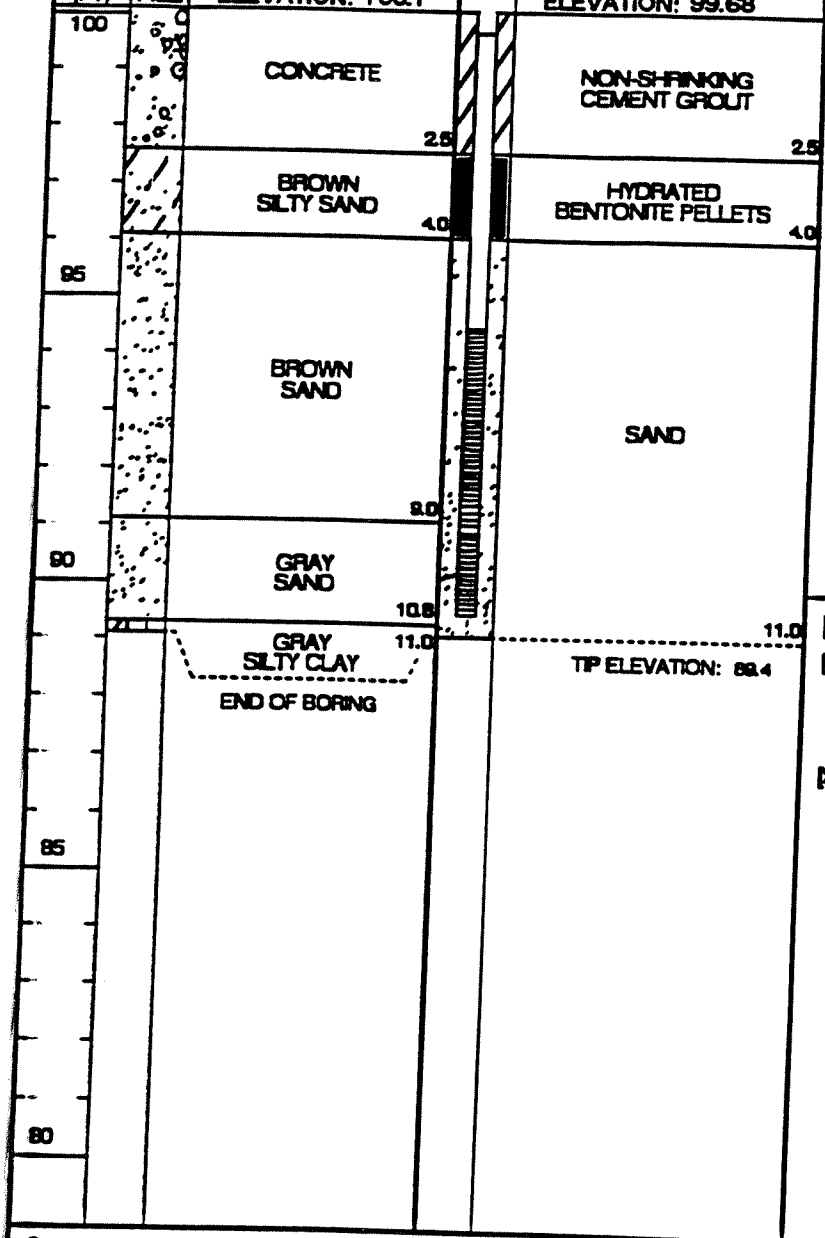
NTH Consultants, Ltd.

MONITORING WELL NO. 4

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891]
NTH Proj. No: 13-201600

Project Location : YPSILANTI, MICHIGAN
Checked By :

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/10/92	92.59	WATER
02/17/92	92.61	WATER
02/28/92	92.66	WATER

NOTES :

[1] TOP OF CASING & FLOOR SURFACE ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

[2] REFER TO LOG OF TEST BORING NO. MW-4 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

Started: 02/10/92
Completed: 02/11/92
Inspector: M. DUEWEKE
Driller: J. MASKELL
Contractor: MATECO DRILLING COMPANY
Equipment: CME-45
Well Type: MONITORING

Casing Diameter: 2.0"
Casing Length: 5.2'
Casing Type: PVC
Screen Diameter: 2.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-9

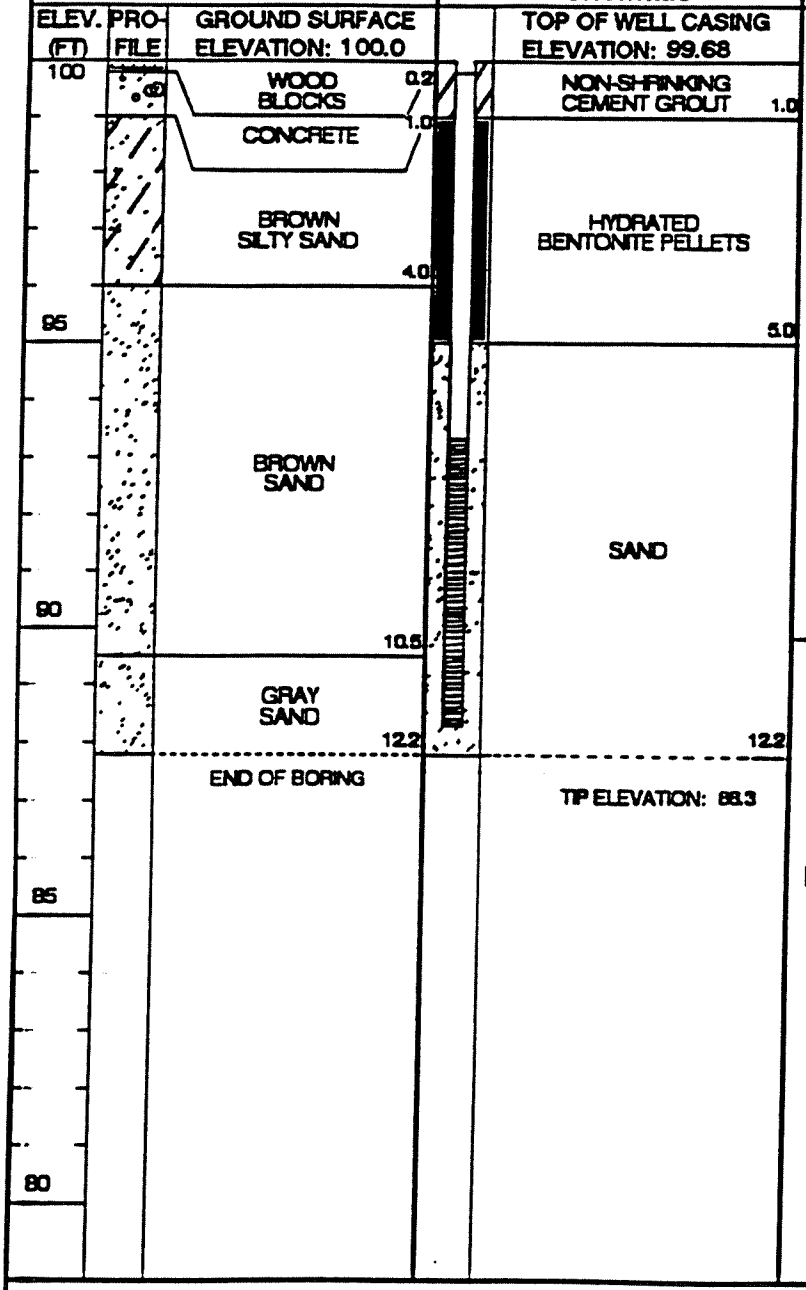
NTH Consultants, Ltd.

MONITORING WELL NO. 1A

Project Name : GM/HYDRA-MATIC WILLOW RUN [K-42 PE #5891] **NTH Proj. No:** 13-2016 00

Project Location : YPSILANTI, MICHIGAN **Checked By :**

LOG OF MONITORING WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/10/92	92.84	PRODUCT
	90.74	WATER
02/17/92	92.81	PRODUCT
	90.54	WATER
02/28/92	92.88	PRODUCT
	90.62	WATER

NOTES :

[1] TOP OF CASING & FLOOR SURFACE ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

[2] MONITORING WELL NO. 1A WAS CONSTRUCTED IN TEST BORING 4' EAST OF TEST BORING NO. MW-1

[3] REFER TO LOG OF TEST BORING NO. MW-1 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

Started: 02/07/92
Completed: 02/07/92
Inspector: M. DUEWEKE
Driller: S. TAYLOR
Contractor: MATECO DRILLING COMPANY
Equipment: CME-45
Well Type: MONITORING

Casing Diameter: 4.0"
Casing Length: 6.4'
Casing Type: PVC
Screen Diameter: 4.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-6

AREA 4

FORMER DRUM HANDLING AREA

SOIL BORING LOG / MONITORING WELL DIAGRAM

E.C. JORDAN CO.

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION	BORING/WELL DESIGNATION: SB-1	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HSA	BOREHOLE SIZE: 8.0 IN.	BOREHOLE DEPTH: 9.0 FT.
DATE STARTED: 12/7 /87	DATE COMPLETED: 12/7 /87	GROUND ELEV.: FT.	GROUNDWATER ENCOUNTERED: 9.0 FT.
RIG: CME 45	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: D. ARGENTATI

See figure 3-1

WELL DEPTH: FT.

TOC ELEV.: FT.

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS (N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	FILL; medium brown sand, fine gravel	0-1.5	REF. and GC.		0.0		
2.5	SAND: interbeds of fine sand and silty sand	1.5-3	REF. and GC.		0.0		
	SILTY CLAY; medium plastic, soft, gray, trace gravel throughout matrix	3-4.5	REF. and GC.		0.0		
5.0	SILTY SAND; slightly plastic, trace clay, moist	4.5-6	REF. and GC.		0.0		
	SAND; coarse, brown, well-sorted	6-7.5	REF. GC. and LAB		0.0		
7.5	CLAY; gray, trace silt, slightly plastic	7.5-9	REF. and GC.		0.0	Borehole grouted to the surface	
	END OF BORING						
10.0							
12.5							
15.0							

NOTES:

SOIL BORING LOG / MONITORING WELL DIAGRAM

E.C. JORDAN CO.

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION		BORING/WELL DESIGNATION: SB-2	BORING/WELL LOCATION: See figure 3-1
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HSA		BOREHOLE SIZE: 8.0 IN.	BOREHOLE DEPTH: 10.5 FT.
DATE STARTED: 12/14/87	DATE COMPLETED: 12/14/87	GROUND ELEV.: FT.	GROUNDWATER ENCOUNTERED: 9.0 FT.	WELL DEPTH: FT.
RIG: CME 45	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: D. ARGENTATI	TOC ELEV.: FT.

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS (N)	P.I. METER	COMMENTS	WELL DATA
0	SAND; medium-grained, light brown, trace silt	0-1.5	REF. and GC.		(ppm) 0.0		
2.5	SAND; medium-grained, light brown with dark gray layers, trace silt	1.5-3	REF. GC. and LAB				
	SILTY SAND; dark gray	3-4.5	REF. and GC.				
	SILTY SAND; light brown						
5.0	SILTY SAND; some gravel, brown, moist	4.5-6	REF. and GC.		0.0		
	SAND; medium well-sorted, brown	6-7.5	REF. and GC.		0.0		
7.5	SILTY CLAY; medium plastic, firm, gray, wet	7.5-9	REF. and GC.		0.0		
	SILT; trace clay, slighty plastic gray, moist	9-10.5	REF. and GC.		0.0	Borehole grouted to the surface	
10.0	END OF BORING						
12.5							
15.0							

NOTES:

SOIL BORING LOG / MONITORING WELL DIAGRAM

E.C. JORDAN CO.

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION	BORING/WELL DESIGNATION: SB-3	BORING/WELL LOCATION: See figure 3-1
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HSA	BOREHOLE SIZE: 8.0 IN.	BOREHOLE DEPTH: 7.5 FT.
DATE STARTED: 12/14/87	DATE COMPLETED: 12/14/87	GROUND ELEV.: FT.	GROUNDWATER ENCOUNTERED: 8.5 FT.
WELL DEPTH: FT.			
RIG: CME 45	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: D. ARGENTATI
TOC ELEV.: FT.			

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS (N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE; parking lot						
	FILL; sand, gravel	0-1.5	REF. and GC.		0.0		
	SAND; medium, brown, trace silt	1.5-3	REF. and GC.		0.0		
2.5							
	SAND; medium to coarse, trace silt, trace gravel	3-4.5	REF. and GC.		0.0		
5.0	SAND; fine to medium, light brown	4.5-6	REF. and GC.		0.0		
	SAND; medium, moist, orange staining	6-7.5	REF. GC. and LAB		0.0	Borehole grouted to the surface	
	SILTY CLAY; medium plastic, gray						
7.5	END OF BORING						
10.0							
12.5							
15.0							

NOTES:

SOIL BORING LOG / MONITORING WELL DIAGRAM

E.C. JORDAN CO.

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION		BORING/WELL DESIGNATION: SB-4	BORING/WELL LOCATION: See figure 3-1
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HSA		BOREHOLE SIZE: 8.0 IN.	BOREHOLE DEPTH: 8.0 FT.
DATE STARTED: 12/14/87	DATE COMPLETED: 12/14/87	GROUND ELEV.: FT.	GROUNDWATER ENCOUNTERED: 8.0 FT.	WELL DEPTH: FT.
RIG: CME 45	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: D. ARGENTATI	TOC ELEV.: FT.

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	CONCRETE; fill, sand, gravel	0-1.5	REF. and GC.		(ppm) 0.0		
2.5	SAND; medium, some gravel, brown	1.5-3	REF. and GC.		0.0		
	SAND and SILT interbedding, brown	3-4.5	REF. and GC.		0.0		
	SAND; medium, brown						
5.0	SAND; medium, brown, moist, trace gravel	4.5-6	REF. and GC.		0.0		
	SAND; medium, moist, orange staining	6-7.5	REF. GC. and LAB		0.0		
7.5	SILTY CLAY; gray, wet						
	END OF BORING					Borehole grouted to the surface	
10.0							
12.5							
15.5							

NOTES:

SOIL BORING LOG / MONITORING WELL DIAGRAM

E.C. JORDAN CO.

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION	BORING/WELL DESIGNATION: MW-1	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HSA	BOREHOLE SIZE: 8.0 IN.	BOREHOLE DEPTH: 16.5 FT.	See figure 3-1
DATE STARTED: 12/16/87	DATE COMPLETED: 12/16/87	GROUND ELEV.: FT.	GROUNDWATER ENCOUNTERED: 10.16 FT.	WELL DEPTH: 16.5 FT.
RIG: CME 45	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: D. ARGENTATI	TOC ELEV.: 98.71 FT.

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS (N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	FILL; sand, gravel	0-1.5	REF. and GC.			FLUSH MOUNT COVER AT SURFACE	
						cement	
	SAND; medium, brown					bentonite seal	
	SILT; gray	1.5-3	REF. and GC.				
2.5	SAND; medium, brown						
	SAND and SILT interbedding	3-4.5	REF. and GC.			2-INCH PVC WELL CASING	
5.0		4.5-6	REF. and GC.			silica sand filter pack	
	SAND and SILT interbedding light green tint	6-7.5	REF. GC. and LAB				
7.5	SILTY CLAY; medium plastic, gray, firm	7.5-9	REF. and GC.			10 - FOOT PVC SCREEN	
		9-10.5	REF. and GC.				
10.0		10.5-12.0	REF. and GC.				
12.5	SAND; fine, light brown	12.0-13.5	REF. and GC.				
		13.5-15.0	REF. and GC.				
15.0							

NOTES:

SOIL BORING LOG / MONITORING WELL DIAGRAM (CONT'D)

E.C. JORDAN CO.

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION	BORING/WELL NUMBER: MW-1	BOREHOLE DEPTH: 16 FT.

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS (N)	P.I. METER	COMMENTS	WELL DATA
15.0	SAND; no sample				(ppm)	silica sand filter pack	
	CLAY; dense, no sample						
	END OF BORING						
17.5							

NOTES:

SOIL BORING LOG / MONITORING WELL DIAGRAM

E.C. JORDAN CO

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION	BORING/WELL DESIGNATION: MW-2	BORING/WELL LOCATIO
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HSA	BOREHOLE SIZE: 8.0 IN.	BOREHOLE DEPTH: 17.5 FT.
DATE STARTED: 12/14/87	DATE COMPLETED: 12/14/87	GROUND ELEV.: FT.	GROUNDWATER ENCOUNTERED: 9.0 FT.
WELL DEPTH: 17.5 FT.			
RIG: CME 45	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: D. ARGENTATI
TOC ELEV.: 98.83			

See figure 3-1

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS (N)	P.I. METER	COMMENTS
0	FILL; sand, gravel	0-1.5	REF. and GC.		(ppm) 0.0	FLUSH MOUNT COVER AT SURFACE; cement
2.5	SAND; medium, brown, trace silt	1.5-3	REF. and GC.		0.0	bentonite seal
	SAND; medium, brown	3-4.5	REF. and GC.		0.0	2-INCH PVC WELL CASING
5.0	SAND; coarse, orange staining	4.5-6	REF. and GC.		0.0	silica sand filter pack
	CLAY; gray					
	SILTY SAND; moist, trace orange staining	6-7.5	REF. and GC.		0.0	
7.5	SILTY CLAY; gray, firm, wet	7.5-9	REF. and GC.		0.0	10 - FOOT WELL SCREEN
		9-10.5	REF. and GC.		0.0	
10.0	CLAY; gray, firm, wet	10.5-12.0	REF. and GC.		0.0	
	SAND; fine, light brown, wet					
12.5		12.0-13.5	REF. and GC.		0.0	
		13.5-15.0	REF. GC. and LAB		0.0	
15.5						

NOTES:

SOIL BORING LOG / MONITORING WELL DIAGRAM (CONT'D)

E.C. JORDAN C

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION	BORING/WELL NUMBER: MW-2	BOREHOLE DEPTH: 17.5

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS (N)	P.I. METER (ppm)	COMMENTS	WELL DATA
15.0	SAND; fine	15.0-16.5	REF. and GC.		0.0	silica sand filter pack	
	CLAY; firm						
	CLAY; trace silt, gray						
17.5	END OF BORING						

NOTES:

SOIL BORING LOG / MONITORING WELL DIAGRAM

E.C. JORDAN CO.

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION		BORING/WELL DESIGNATION: MW-3	BORING/WELL LOCATION: See figure 3-1
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HSA		BOREHOLE SIZE: 8.0 IN. / BOREHOLE DEPTH: 17 FT.	
DATE STARTED: 12/16/87	DATE COMPLETED: 12/16/87	GROUND ELEV.: FT.	GROUNDWATER ENCOUNTERED: 9.0 FT. / WELL DEPTH: 17 FT.	
RIG: CME 45	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: D. ARGENTATI	TOC ELEV.: 99.11 FT.

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS (N)	P.I. METER	COMMENTS
0	FILL; sand, gravel				(ppm)	FLUSH MOUNT COVER AT SURFACE
						cement
	SILTY SAND; perched water, no sample recovery					bentonite seal
2.5						
	SAND; medium to coarse, trace gravel, brown	3-4.5	REF. and GC.		0.0	2-INCH PVC WELL CASING
5.0		4.5-6	REF. and GC.		0.0	silica sand filter pack
	SAND; coarse, orange staining, moist	6-7.5	REF. and GC.		0.0	
	SILT; brown					
7.5	SILTY CLAY; firm, gray	7.5-9	REF. and GC.		0.0	
		9-10.5	REF. and GC.		0.0	10 - FOOT PVC WELL SCREEN
10.0	SILTY CLAY; firm, gray	10.5-12.0	REF. and GC.		0.0	
12.5	SAND; fine, light brown	12.0-13.5	REF. GC. and LAB		0.0	
	SAND; fine, dark gray	13.5-15.0	REF. and LAB		0.0	
0						

NOTES:

PROJECT NO.: 5450-00	PROJECT NAME: GM HYDRA-MATIC DIVISION	BORING/WELL NUMBER: MW-3	BOREHOLE DEPTH: 17 FT

DEPTH (FT.)	SOIL DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
15.0	SAND; no sample					silica sand filter pack	
	CLAY; firm						
17.5	END OF BORING						

NOTES:

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: HP-1/1A	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HYDROPUNCH II	BOREHOLE SIZE: 2 IN. / BOREHOLE DEPTH: 12 FT.	
DATE STARTED: 7/8/92	DATE COMPLETED: 7/8/92	GROUND ELEV.: - - FT. / MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	SEE FIGURE 3-1
RIG: CME-45	DRILLER: B. THOMAS	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO SURFACE	
	SAND - yellow brown, medium grained						HYDROPUNCH INSTALLED
2.5							
5						BENTONITE CHIPS	
7.5							
10						HYDROPUNCH POLY SCREEN	
	END OF BORING AT 12 FEET					DRIVE POINT	
12.5							
15							

NOTES: 1. HYDROPUNCH II DRIVEN TO DEPTH BY DROP HAMMER.

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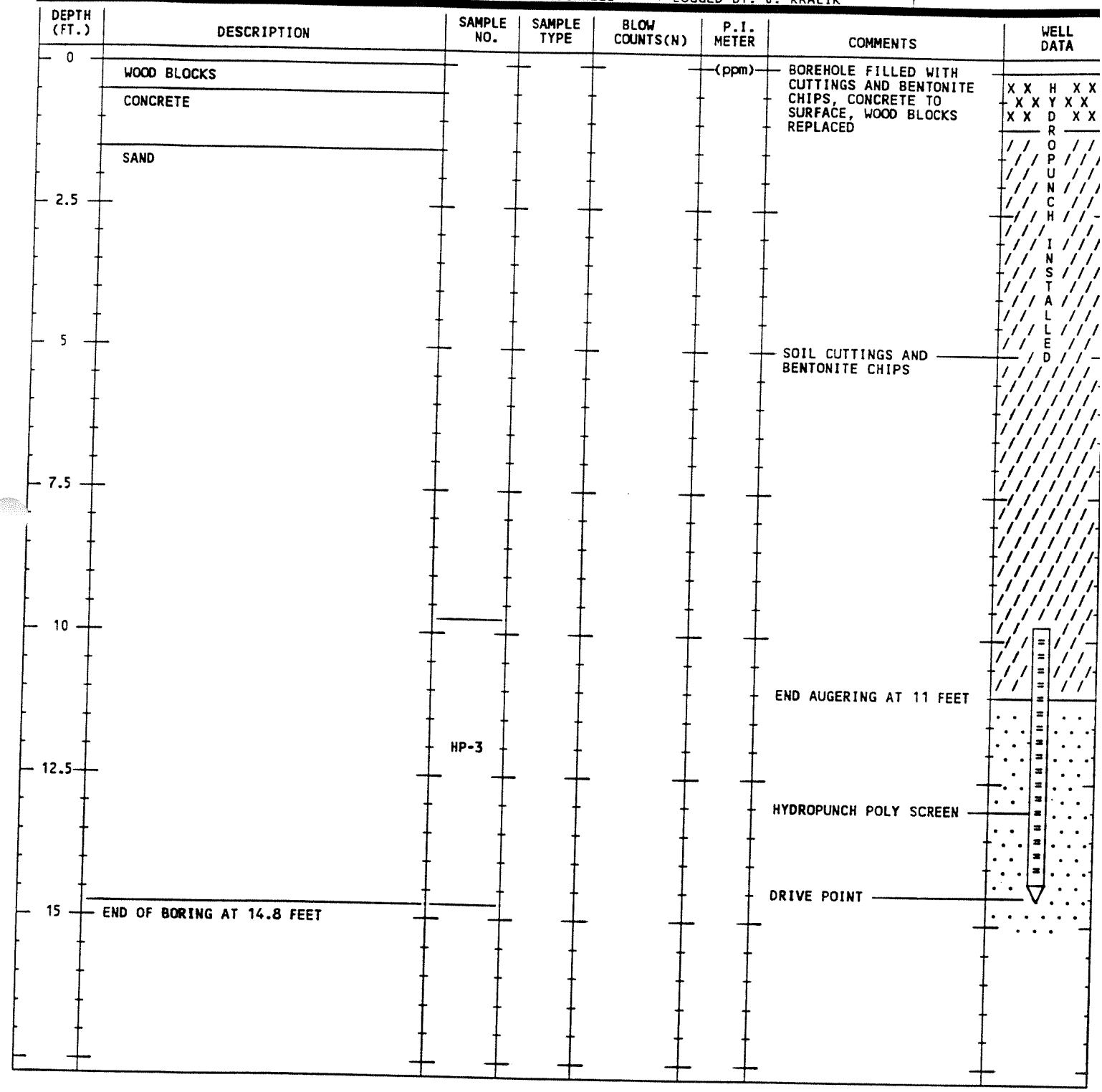
BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: HP-3	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 14.8 FT.
DATE STARTED: 7/13/92	DATE COMPLETED: 7/13/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: CME-45	DRILLER: B. THOMAS	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	SEE FIGURE 3-1



NOTES: 1. HYDROPUNCH II INSTALLED INTO BOREHOLE AND DRIVEN TO DEPTH.
2. HP - HYDROPUNCH II SAMPLE.

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BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: HP-5	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 14.2 FT.
DATE STARTED: 7/16/92	DATE COMPLETED: 7/16/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: CME-45	DRILLER: B. THOMAS	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	WOOD BLOCKS					BOREHOLE FILLED WITH CUTTINGS AND BENTONITE CHIPS, CONCRETE TO SURFACE, WOOD BLOCKS REPLACED	
	CONCRETE						
	SAND/FILL - yellow brown, medium grained, some coarse sand and gravel, no apparent odor						
2.5							HYDROPUNCH INSTALLED
5						SOIL CUTTINGS AND BENTONITE CHIPS	
7.5							
10							
		HP-5/ HP-200				END AUGERING AT 11 FEET	
12.5						HYDROPUNCH POLY SCREEN	
						DRIVE POINT	
	END OF BORING AT 14.2 FEET						
15							

NOTES: 1. HYDROPUNCH II INSTALLED INTO BOREHOLE AND DRIVEN TO DEPTH.
2. SOIL DESCRIPTIONS LOGGED FROM SOIL CUTTINGS OFF AUGER FLIGHTS TO A DEPTH OF 11 FEET.
3. HP - HYDROPUNCH II SAMPLE.

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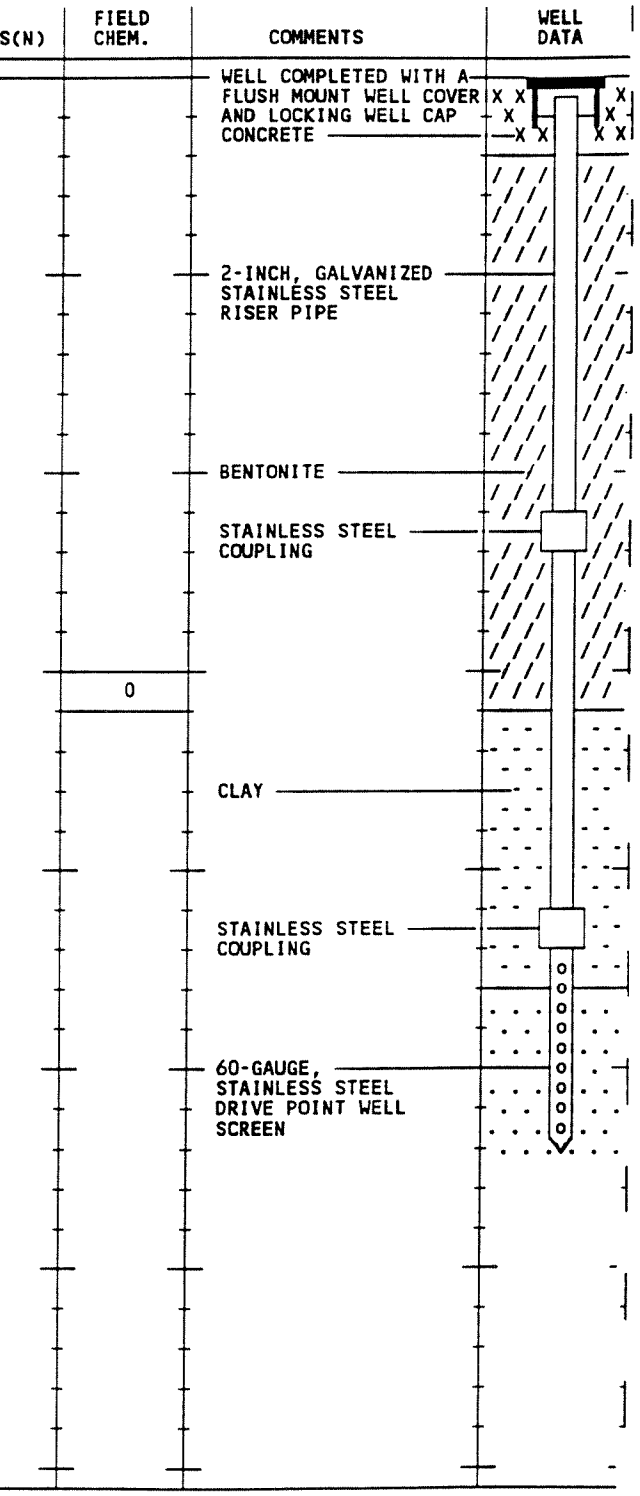
BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: HA-1/MW-4	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER/ DRIVE POINT	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 8 FT.
DATE STARTED: 8/10/92	DATE COMPLETED: 8/10/92	GROUND ELEV.: 99.33 FT.	MEASURING POINT ELEV: 98.86 FT.	WELL DEPTH: 13.5 FT.
RIG:	DRILLER: C. KIELTY	HELPER: T. WINEBRENNER	LOGGED BY: C. KIELTY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	FIELD CHEM.	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A FLUSH MOUNT WELL COVER AND LOCKING WELL CAP
	SAND/FILL - reddish brown, fine-medium grained, trace fine gravel, dry, no apparent odor					CONCRETE
2.5						2-INCH, GALVANIZED STAINLESS STEEL RISER PIPE
5						BENTONITE
						STAINLESS STEEL COUPLING
7.5	SAND - light brown, medium-coarse grained, wet	7.5-8'	HA		0	
	CLAY -brown-gray					
	END OF BORING AT 8.5 FEET					CLAY
10						STAINLESS STEEL COUPLING
12.5						60-GAUGE, STAINLESS STEEL DRIVE POINT WELL SCREEN



NOTES: 1. SOIL DESCRIPTIONS LOGGED FROM HAND AUGERING TO A DEPTH OF 8.5 FEET
2. FIELD CHEM - SAMPLE ANALYZED BY SCREENING WITH A 10S50 OVA.

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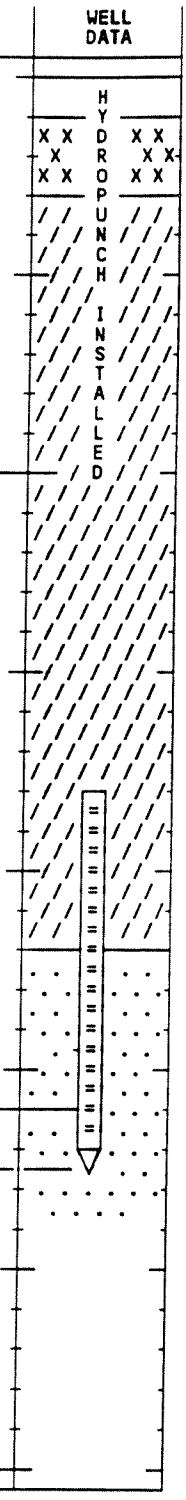
BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: HP-4	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN. / BOREHOLE DEPTH: 14 FT.	SEE FIGURE 3-1
DATE STARTED: 7/13/92	DATE COMPLETED: 7/14/92	GROUND ELEV.: - - FT. / MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	
RIG: CME-45	DRILLER: B. THOMAS	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	WOOD BLOCKS					BOREHOLE FILLED WITH CUTTINGS AND BENTONITE CHIPS, CONCRETE TO SURFACE, WOOD BLOCKS REPLACED	
	CONCRETE						
	SAND - brown-yellow brown, medium-coarse grained, dry-damp, no apparent odor						
2.5							
5						SOIL CUTTINGS AND BENTONITE CHIPS	
7.5							
	CLAY - yellow brown-gray, dry-damp, no apparent odor						
10	SILT - gray, dry-damp, no apparent odor						
						END AUGERING AT 11 FEET	
12.5						HYDROPUNCH POLY SCREEN	
						DRIVE POINT	
	END OF BORING AT 14 FEET						
15							



NOTES: 1. HYDROPUNCH II INSTALLED INTO BOREHOLE AND DRIVEN TO DEPTH.
2. SOIL DESCRIPTIONS LOGGED FROM SOIL CUTTINGS OFF AUGER FLIGHTS TO A DEPTH OF 11 FEET.

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BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: HP-1B	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN. / BOREHOLE DEPTH: 10.6 FT.	
DATE STARTED: 7/13/92	DATE COMPLETED: 7/13/92	GROUND ELEV.: - - FT. / MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	SEE FIGURE 3-1
RIG: CME-45	DRILLER: B. THOMAS	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS AND BENTONITE CHIPS, CONCRETE TO SURFACE	HYDROPUNCH INSTALLED
	SAND - brown-yellow brown, medium-coarse grained, damp-moist, no apparent odor						
2.5							
5						SOIL CUTTINGS AND BENTONITE CHIPS	
7.5	CLAY - gray, wet, no apparent odor						
10						END AUGERING AT 10.5 FEET	
12.5						HYDROPUNCH POLY SCREEN	
15						DRIVE POINT	
	END OF BORING AT 16 FEET						

NOTES: 1. HYDROPUNCH II INSTALLED INTO BOREHOLE AND DRIVEN TO DEPTH.
2. SOIL DESCRIPTIONS LOGGED FROM SOIL CUTTINGS OFF AUGER FLIGHTS TO A DEPTH OF 10.5 FEET.

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BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: SB-1/HP-4	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 8 IN. / BOREHOLE DEPTH: 24 FT.	
DATE STARTED: 7/15/92	DATE COMPLETED: 7/15/92	GROUND ELEV.: 99.20 FT. / MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	SEE FIGURE 3-1
RIG: CME-45	DRILLER: B. THOMAS	HELPER: D. MCMILLAN	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	WOOD BLOCKS					BOREHOLE FILLED WITH BENTONITE CHIPS, CONCRETE TO SURFACE, WOOD BLOCKS REPLACED
	CONCRETE	0-2'	SS	12-14	0	
	SAND/FILL - yellow brown, medium-coarse grained, medium dense, slightly damp					
2.5	SAND - yellow brown, medium grained, trace clay, medium dense, slighly damp, wood fragments present, no apparent odor	2-4'	SS	10-10-11-12	0	
5	SAND - pale yellow brown, fine-medium grained, trace coarse and gravel, medium dense, slightly damp, no apparent odor	4-6'	SS	5-10-15-17	0	BENTONITE CHIPS
		6-8'	SS	11-14-21-17	0	
7.5	GRAVEL - pale yellow brown-yellow brown, some coarse sand, dense, dry, no apparent odor					
	CLAY - yellow brown-gray, very stiff, dry, no apparent odor	8-10'	LAB	5-9-12-14	0	
	SILT - light olive gray, wet, no apparent odor					
10	CLAY - gray-light olive gray, trace silt, very stiff, wet-dry, no apparent odor	10-12'	SS	8-6-11-15	0	
12.5		12-14'	SS	5-8-30-41	0	HYDROPUNCH POLY SCREEN
	SANDY SILT - gray-light olive gray, some fine sand, hard, wet, clay lenses present, no apparent odor	14-16'	SS	12-25-35-44	0	
15						NATURAL COLLAPSE
						DRIVE POINT
17.5						

WELL DATA: HYDROPUNCH INSTALLED

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. LAB - SPLIT-SPOON SAMPLE SUBMITTED TO LABORATORY FOR ANALYSIS.
3. P.I. METER - SAMPLE FIELD SCREENED WITH A PHOTOIONIZATION METER.
4. HYDROPUNCH II INSERTED INTO BOREHOLE FOR GROUNDWATER SAMPLING.

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PROJECT NO.: 5883-15	PROJECT NAME: GM POPWERTRAIN - D.H.A.	BORING/WELL NUMBER: SB-1/HP-4	BOREHOLE DEPTH: 24 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5	SANDY SILT - gray-light olive gray, some fine-very fine sand, very stiff, wet, no apparent odor	18-20'	SS	6-9-16-26	0		
20	CLAY - medium gray, hard, dry, no apparent odor	20-22'	SS	3-5-27-26	0		
22.5		22-24'	SS	11-11-15-15	0		
	END OF BORING AT 24 FEET						
25							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - FIELD SCREENING WITH PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: MW-5	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 22 FT.
DATE STARTED: 8/10/92	DATE COMPLETED: 8/10/92	GROUND ELEV.: 99.21 FT.	MEASURING POINT ELEV: 98.89 FT.	WELL DEPTH: 19 FT.
RIG: CME-45	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	WOOD BLOCKS					WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP
	CONCRETE					CONCRETE
2.5						
5	SAND - pale yellow gray, medium-fine grained, some gravel, trace coarse sand, very dense, dry, no apparent odor	5-7'	SS	13-25-35-41	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC RISER PIPE
						BENTONITE
7.5						
10	CLAY - gray, moist, plastic					
	SILT - light olive gray, medium dense, wet, no apparent odor	10-12'	SS	8-18-9-14	0	
	CLAY - gray-light olive gray, trace silt, very stiff, moist, no apparent odor					
12.5						SILICA SAND PACK
15	SANDY SILT - gray-light olive gray, some fine sand, trace clay, dense, wet, no apparent odor	15-17'	SS	13-19-20-14	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN
17.5						

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH PHOTOIONIZATION METER.

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BORING LOG / MONITORING WELL DIAGRAM (CONT'D)

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL NUMBER: MW-5	BOREHOLE DEPTH: 22 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5						2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN	
20	CLAY - gray-medium gray, stiff, dry-moist, no apparent odor	20-22'	SS	3-5-8-10	0	NATURAL COLLAPSE	
	END OF BORING AT 22 FEET						
22.5							
25							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

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BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: MW-6	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 22 FT.
DATE STARTED: 8/10/92	DATE COMPLETED: 8/10/92	GROUND ELEV.: 98.75 FT.	MEASURING POINT ELEV: 98.50 FT.	WELL DEPTH: 19 FT.
RIG: CME-95	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0	GRAVEL AND SAND				(ppm)	WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP
						CONCRETE
2.5						
5	SAND/FILL - yellow brown-pale yellow gray, coarse-medium grained, some clay and gravel, medium dense, dry-damp, no apparent odor	5-7'	SS	7-16-17-25	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC RISER PIPE
						BENTONITE
7.5						
10	CLAY - gray-light olive gray, trace silt, very stiff, moist, no apparent odor	10-12'	SS	5-7-9-10	0	
12.5						SILICA SAND PACK
15	SANDY SILT - gray-light olive gray, some fine sand, trace clay, dense, wet, no apparent odor	15-17'	SS	14-39-44-14	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN
17.5						

WELL DATA

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH PHOTOIONIZATION METER.

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PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL NUMBER: MW-6	BOREHOLE DEPTH: 22 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5						2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN	
20	CLAY - medium gray, very stiff, dry, no apparent odor	20-22'	SS	4-9-15-24	0	NATURAL COLLAPSE	
	END OF BORING AT 22 FEET						
22.5							
25							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

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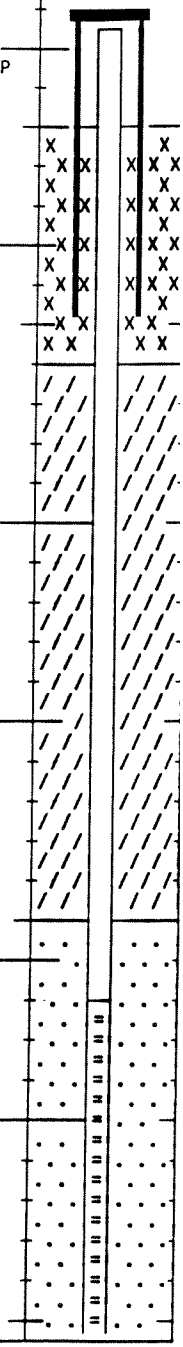
BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: MW-7	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN. / BOREHOLE DEPTH: 22 FT.	
DATE STARTED: 8/10/92	DATE COMPLETED: 8/10/92	GROUND ELEV.: 98.98 FT. / MEASURING POINT ELEV: 100.34 FT.	WELL DEPTH: 16 FT.	SEE FIGURE 3-1
RIG: CME-55	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	SAND, GRAVEL, AND FILL					WELL COMPLETED WITH A LOCKABLE METAL STAND-UP AND PROTECTIVE POSTS INSTALLED
	FILL - gray-brown, dry					CONCRETE
2.5						
5	SAND/FILL - gray-yellow brown, coarse grained, some gravel, trace clay, dry-damp, no apparent odor	5-7'	SS	7-12-15-17	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC RISER PIPE
7.5						BENTONITE
10	CLAY - gray, dry, no apparent odor					SILICA SAND PACK
	SILTY SAND - gray, medium-fine grained, wet, no apparent odor	10-12'	SS	2-10-13-30	0	
12.5						2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN
15						

WELL DATA



NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH PHOTOIONIZATION METER.

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PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL NUMBER: MW-7	BOREHOLE DEPTH: 22 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
15	SILTY SAND - gray, medium-fine grained, dense, wet, no apparent odor	15-17'	SS	4-16-33-37	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN SILICA SAND PACK	
17.5						NATURAL COLLAPSE	
20	CLAY - medium gray, very stiff, dry, no apparent odor	20-22'	SS	4-9-15-24	0		
22.5	END OF BORING AT 22 FEET						

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: MW-8	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN. / BOREHOLE DEPTH: 22 FT.	
DATE STARTED: 8/10/92	DATE COMPLETED: 8/10/92	GROUND ELEV.: 99.03 FT. / MEASURING POINT ELEV: 98.69 FT.	WELL DEPTH: 20 FT.	SEE FIGURE 3-1
RIG: CME-55	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP
2.5						CONCRETE
5	SAND/FILL - yellow brown-brown, coarse-medium grained, some gravel, loose, dry-moist, no apparent odor	5-7'	SS	3-3-2-3	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC RISER PIPE
7.5						BENTONITE
10	CLAY - medium gray, stiff, dry, no apparent odor	10-12'	SS	3-6-8-10	0	
12.5						SILICA SAND PACK
15	SANDY SILT - gray-light olive gray, some fine-very fine sand, dense, wet, no apparent odor	15-17'	SS	15-17-20-13	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN
17.5						

WELL DATA

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH PHOTOIONIZATION METER.

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PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL NUMBER: MW-8	BOREHOLE DEPTH: 22 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5						2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN	
20	CLAY - medium gray, very stiff, dry, no apparent odor	20-22'	SS	2-6-10-15	0	NATURAL COLLAPSE	
	END OF BORING AT 22 FEET						
22.5							
25							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

CR463

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: MW-9/HP-2	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN. / BOREHOLE DEPTH: 20 FT.	
DATE STARTED: 8/11/92	DATE COMPLETED: 8/11/92	GROUND ELEV.: 99.01 FT. / MEASURING POINT ELEV: 98.82 FT.	WELL DEPTH: 18 FT.	SEE FIGURE 3-1
RIG: CME-55	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP
	SAND/FILL - yellow brown-brown, coarse-medium grained, some gravel, dry, no apparent odor					CONCRETE
2.5	CONCRETE					
	SAND - yellow brown-brown, medium-fine grained, trace coarse sand and gravel, dense, damp-dry, no apparent odor	4-6'	SS	2-12-22-22	1-2	2-INCH, SCHEDULE-40, FLUSH THREADED PVC RISER PIPE
5	SAND - pale yellow brown, medium-fine grained, dense, slightly damp, no apparent odor	6-8'	SS	12-18-17-18	0	BENTONITE
7.5	SAND - pale yellow brown, medium-fine grained, reddish brown staining, slightly damp, no apparent odor					
	CLAY - gray-light olive gray, trace yellow gray silt, stiff-very stiff, dry, no apparent odor	8-10'	SS	4-8-10-12	0	
10		10-12'	SS	3-5-9-14	0	
12.5	SANDY SILT - gray-light olive gray, some fine sand, some clay, medium dense-dense, wet, no apparent odor	12-14'	SS	2-9-10-8	0	SILICA SAND PACK
15		14-16'	SS	2-4-10-16	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN
		16-18'	SS	4-10-25-32	0	
17.5						

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH PHOTOIONIZATION METER.

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PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL NUMBER: MW-9/HP-2	BOREHOLE DEPTH: 20 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5	SANDY SILT (continued)						
	CLAY - gray-medium gray, stiff, dry, no apparent odor	18-20'	SS	4-5-7-7	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN	
20	END OF BORING AT 20 FEET					NATURAL COLLAPSE	
22.5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: MW-10	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN. / BOREHOLE DEPTH: 19 FT.	
DATE STARTED: 1/21/93	DATE COMPLETED: 1/22/93	GROUND ELEV.: 99.40 FT. / MEASURING POINT ELEV: 98.64 FT.	WELL DEPTH: 18.5 FT.	SEE FIGURE 3-1
RIG: CME-45	DRILLER: K. DANTES	HELPER: A. BABB	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP
	SAND - light brown-brown, medium grained, trace fine gravel, dry, no apparent odor					CONCRETE
2.5						BENTONITE CHIPS AND CUTTINGS
5						2-INCH, SCHEDULE-40, FLUSH THREADED PVC RISER PIPE
	SAND - brown, fine-medium grained, trace fine gravel, dense, dry, slight odor present	6-8'	SS	9-27-29-30	0	
7.5						
	SAND - brown, medium-coarse grained, trace silt, medium dense, dry-wet, slight odor present	8-10'	SS	7-14-16-16	0	
	SILT - light gray-brown, moist, no apparent odor					BENTONITE CHIPS
10	SILTY SAND - brown, fine grained, medium dense, wet, no apparent odor	10-12'	SS	10-12-20-8	0	
	SILTY CLAY - gray, plastic, stiff, moist, no apparent odor					
12.5		12-14'	SS	4-11-47-58	0	
	SILTY SAND - gray, fine grained, very dense, wet, no apparent odor					SILICA SAND PACK
15		14-16'	SS	10-16-36-55	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN
17.5						

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH PHOTOIONIZATION METER.

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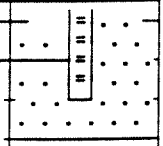
PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL NUMBER: MW-10	BOREHOLE DEPTH: 19 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5	SILTY SILT (continued)					2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN	
	END OF BORING AT 19 FEET						
20							
22.5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

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BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.		BORING/WELL DESIGNATION: MW-11	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HOLLOW-STEM AUGERS		BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 18 FT.
DATE STARTED: 1/21/93	DATE COMPLETED: 1/22/93	GROUND ELEV.: 99.60 FT.	MEASURING POINT ELEV: 98.82 FT.	WELL DEPTH: 18 FT.
RIG: CME-45	DRILLER: K. DANTES	HELPER: A. BABB	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP
	SAND - yellow brown, fine-medium grained, some silt, dry, no apparent odor					CONCRETE
2.5						BENTONITE CHIPS AND CUTTINGS
5						2-INCH, SCHEDULE-40, FLUSH THREADED PVC RISER PIPE
	SAND - brown, medium-coarse grained, dense, moist-wet, odor present	6-8'	SS	14-27-21-23	0	
7.5						
	SILTY CLAY - gray, hard	8-10'	SS	5-6-12-14	0	BENTONITE CHIPS
10		10-12'	SS	4-7-8-13	0	
12.5	SILTY SAND - gray, fine-very fine grained, very dense, wet, no apparent odor	12-14'	SS	12-27-33-35	0	SILICA SAND PACK
15		14-16'	SS	10-18-27-33	0	2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN
17.5						

WELL DATA

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH PHOTOIONIZATION METER.

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BORING LOG / MONITORING WELL DIAGRAM (CONT'D)

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL NUMBER: MW-11	BOREHOLE DEPTH: 18 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5	SILTY SAND (continued)						
	END OF BORING AT 18 FEET						
20							
22.5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

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BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL DESIGNATION: MW-12	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 20 FT.
DATE STARTED: 1/26/93	DATE COMPLETED: 1/26/93	GROUND ELEV.: 99.20 FT.	MEASURING POINT ELEV: 98.52 FT.
WELL DEPTH: 18 FT.	SEE FIGURE 3-1		
RIG: CME-45	DRILLER: K. DANTES	HELPER: A. BABB	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP	
	WOOD BLOCKS						
	CONCRETE					CONCRETE	
2.5	SAND - pale yellow brown, fine-medium grained, trace gravel and clay, dry, no apparent odor					BENTONITE CHIPS AND CUTTINGS	
5						2-INCH, SCHEDULE-40, FLUSH THREADED PVC RISER PIPE	
7.5	CLAY - gray, some silt, very stiff, moist, no apparent odor						
10						BENTONITE CHIPS	
12.5	SILTY SAND - light gray, very fine-fine grained, dense, wet, no apparent odor	12-14'	SS	4-23-25-29	0	SILICA SAND PACK	
15						2-INCH, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN	
17.5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH PHOTOIONIZATION METER.

PROJECT NO.: 5883-15	PROJECT NAME: GM POWERTRAIN - D.H.A.	BORING/WELL NUMBER: MW-12	BOREHOLE DEPTH: 20 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5	SILTY SAND (continued)						
	SILTY CLAY - gray, stiff, slightly plastic	18-20'	SS	3-3-7-6	0		
20	END OF BORING AT 20 FEET						
22.5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

CR463

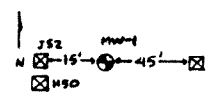
AREA 5

DEPARTMENT #263

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-16	PROJECT NAME: GM POWERTRAIN - Dept. 263		BORING/WELL DESIGNATION: MW-1	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 14 FT.
DATE STARTED: 8/7/92	DATE COMPLETED: 8/7/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: 13 FT.
RIG: CME-45	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	



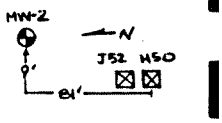
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP	
	SAND/FILL - brownish gray, coarse-medium grained, some gravel, trace clay, loose, dry, no apparent odor	0-2'	SS	X-X-7-10	0-2	CONCRETE	
2.5	ORGANIC FILL - black, some clay, some sand, soil-like, moist	2-4'	SS	5-6-12-16	0-5	2-INCH, SCHEDULE-40, FLUSH-THREADED PVC RISER PIPE	
	SAND - yellow brown, medium grained, medium dense, dry, no apparent odor						
5	SAND - pale yellow gray, fine-medium grained, dense, dry-wet, no apparent odor	4-6'	SS	8-13-18-19	0	BENTONITE	
		6-8'	SS	4-10-13-16	0		
7.5	groundwater at 8 feet, odor present					SILICA SAND PACK	
		8-10'	SS	2-7-9-10	3-4.8		
10						2-INCH, 10-SLOT, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN	
		10-12'	SS	7-13-18-16	0		
	CLAY - gray, some silt, very stiff, moist-wet, plastic, no apparent odor						
12.5		12-14'	SS	7-11-9-6	0-0.1		
	END OF BORING AT 14 FEET						
15							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. NS - INTERVAL NOT SAMPLED.
3. P.I. METER - SAMPLE FIELD SCREENED WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-16	PROJECT NAME: GM POWERTRAIN - Dept. 263		BORING/WELL DESIGNATION: MW-2	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 14 FT.
DATE STARTED: 8/7/92	DATE COMPLETED: 8/7/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: 14 FT.
RIG: CME-45	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE	0-2'	SS	X-X-3-10	0	WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKING WELL CAP; CONCRETE	
	SAND/FILL - dark gray-gray brown, coarse-medium grained, some gravel, trace clay, medium dense, dry, no apparent odor						
2.5	ORGANIC FILL - black, some clay, some sand, soil-like, moist	2-4'	SS	3-3-5-7	0	2-INCH, SCHEDULE-40, FLUSH-THREADED PVC RISER PIPE	
	SILTY SAND - dark brown/black-yellow brown, medium grained, trace gravel, dry-damp, no apparent odor						
5	SAND - yellow brown, coarse-medium grained, trace gravel, some silt, dry, no apparent odor	4-6'	SS	3-7-6-7	0	BENTONITE	
	SAND - pale yellow gray, fine-medium grained, some gravel, trace silt, medium dense-dense, dry-damp, no apparent odor	6-8'	SS	11-14-16-14	0	SILICA SAND PACK	
7.5							
	SAND - dark gray, medium grained, some silt, medium dense, moist, slight odor present	8-10'	SS	5-9-10-13	0		
10	SILTY SAND - dark gray, fine-medium grained, medium dense, wet, no apparent odor	10-12'	SS	7-5-7-14	0	2-INCH, 10-SLOT, SCHEDULE-40, FLUSH THREADED PVC WELL SCREEN	
	CLAY - gray, some silt, stiff, moist, no apparent odor						
12.5		12-14'	SS	3-5-4-14	0		
	END OF BORING AT 14 FEET						
15							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. P.I. METER - SAMPLE FIELD SCREENED WITH A PHOTOIONIZATION METER.

AREA 6

BAY E-49

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: MW-801	BORING/WELL LOCATIC
DRILLING CONTRACTOR: P. S. I.		DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 10.3 IN.	BOREHOLE DEPTH: 14.0 FT.
DATE STARTED: 1/30/92	DATE COMPLETED: 1/30/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: 12.0 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: A. BABB	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0					(ppm)	WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	CONCRETE					
	SAND - brown, fine-medium grained, little clay, firm, damp, no odor	1-2'	SS	10-30	BG	CONCRETE
	SAND - brown, medium grained, trace silt, very firm, dry, no odor					
2.5						BENTONITE CHIPS
	CLAYEY SILT - dark gray/black, trace sand and gravel, stiff, dry, no odor	2-4'	LAB	4-5-6-6	BG	
	SAND - light brown, fine grained, trace silt, very firm, damp-moist, no odor					2-INCH, SCHEDULE-40, FLUSH-THREADED, PVC WELL CASING
5		4-6'	SS	2-8-14-23	BG	
		6-8'	LAB	4-12-17-15	BG	FILTER PACK
7.5						
	SAND - light brown, fine grained, some silt, firm, moist-wet, no odor (groundwater at 8.2 feet)	8-10'	SS	4-8-12-14	BG	2-INCH, 10-SLOT, FLUSH-THREADED, PVC WELL SCREEN
10						
		10-12'	SS	4-10-16-15	BG	
12.5	SILTY CLAY - gray, slightly plastic, stiff, no odor					
		12-14'	SS	3-4-7-9	BG	NATIVE CLAY
	END OF BORING AT 14 FEET					
15						

NOTES: 1. LAB - SPLIT-SPOON SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. SS - SPLIT-SPOON SAMPLE.
3. BG - BACKGROUND READING.

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BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: MW-802	BORING/WELL LOCATI
DRILLING CONTRACTOR: P. S. I.	DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 10.3 IN.	BOREHOLE DEPTH: 12.0 FT.	
DATE STARTED: 1/30/92	DATE COMPLETED: 1/30/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: 12.0 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: A. BABB	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	SAND - (fill), dark brown, medium grained, some clay, firm, damp, slight odor	1-2'	SS	7-7	1	CONCRETE
2.5						BENTONITE CHIPS
	SAND - yellow brown, medium grained, trace silt and clay, firm, damp, no odor	2-4'	LAB	6-6-7-6	BG	
						2-INCH, SCHEDULE-40, FLUSH-THREADED, PVC WELL CASING
5		4-6'	SS	4-5-5-7	BG	
	SAND - light brown, fine grained, trace-little silt, very firm, dry-damp, no odor					
		6-8'	LAB	5-9-13-16	BG	FILTER PACK
7.5						
	SAND - light brown, fine grained, little silt, very firm, moist-wet, no odor (groundwater at 8.5 feet)	8-10'	SS	4-10-18-20	BG	2-INCH, 10-SLOT, FLUSH-THREADED, PVC WELL SCREEN
10						
		10-12'	SS	5-4-4-6	BG	
	SILTY CLAY - gray, slightly plastic, stiff, moist, no odor					
12.5	END OF BORING AT 12 FEET					
15						

NOTES: 1. LAB - SPLIT-SPOON SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. SS - SPLIT-SPOON SAMPLE.
3. BG - BACKGROUND READING.

CR373

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49	BORING/WELL DESIGNATION: MW-803		BORING/WELL LOCATION:
DRILLING CONTRACTOR: P. S. I.	DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 10.3 IN.	BOREHOLE DEPTH: 12.0 FT.	
DATE STARTED: 1/31/92	DATE COMPLETED: 1/31/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: 12.0 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: A. BABB	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0					(ppm)	WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	CONCRETE					
	SAND - (fill), dark brown, fine-medium grained, some clay and silt, dense, dry, no odor	1-2'	SS	6-30	BG	CONCRETE
2.5						BENTONITE CHIPS
	CLAYEY SAND - black/brown, fine grained, trace gravel, firm, no odor	2-4'	LAB	4-5-11-15	BG	
						4-INCH, SCHEDULE-40, FLUSH-THREADED, PVC WELL CASING
5	SAND - light brown, fine grained, little silt, firm, damp-moist, no odor	4-6'	SS	2-4-8-10	BG	
		6-8'	LAB	2-7-12-17	BG	FILTER PACK
7.5						
	SAND - light brown, fine grained, little silt, very firm, moist-wet, no odor (groundwater at 8 feet)	8-10'	SS	5-8-9-3	BG	4-INCH, 10-SLOT, FLUSH-THREADED, PVC WELL SCREEN
10	SILTY CLAY - gray, slightly plastic, firm, damp, no odor	10-12'	SS	2-2-4-3	BG	
12.5	END OF BORING AT 12 FEET					
15						

NOTES: 1. LAB - SPLIT-SPOON SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. SS - SPLIT-SPOON SAMPLE.
3. BG - BACKGROUND READING.

CR373

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: MW-804	BORING/WELL LOCATION
DRILLING CONTRACTOR: P. S. I.	DRILLING METHOD: HOLLOW-STEM AUGER		BOREHOLE SIZE: 10.3 IN.	BOREHOLE DEPTH: 16.0 FT.
DATE STARTED: 1/31/92	DATE COMPLETED: 1/31/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: 12.0 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: A. BABB	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0	CONCRETE				(ppm)	WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	CLAYEY SAND - brown, fine-medium grained, firm, no odor	1-2'	SS	8-8	BG	CONCRETE
2.5	SAND - yellow brown, fine grained, trace silt, very firm, dry, no odor	2-4'	LAB	8-12-14-17	BG	BENTONITE CHIPS
	SAND - light brown, fine grained, trace silt, very firm, dry-damp, no odor	4-6'	SS	8-14-12-14	BG	4-INCH, SCHEDULE-40, FLUSH-THREADED, PVC WELL CASING
5		6-8'	LAB	8-12-14-14	BG	FILTER PACK
7.5	SAND - light brown, fine grained, trace silt, very firm-firm, moist-wet, no odor (groundwater at 9 feet)	8-10'	SS	1-10-15-16	BG	4-INCH, 10-SLOT, FLUSH-THREADED, PVC WELL SCREEN
10		10-12'	SS	2-7-11-4	BG	
12.5	SILTY CLAY - gray, slightly plastic, firm, damp, no odor	12-14'	SS	2-2-4-5	BG	
15		14-16'	SS	2-3-5-6	BG	
	END OF BORING AT 16 FEET					

WELL DATA

NOTES: 1. LAB - SPLIT-SPOON SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. SS - SPLIT-SPOON SAMPLE.
3. BG - BACKGROUND READING.

CR373

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - E-49		BORING/WELL DESIGNATION: MW-805	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER		BOREHOLE SIZE: 4 IN.	BOREHOLE DEPTH: 10.5 FT.
DATE STARTED: 02/03/92	DATE COMPLETED: 02/03/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: 10.5 FT.
RIG: N/A	DRILLER: J. BELL	HELPER:	LOGGED BY: C. KIELTY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0	CONCRETE				(ppm)	WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	SAND - dark brown, medium grained, (fill) moist, no apparent odor					CONCRETE
	SAND - light brown, fine-medium grained, moist, no apparent odor					STEEL COUPLING
2.5						CHUNK BENTONITE
		4-5'	HA		BG	
5						2-INCH, SCHEDULE-40, GALVANIZED STEEL, RISER PIPE
	SAND - light brown, fine-medium grained, trace fine gravel, moist no odor					SAND PACK
		6-7'	HA		BG	
7.5						2-INCH, 80 GAUZE, STAINLESS STEEL, DRIVE POINT WELL SCREEN
	SAND - brown, medium grained, wet, odor present					
		9-10'	HA-LAB		BG	
10	END OF BORING AT 10 FEET					

NOTES: 1. HA - HAND AUGER SAMPLE.
2. HA-LAB - SAMPLE SUBMITTED FOR LABORATORY ANALYSIS.

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-806
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	04/13/93	9.61'	89.94'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Bay E-49, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.80'
DATES: STARTED: 3/24/93 ENDED: 3/24/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	5-6	12"/12"	11	Concrete					0.0	
						Black stained, damp, SAND and CLAY, hydrocarbo odor	11"					
	2	2'-4'	5-7-7-8	24"/24"	14	Light brown, damp, fine SAND, hydrocarbon odor	2'				0.0	
						Gray, damp, CLAY, some silt, hydrocarbon odor	3'					
	3	4'-6'	6-7-7-8	24"/24"	14	Same					0.0	
5						Tan, damp, medium SAND, slight odor	5'					
	4	6'-8'	9-10-10-12	24"/24"	20	Same					0.0	
	5	8'-10	6-8-12-14	24"/24"	20	Same, wet, black stains, odor					0.0	*
10	6	10'-12	4-7-10-11	24"/24"	17	Same					0.0	
						Tan, wet, fine SAND, silty						
	7	12'-14'	3-3-4-6	24"/18"	7	Same					0.0	
						Gray, damp, silty CLAY, no odor	12'6"					
						E.O.B. @ 14 fbg						
15												
20												

MW806

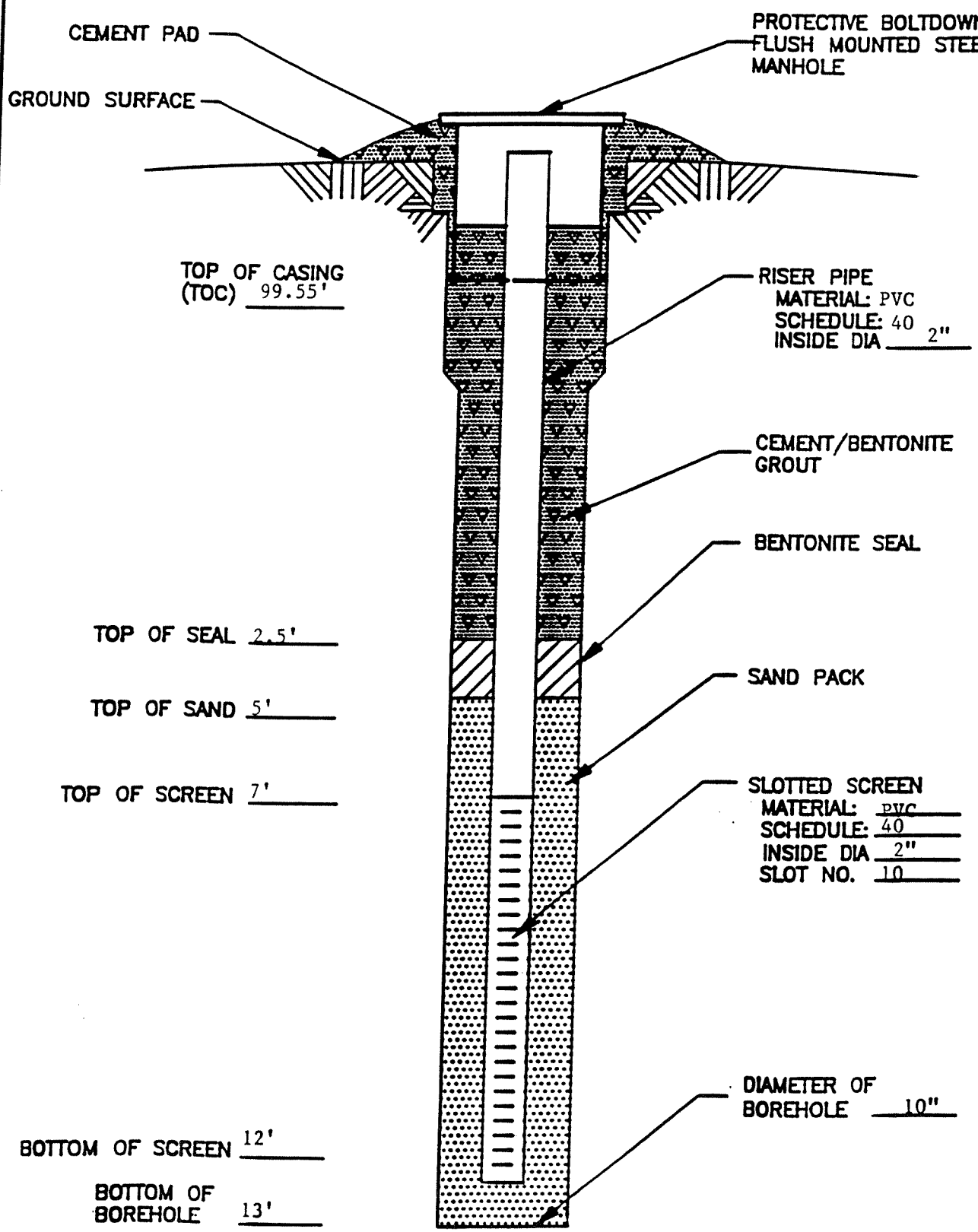
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-806 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 7-12fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 806

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-807 SHEET 1 OF 1
CLIENT: General Motors Corporation PROJECT LOCATION: GM Powertrain, Ypsilanti, Michigan	GROUND WATER — DATE: 04/13/93, DEPTH: 8.21', ELEVATION: 91.58'	FILE No.: 4585.015 DRILLING METHOD: SAMPLER TYPE: 2" Splitspoon HAMMER: 140 lbs FALL: 30"
O'BRIEN & GERE GEOLOGIST: Anthony J. Finch BORING CO.: Carlo Environmental Technologies FOREMAN: Mike Bond	BORING LOCATION: Bay E-49 GROUND ELEVATION: 100.10' DATES: STARTED: 3/26/93	ENDED: 3/26/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	REMARKS
0	1	0'-2'	3-6	12"/12"	9	Concrete					0.0	
						Light brown, damp, sandy CLAY	10"					
	2	2'-4'	5-6-5-7	24"/24"	11	Same					0.0	
						Brown, black stained, silty CLAY						
	3	4'-6'	4-7-9-10	24"/24"	16	Same					0.0	
5						Tan, damp, fine SAND, no odor	5'					
	4	6'-8'	7-9-9-8	24"/24"	18	Same					0.0	
						Same, moist						
	5	8'-10	3-4-6-9	24"/24"	10	Same, wet, no odor					4.4	*
						Brown, wet, silty SAND						
10	6	10'-12	2-6-7-6	24"/24"	13	Brown, wet, fine SAND, little silt, no odor					4.4	
	7	12'-14'	3-4-5-6	24"/24"	9	Same					1.2	
						Soft, gray, damp, CLAY trace of silt	12'6"					
						Soft, gray, wet, clayey SILT	13'					
	8	14'-16'	2-2	12"/12"	4	Gray, damp, CLAY, little silt	13'8"				0.0	
15						E.O.B. @ 15 fbg						
20												

MW807

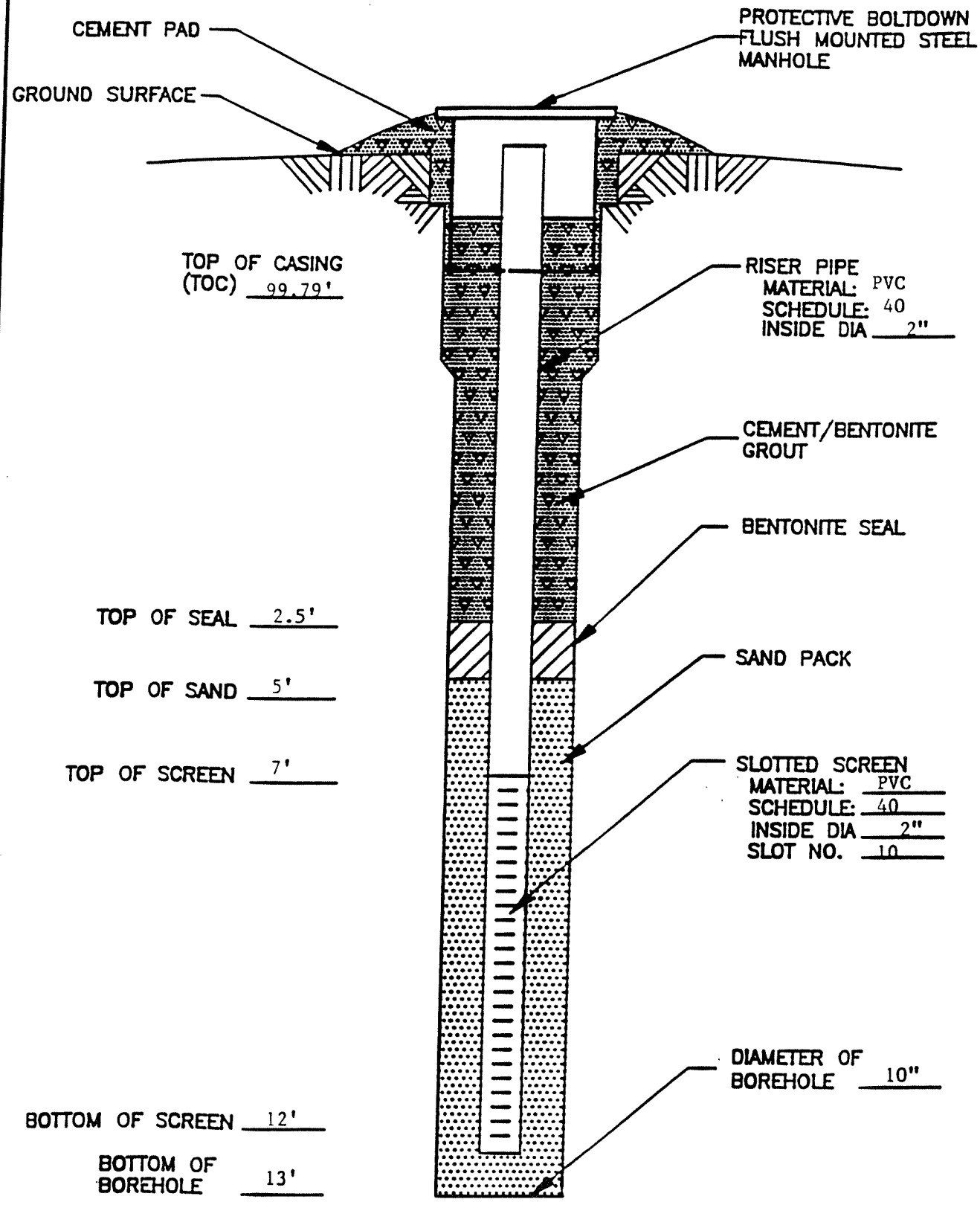
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-807 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 7-12fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 807

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-808
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	04/13/93	8.60'	91.02'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.94'
DATES: STARTED: 3/23/93 ENDED: 3/23/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	Hand Augured	Full		Concrete					0.0	
						Brown damp, SAND and CLAY	10"					
	2	2'-4'	Hand Augured	Full		Same					0.0	
	3	4'-6'	Hand Augured	Full		Light brown, damp, fine SAND	4'				0.0	
5												
	4	6'-8'	Hand Augured	Full		Same					0.0	*
	5	8'-10	5-8-12-10	24"/18"	20	Same					0.0	
10	6	10'-12	2-4-5-5	24"/24"	9	Gray, damp, CLAY, trace of silt, no odor	10'				0.0	
						E.O.B. @ 12 fbg						
15												
20												

MW808

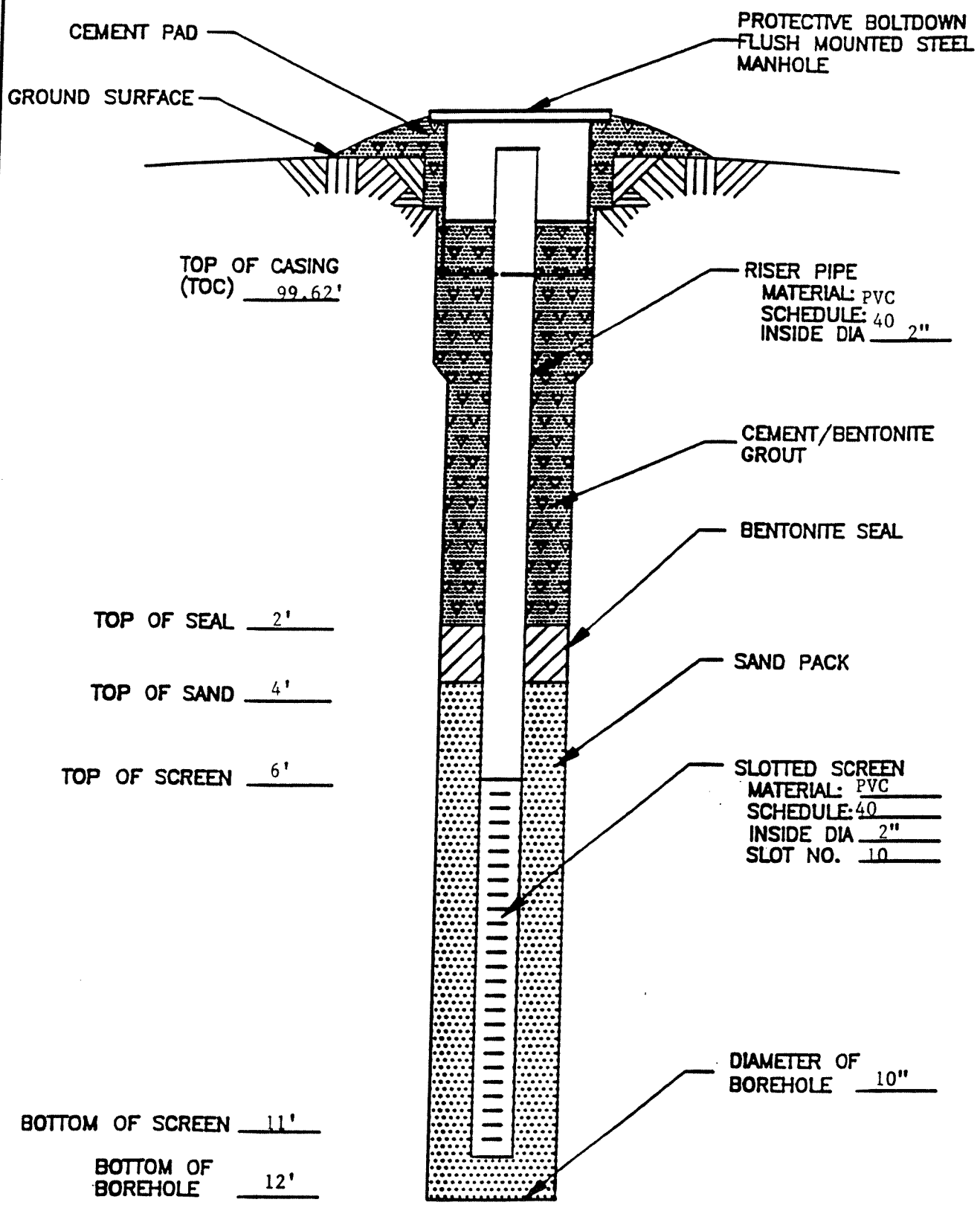
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-808 constructed of 2" schedule 40 PVC, with 5 feet of 0.010" slot screen extending from 6-11fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 808

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-809
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	04/13/93	8.21'	91.20'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.90'
DATES: STARTED: 3/30/93 ENDED: 3/30/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	1-2	12"/12"	3	Concrete						
						Brown, damp, fine SAND, little clay	7"				0.0	
	2	2'-4'	1-1-1-2	24"/24"	2	Same					0.0	
	3	4'-6'	1-2-1-2	24"/24"	3	Same, no odor					0.0	
5												
	4	6'-8'	2-4-7-9	24"/18"	11	Same, trace of clay					0.0	
	5	8'-10'	3-5-7-9	24"/24"	12	Brown, wet, fine SAND, no odor	8'				0.0	*
10	6	10'-12'	4-3-2-2	24"/24"	5	Same					0.0	
						Gray, damp, CLAY, some silt	11'4"					
						E.O.B. @ 12 fbg						
15												
20												

MW809

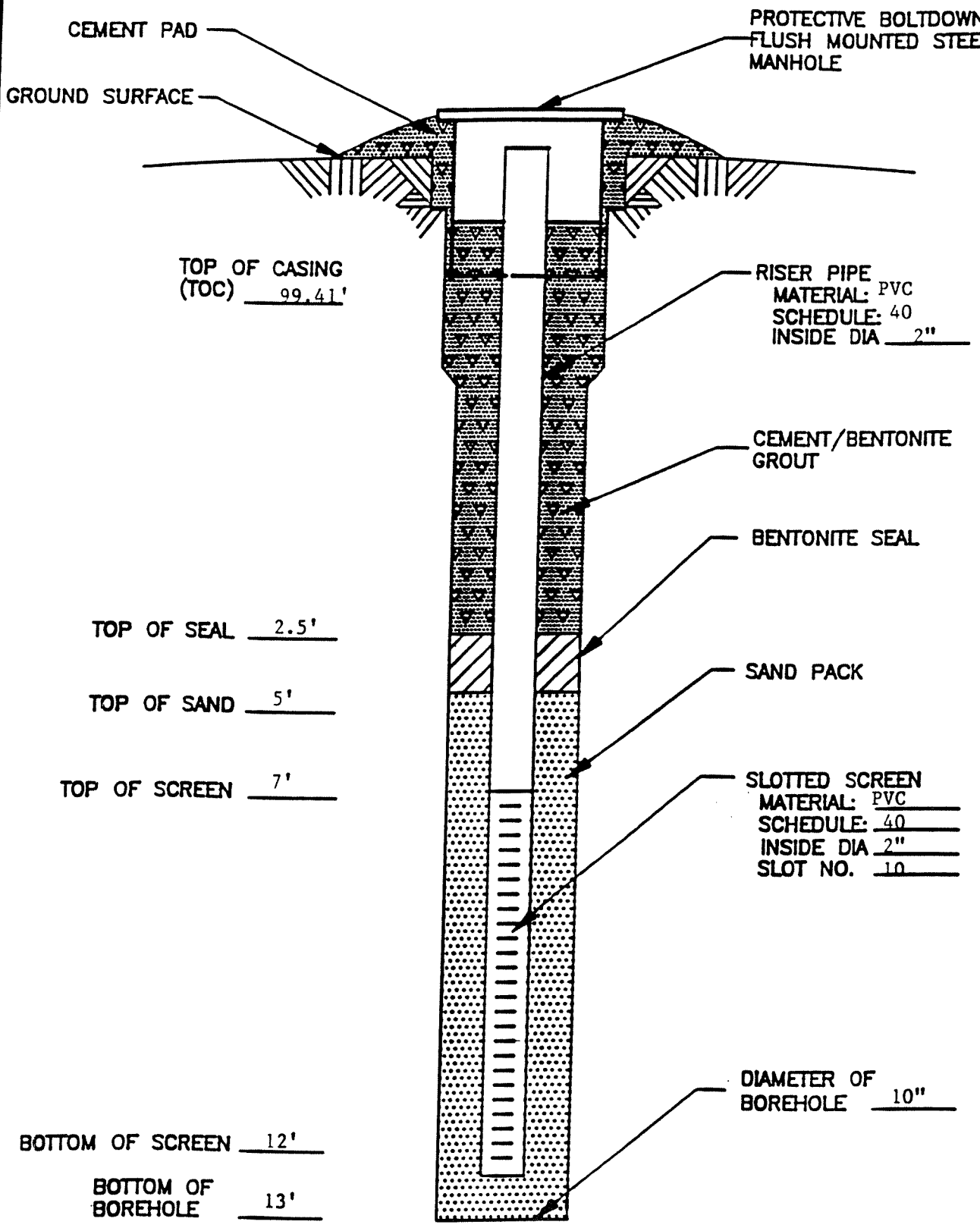
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-809 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 7-12fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 809

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-810 SHEET 1 OF 1
CLIENT: General Motors Corporation PROJECT LOCATION: GM Powertrain, Ypsilanti, Michigan	GROUND WATER DATE 04/13/93 DEPTH 9.98' ELEVATION 89.34'	FILE No.: 4585.015 DRILLING METHOD: SAMPLER TYPE: 2" Splitspoon HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond
BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.48'
DATES: STARTED: 3/30/93 ENDED: 3/30/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	RMKS*
0	1	0'-2'	Hand Augured	Full		Concrete Brown, damp, CLAY and medium Sand	8"				0.0	
	2	2'-4'	Hand Augured	Full		Same					0.0	
						Brown, damp, fine SAND, little clay	3'					
	3	4'-6'	Hand Augured	Full		Same					0.0	
5												
	4	6'-8'	Hand Augured	Full		Same					0.0	*
	5	8'-10	Hand Augured	Full		Brown, damp, fine SAND, petroleum odor					3.0	
10	6	10'-12'	Hand Augured	Full		Same					0.0	
						E.O.B. @ 12 fbg						
15												
20												

MW810

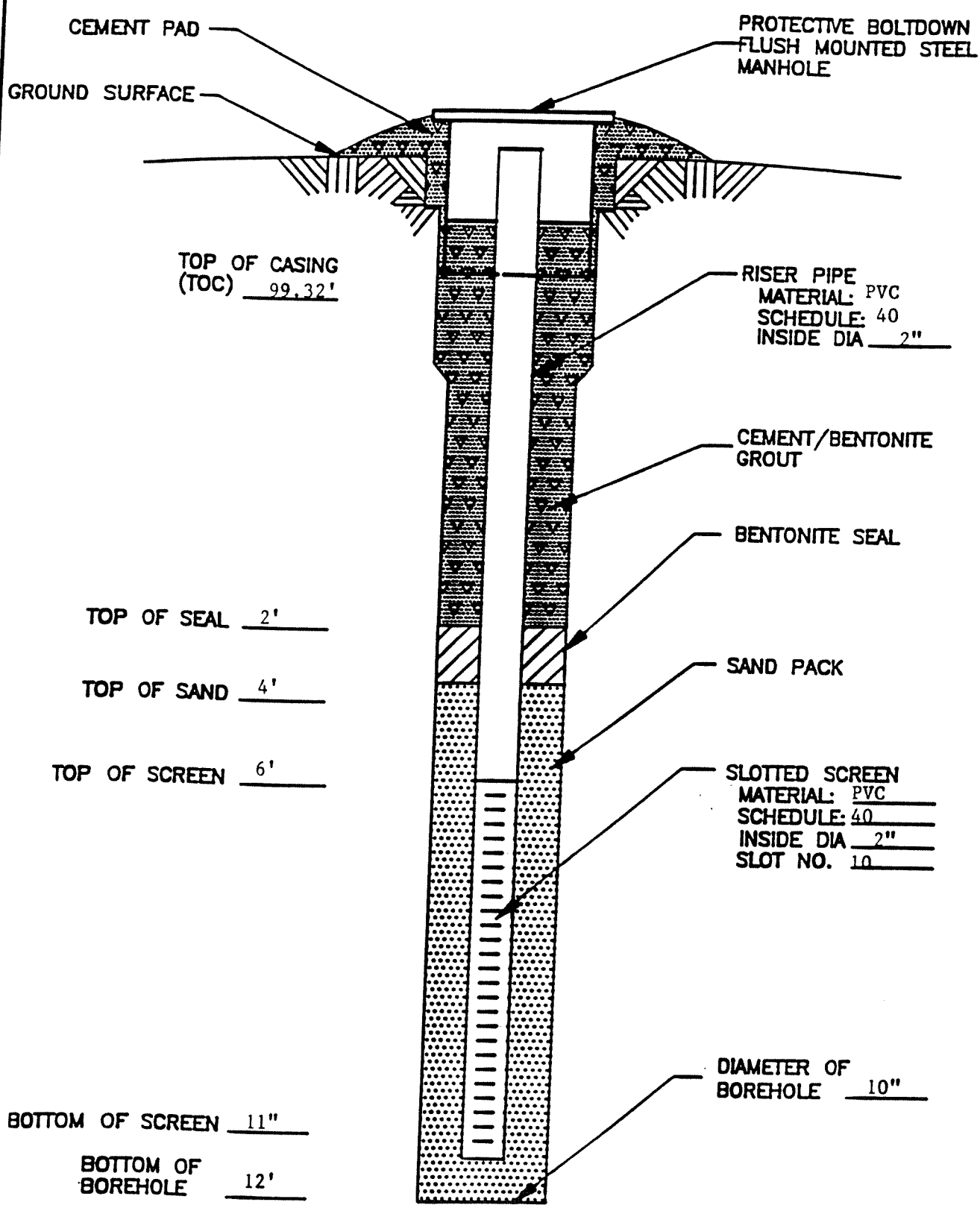
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-810 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 6-11fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 810

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-811
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD: Hollow Stem Auger
PROJECT LOCATION	05/07/93	9.57'	898.91'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.73'
DATES: STARTED: 4/29/93 ENDED: 4/29/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	17-10	12"/12"		Concrete					0.0	
						Dark brown, dry, fine SAND and CLAY, petroleum	12"					
	2	2'-4'	7-8-8-8	24"/24"	16	Dark brown, dry, fine SAND and CLAY petroleum odor					0.0	
	3	4'-6'	3-4-8-12	24"/24"	12	Brown, damp medium to coarse SAND, petroleum odor	4'				0.0	
5												
	4	6'-8'	3-9-12-13	24"/24"	21	Same					0.0	
	5	8'-10	2-6-9-14	24"/24"	15	Same, wet, black staining					0.0	*
10	6	10'-12'	5-8-6-3	24"/24"	14	Grey, wet, fine SAND					0.0	
						Grey, damp CLAY	11'10"					
						EOB @ 12fbg					0.0	
15												
20												

MW811

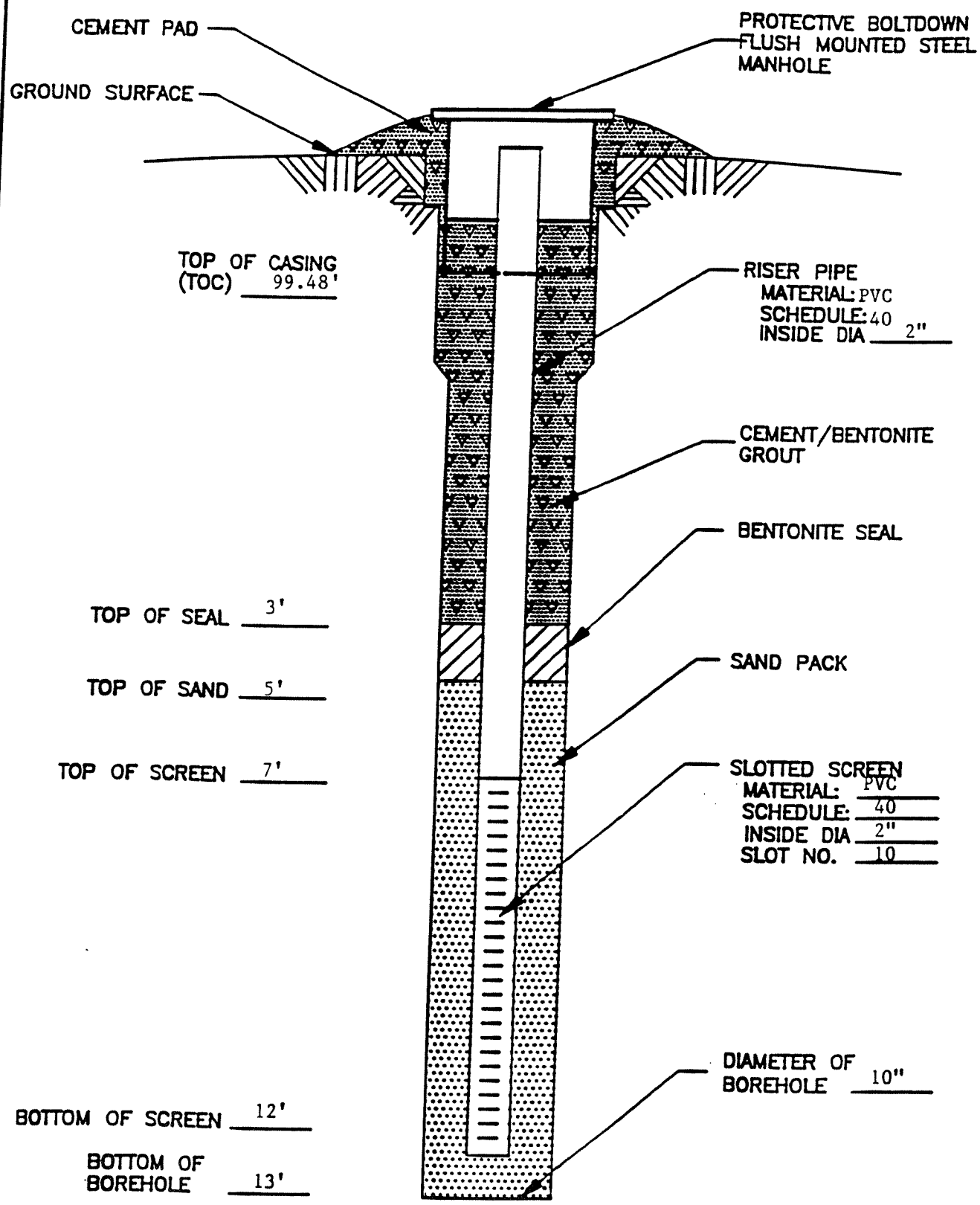
Notes:

"*" denotes top of 24' discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-811 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 7-12fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 811

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-812
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	04/13/93	7.98'	91.59'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.75'
DATES: STARTED: 3/23/93 ENDED: 3/23/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	Hand Augured	Full		Concrete					0.0	
						Brown, damp SAND and GRAVEL	10"					
						Brown, damp medium SAND	1'7"					
	2	2'-4'	Hand Augured	Full		Tan, damp CLAY, some sand, trace of fine gravel	2'1"				0.0	
						Tan, damp Sand and Clay						
	3	4'-6'	Hand Augured	Full							0.0	
5						Light, brown, damp, fine to medium SAND, no odor	4'8"					
	4	6'-8'	Hand Augured	Full							0.0	*
	5	8'-10	2-4-7-8	24"/24"	11	Brown, wet medium SAND, trace of clay no odor	8'				0.0	
10	6	10'-12	3-6-8-11	24"/24"	14	Same, fine					0.0	
						Gray, wet, SILT, no odor	11'2"					
						E.O.B. @ 12 fbg						
15												
20												

MW812

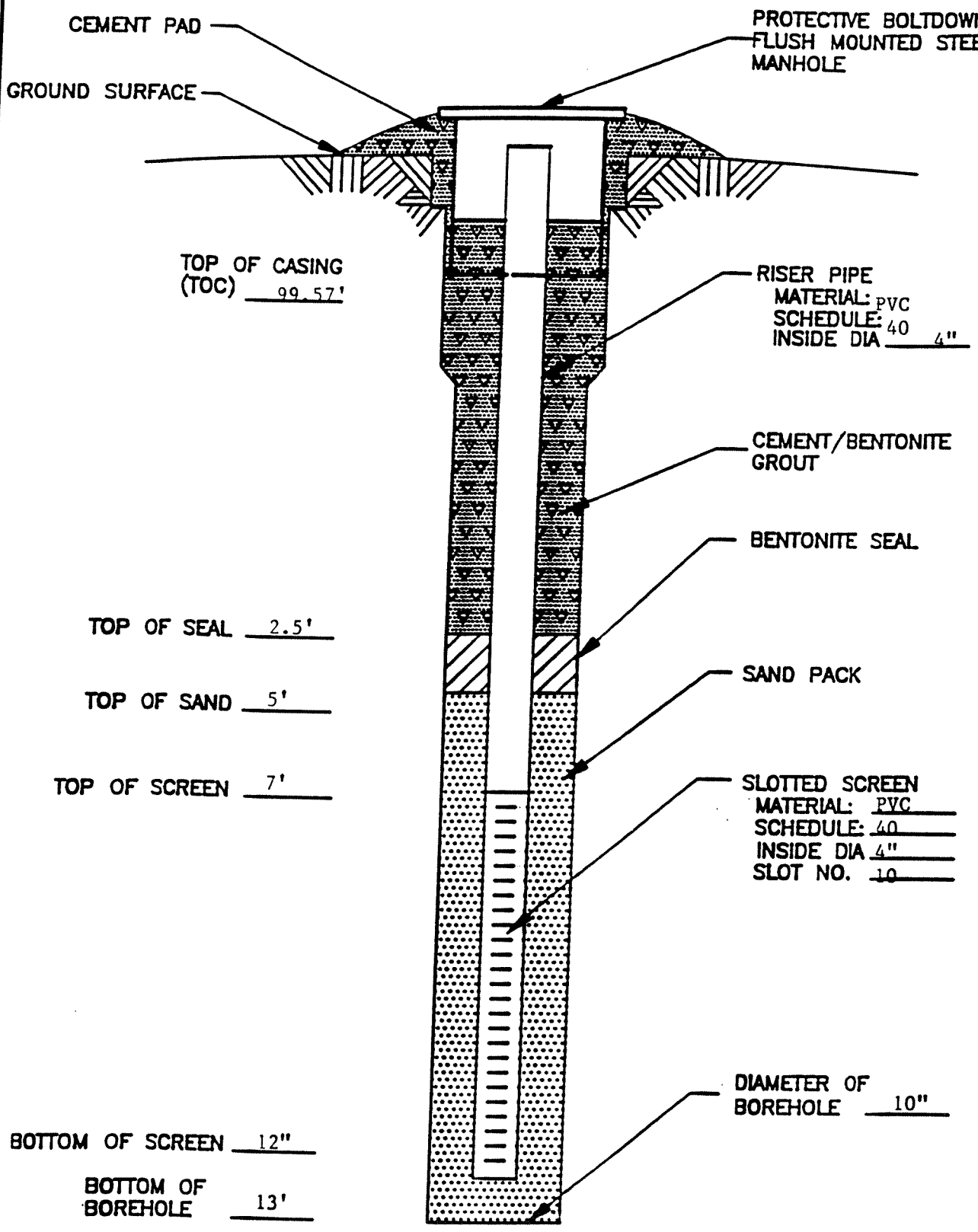
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-812 constructed of 4" schedule 40 PVC, with 0.010 inch slot screen extending from 7-12fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 812

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-813
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	04/13/93	8.68'	90.56'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.56'
DATES: STARTED: 3/30/93 ENDED: 3/30/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	Hand	Full		Concrete						
			Augured			Brown, damp, medium SAND, little clay	7"				0.0	
	2	2'-4'	Hand	Full		Same						
			Augured								0.0	
	3	4'-6'	Hand	Full		Brown, damp, medium SAND, little clay						
			Augured								0.0	
5												
	4	6'-8'	Hand	Full		Same						
			Augured								0.0	
												*
	5	8'-10	Hand	Full		Same, little medium gravel						
			Augured								0.0	
10	6	10'-12'	Hand	Full		Same						
			Augured								0.0	
						E.O.B. @ 12 fbg						
15												
20												

MW813

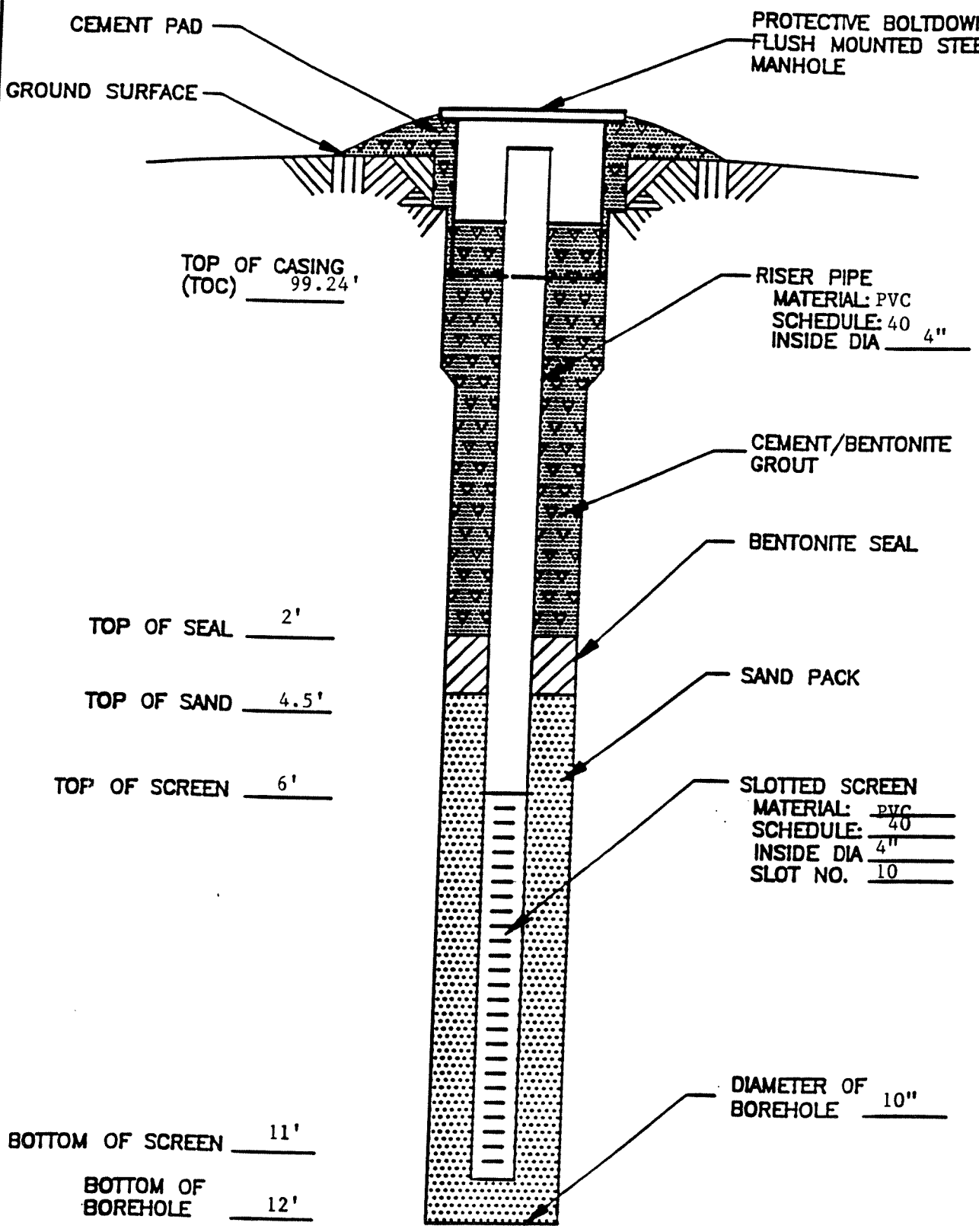
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-813 constructed of 4" schedule 40 PVC, with 5 feet of 0.010" slot screen extending from 6-11fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 813

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-814 SHEET 1 OF 1

CLIENT	GROUND WATER			
General Motors Corporation	DATE	DEPTH	ELEVATION	FILE No.: 4585.015
PROJECT LOCATION	04/13/93	7.05'	91.22'	DRILLING METHOD:
GM Powertrain, Ypsilanti, Michigan				SAMPLER TYPE: 2" Splitspoon
				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 98.63'
DATES: STARTED: 3/23/93 ENDED: 3/23/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	7-3	12"/6"	10	Concrete					0.0	
						Brown, damp/moist, medium to coarse SAND	10"					
	2	2'-4'	6-8-8-8	24"/24"	16	Brown, damp, medium SAND, little gravel no odor					0.0	
	3	4'-6'	5-10-40-39	24"/24"	50	Same, some medium to large gravel					0.0	
5												
	4	6'-8'	11-15-15-12	24"/24"	30	Brown, moist fine SAND, no odor					0.0	*
	5	8'-10	4-7-6-2	24"/24"	13	Same, fine to medium SAND, no odor					0.0	
10	6	10'-12	1-2-3-5	24"/24"	5	Same					0.0	
						Brown, damp CLAY, some silt	10'6"					
	7	12'-14'	4-3-6-5	24"/18"	9						0.0	
	8	14'-16'	5-16	12"/12"	21	Gray, damp, SILT, no odor	14'				0.0	
15						E.O.B. @ 15 fbg						
20												

MW814

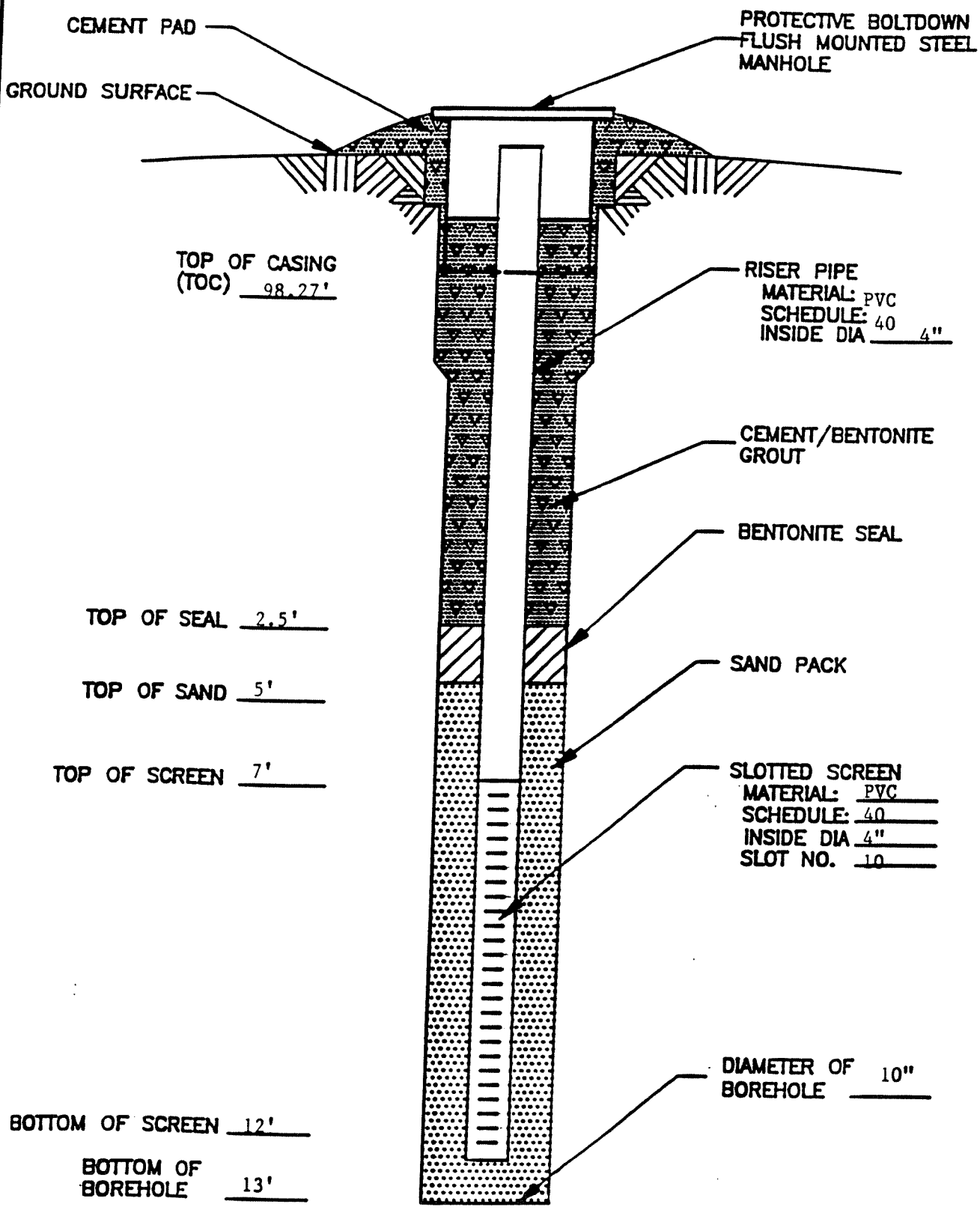
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-814 constructed of 4" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 7-12fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 814

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-815
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	12/17/93	8.53'	90.88'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.67'
DATES: STARTED: 12/13/93 ENDED: 12/13/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	7	12"/12"		Concrete					1.1	
			14									
						Dusky yellowish brown, damp clayey SAND, little medium gravel	1'					
	2	2'-4'	5	24"/24"	32	Dark yellowish brown, damp, fine to medium SAND, little clay					0.8	
			13									
			19			Olive black, damp, silty CLAY, little sand	3'					
			20									
	3	4'-6'	9	24"/24"	50	Dark yellowish brown, damp, fine to medium SAND	4'				0.0	
			23									
5			27									
			28									
	4	6'-8'	15	18"/18"	50	Dark yellowish brown, damp, fine to medium SAND	6'				0.3	
			25									
			25									
	5	8'-10	12	18"/18"	50	Dark yellowish brown, moist, fine to medium SAND	8'				0.2	*
			21									
			29									
10	6	10'-12	13	18"/18"	32	Dark yellowish brown, moist, fine to medium SAND	10'				0.0	
			19									
			23									
	7	12'-14'	14	18"/18"	48	Dark yellowish brown, moist, fine to medium SAND	12'				0.0	
			22									
			26									
						Greenish gray, damp CLAY, some silt	13'6"					
	8	14'-16'	6	12"/12"							0.0	
			22									
15						E.O.B. @ 15 fbg						
20												

MW815

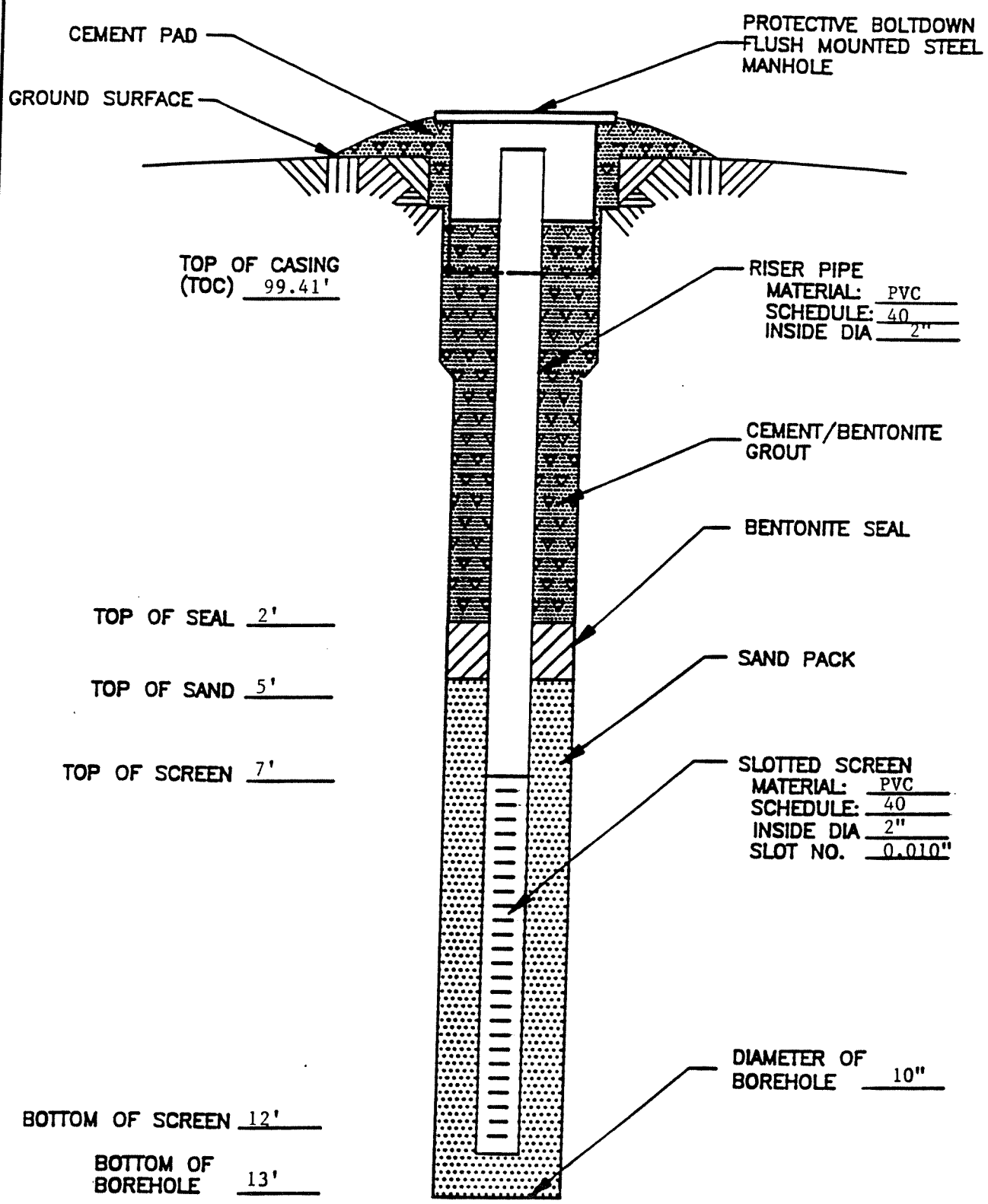
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-815 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 7-12fbg.

O'BRIEN & GERE ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 815

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-816
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	12/17/93	8.11'	91.25'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.56'
DATES: STARTED: 12/14/93 ENDED: 12/14/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	7	12"/12"		Concrete					0.0	
			16									
						Light brown, damp fill SAND and Concrete debris	1'					
	2	2'-4'	6	24"/24"	32	Light brown, damp fill SAND and Concrete debris	2'				0.0	
			12									
			20									
			22									
	3	4'-6'	5	24"/24"	28	Light brown, damp fill SAND and Concrete debris	4'				0.0	
5			13									
			15			Grayish Orange, moist fine SAND, little silt, salty odor	5'					
			6									
	4	6'-8'	10	24"/24"	31	Grayish Orange, moist fine SAND, little silt, salty odor	6'				0.0	
			14									
			17			Grayish orange, moist to wet fine SAND	7'					
			23									
	5	8'-10	15	24"/24"	53	Grayish orange, moist to wet fine SAND	8'				0.0	*
			25									
			28									
			30									
10	6	10'-12	12	24"/24"	42	Grayish orange, moist to wet fine SAND	10'				0.0	
			18									
			24									
			28									
	7	12'-14'	6	24"/24"	25	Grayish orange, moist to wet fine SAND	12'				0.0	
			10			Greenish gray, damp silty CLAY	12'6"					
			15									
			23									
	8					E.O.B. @ 14 fbg						
15												
20												

MW816

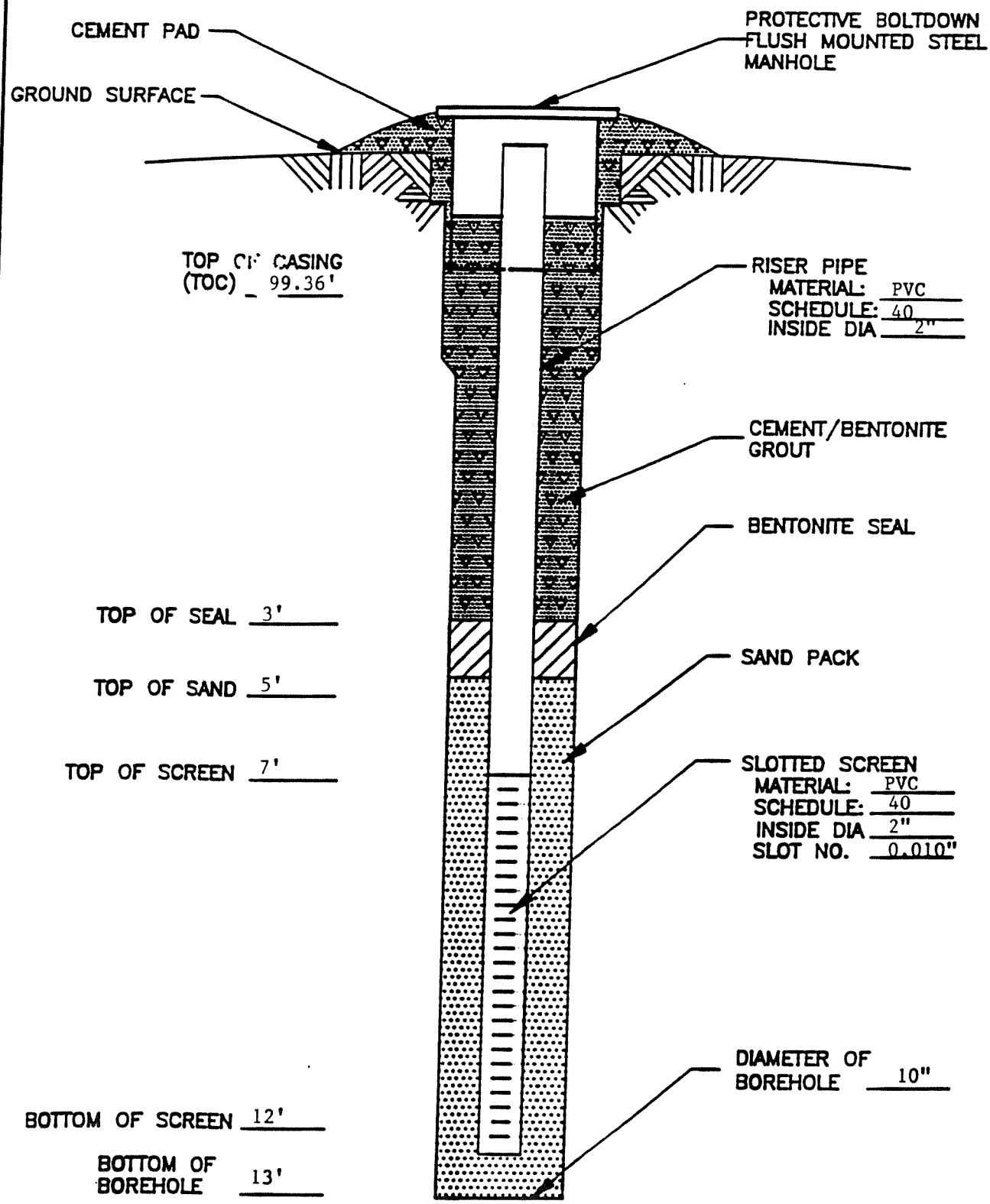
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-816 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 7-12fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 816

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-817
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	04/13/93	7.79'	90.99'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.14'
DATES: STARTED: 3/30/93 ENDED: 3/30/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	REMARKS*
0	1	0'-2'	Hand Augured	Full		Concrete					0.0	
	2	2'-4'	Hand Augured	Full		Brown, damp, fine SAND	2'				0.0	
	3	4'-6'	Hand Augured	Full		Same					0.0	
5												
	4	6'-8'	Hand Augured	Full		Same					0.0	
	5	8'-10	Hand Augured	Full		Gray, wet, silty SAND Same, odor					0.0	
10	6	10'-12'	1-2-3-4	24"/24"	5	Same					0.0	
						E.O.B. @ 12 fbg						
15												
20												

MW817

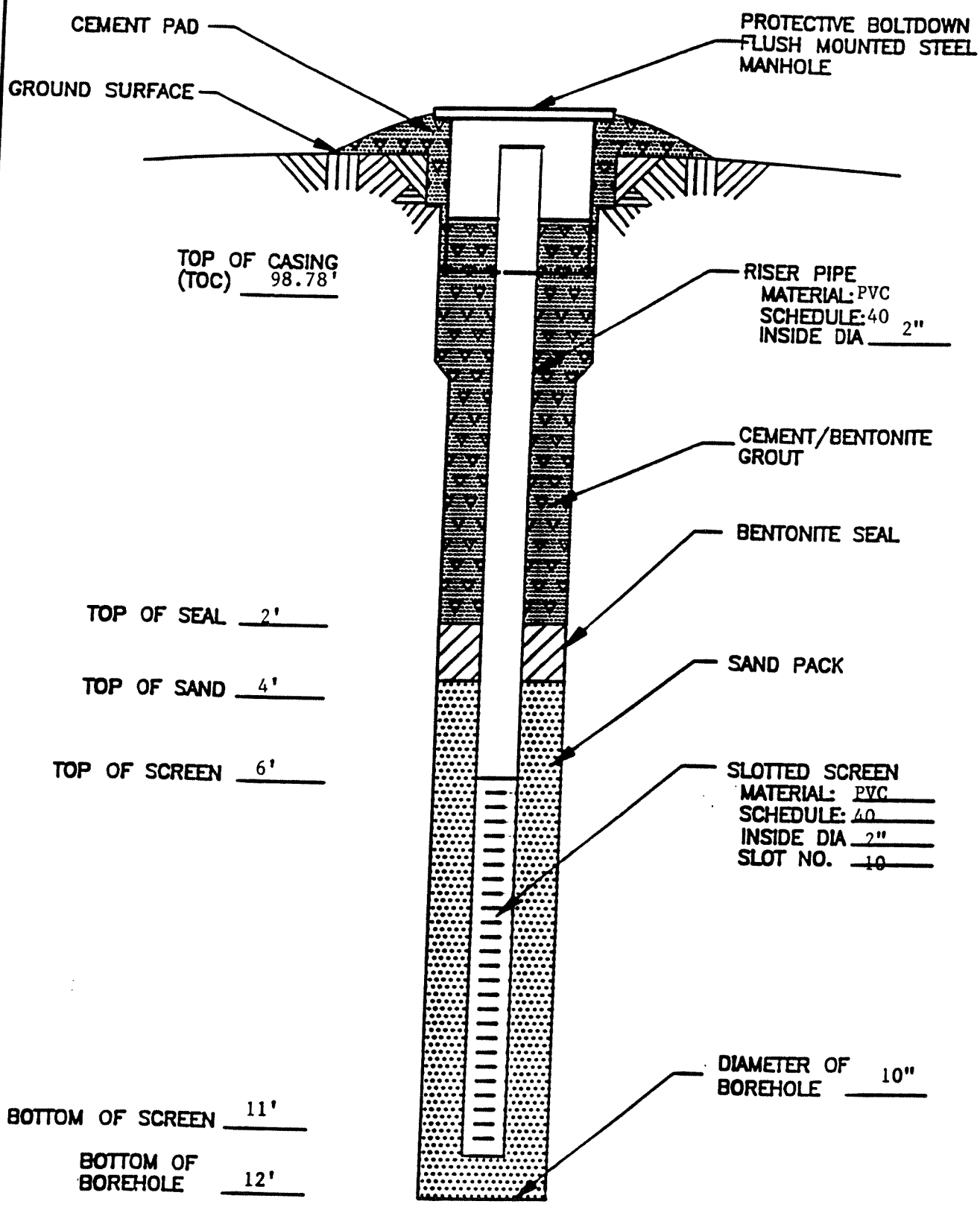
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-817 constructed of 2" schedule 40 PVC, with 5 feet of 0.010" slot screen extending from 6-11fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 817

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-818 SHEET 1 OF 1
CLIENT General Motors Corporation PROJECT LOCATION GM Powertrain, Ypsilanti, Michigan	GROUND WATER DATE 04/13/93 DEPTH 8.65' ELEVATION 90.56'	FILE No.: 4585.015 DRILLING METHOD: SAMPLER TYPE: 2" Splitspoon HAMMER: 140 lbs FALL: 30"
O'BRIEN & GERE GEOLOGIST: Anthony J. Finch BORING CO.: Carlo Environmental Technologies FOREMAN: Mike Bond	BORING LOCATION: Bay E-49 GROUND ELEVATION: 99.49' DATES: STARTED: 3/26/93	ENDED: 3/26/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	Hand Augured	Full		Concrete						
						Dark brown, damp sandy CLAY, no odor some, medium to large gravel	7"				0.0	
	2	2'-4'	Hand Augured	Full		Same					0.0	
	3	4'-6'	Hand Augured	Full		Same					0.0	
5						Tan, damp, fine SAND	5'					
	4	6'-8'	Hand Augured	Full		Same					0.0	*
	5	8'-10	Hand Augured	Full		Same					0.0	
10	6	10'-12'	3-5-4-2	24"/24"	9	Gray, damp, silty CLAY	10'				0.0	
						E.O.B. @ 12 fbg						
15												
20												

MW818

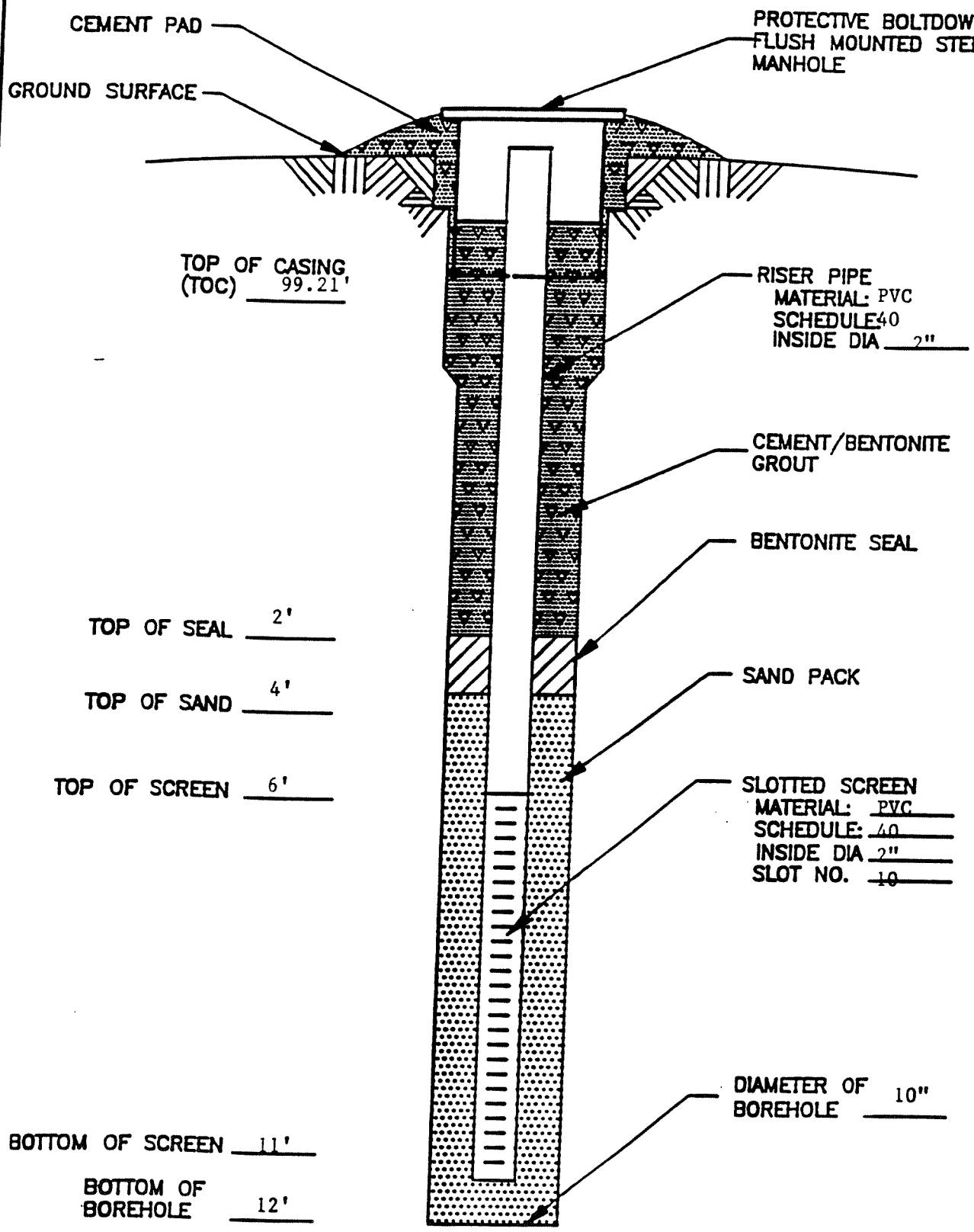
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-818 constructed of 2" schedule 40 PVC, with 5feet of 0.010 inch slot screen extending from 6-11fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 818

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-819
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	04/13/93	8.78'	90.30'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.27'
DATES: STARTED: 3/26/93 ENDED: 3/26/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	Hand Augured	Full		Concrete						
						Dark brown, damp, sandy CLAY, no odor	7"				0.0	
	2	2'-4'	Hand Augured	Full		Same					0.0	
						Same, tan, trace of fine to medium gravel						
	3	4'-6'	Hand Augured	Full		Tan, damp, fine SAND	4'				0.0	
5												
	4	6'-8'	Hand Augured	Full		Same					0.0	
	5	8'-10	Hand Augured	Full							0.0	*
						Same, wet						
10	6	10'-12'	5-8-11-11	24"/24"	19	Light brown, wet, fine SAND, no odor					0.0	
	7	12'-14'	1-2-4-4	24"/24"	6						0.0	
						Gray, damp, CLAY, trace of silt	12'6"					
						E.O.B. @ 14 fbg						
15												
20												

MW819

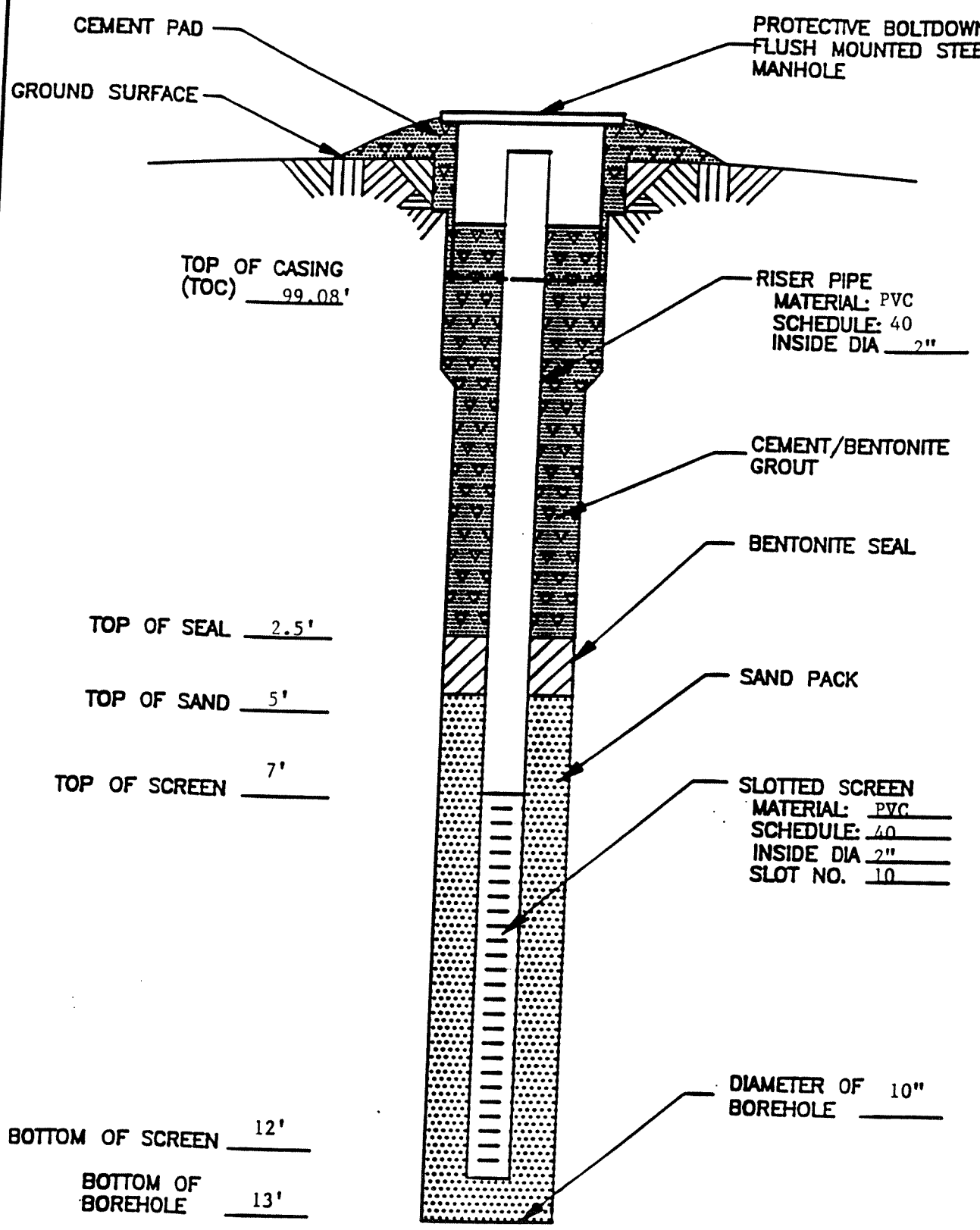
Notes:

"*" denotes top of 24' discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-819 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 7-12fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 819

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-820
		SHEET 1 OF 1

CLIENT	GROUND WATER			FILE No.: 4585.015
General Motors Corporation	DATE	DEPTH	ELEVATION	DRILLING METHOD:
PROJECT LOCATION	12/17/93	8.49'	90.72'	SAMPLER TYPE: 2" Splitspoon
GM Powertrain, Ypsilanti, Michigan				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.42'
DATES: STARTED: 12/14/93 ENDED: 12/14/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	14	12"/12"		Concrete					0.0	
			24									
						Light brown, damp medium SAND, some clay	1'					
	2	2'-4'	20	24"/24"	32	Light brown, damp medium SAND, some clay	2'				0.0	
			10									
			14									
			12									
	3	4'-6'	4	24"/24"	28	Light brown, damp medium SAND, some clay	4'				0.0	
			3									
5			5									
			14			Light brown, damp, medium to fine SAND	5'6"					
	4	6'-8'	8	24"/24"	31	Light brown, damp, medium to fine SAND	6'				0.0	
			10									
			14									
			20									
	5	8'-10	20	24"/24"	53	Dark yellowish brown, wet, fine SAND, little clayey silt	8'				0.0	*
			22									
			26									
			40									
10	6	10'-12	18	24"/24"	42	Dark yellowish brown, wet, fine SAND, little clayey silt	10'				0.0	
			22									
			26									
			30									
	7	12'-14'	7	24"/24"	25	Greenish gray, damp silty CLAY	12'				0.0	
			9									
			13									
			16									
	8	14'-15'	14	12"/12"		Greenish gray, damp silty CLAY	14'					
			16									
15						E.O.B. @ 15 fbg						
20												

MW820

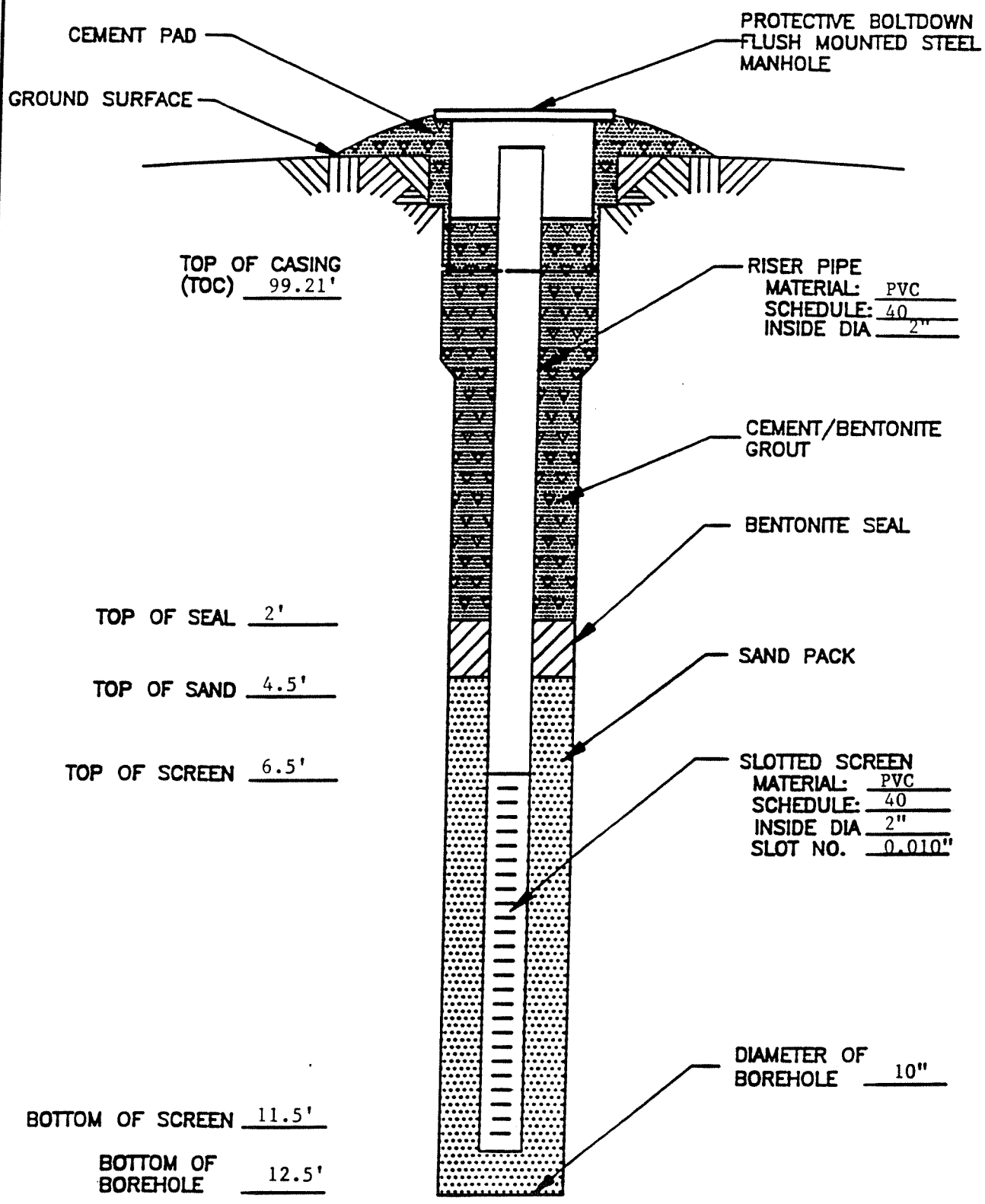
Notes:

"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-820 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 6.5-11.5fbg.

ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 820

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MW-821 SHEET 1 OF 1

CLIENT General Motors Corporation PROJECT LOCATION GM Powertrain, Ypsilanti, Michigan	GROUND WATER DATE 12/17/93 DEPTH 8.64' ELEVATION 90.33'	FILE No.: 4585.015 DRILLING METHOD: SAMPLER TYPE: 2" Splitspoon HAMMER: 140 lbs FALL: 30"
O'BRIEN & GERE GEOLOGIST: Anthony J. Finch BORING CO.: Carlo Environmental Technologies FOREMAN: Mike Bond	BORING LOCATION: Bay E-49 GROUND ELEVATION: 99.16' DATES: STARTED: 12/14/93	ENDED: 12/14/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	RMKS
0	1	0'-2'	Hand Augered	Full		Concrete					0.0	
						Light brown, damp medium SAND, little clay	1'					
	2	2'-4'	Hand Augered	Full		Light brown, damp medium SAND, little clay	2'				0.0	
	3	4'-6'	Hand Augered	Full		Light brown, damp medium SAND, little clay	4'				0.0	
5												
	4	6'-8'	Hand Augered	Full		Light brown, damp medium SAND, little clay	6'				0.0	
						Light brown, moist medium SAND, little clay	7'				NA	*
	5	8'-10	Hand Augered	Full		Light brown, wet medium SAND, little clay, petroleum odor	8'				NA	
10						E.O.B. @ 10 fbg						
15												
20												

MW821

Notes:

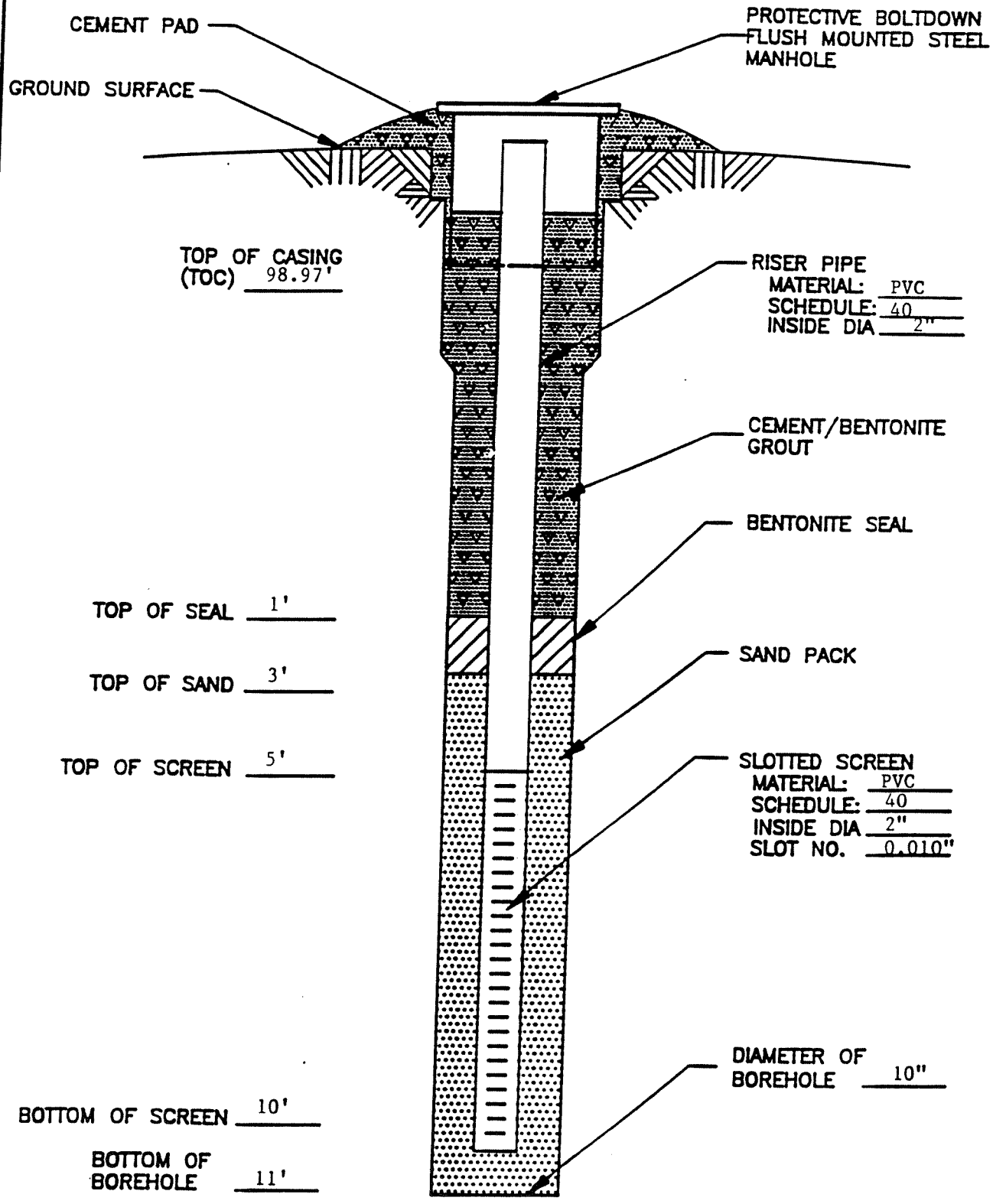
"*" denotes top of 24" discrete sampled interval.

PID readings are in parts per million (ppm).

Monitoring well MW-821 constructed of 2" schedule 40 PVC, with 5 feet of 0.010 inch slot screen extending from 5-10fbg.

"NA" denotes PID not functioning correctly.

O'BRIEN & GERE
ENGINEERS INC.



General Motors Corporation
Powertrain Facility
Ypsilanti, Michigan
Monitoring Well 821

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49	BORING/WELL DESIGNATION: HA-1	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 10.5 FT.
DATE STARTED: 1/22/92	DATE COMPLETED: 1/22/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: - - FT.	SEE FIGURE 3-1		
RIG: N/A	DRILLER: J. BELL	HELPER: - -	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE						
	SAND - gray, fine-medium grained, trace silt and clay						
2.5		2-3'	HA-LAB		BG		
	SAND - gray / brown, medium grained, trace silt, odor present						
5		5-6'	HA-LAB		1		
7.5							
	(Groundwater at 9 feet)						
10		9.5 -10.5'	HA-LAB		3		
	END OF BORING AT 10.5 FEET						
12.5							
15							
17.5							

NOTES: 1. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: HA-2	BORING/WELL LOCATION
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 6.5 FT.
DATE STARTED: 1/22/92	DATE COMPLETED: 1/22/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: J. BELL	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						
	SAND - light brown, fine-medium grained, trace gravel, dry, no odor						
2.5		2-3'	HA		BG		
5		5-6'	HA-LAB		BG	DIFFICULT TO AUGER AT 6'	
	END OF BORING AT 6.5 FEET					REFUSAL AT 6.5'	
7.5							
10							
12.5							
15							
17.5							

NOTES: 1. HA - HAND AUGER SAMPLES FOR REFERENCE ONLY.
2. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
3. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: HA-3	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 7.2 FT.
DATE STARTED: 1/22/92	DATE COMPLETED: 1/22/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: J. BELL	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	CONCRETE				(ppm)		
	SAND - light brown-brown, fine-medium grained, trace silt and gravel, no odor						
2.5		2-3'	HA		BG		
5		5-6'	HA-LAB		BG		
7.5	END OF BORING AT 7.2 FEET					refusal at 7.2'	
10							
12.5							
15							
17.5							

NOTES: 1. HA - HAND AUGER SAMPLES NOT SENT TO LABORATORY.
2. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
3. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: HA-5	BORING/WELL LOCATIO
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 10.5 FT.
DATE STARTED: 1/22/92	DATE COMPLETED: 1/22/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: J. BELL	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE						
	SAND - light gray, medium grained, trace silt						
	moist layer, sticky, dark brown at 1.5'						
	SAND - gray, dark brown, medium grained, trace silt and gravel, slight odor	2-3'	HA		BG		
2.5							
	SAND - light brown, medium grained, trace silt and gravel, no odor						
5		5-6'	HA-LAB		BG		
7.5							
	(Groundwater at 9.5 feet)						
10		9.5-10.5'	HA-LAB		BG		
	END OF BORING AT 10.5 FEET						
12.5							
15							
17.5							

NOTES: 1. HA - HAND AUGER SAMPLES NOT SENT TO LABORATORY.
2. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
3. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49	BORING/WELL DESIGNATION: HA-6	BORING/WELL LOCATI
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 11 FT.
DATE STARTED: 1/23/92	DATE COMPLETED: 1/23/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: - - FT.	SEE FIGURE 3-1		
RIG: N/A	DRILLER: J. BELL	HELPER: - -	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						
	SAND - brown, medium grained, trace silt and gravel, damp, no odor						
2.5		2-3'	HA		BG		
	SAND - dark brown-black, fine-medium grained, some clay, trace silt and gravel, hard, no odor						
	SAND - yellow-brown, fine-medium grained, trace silt, no odor						
5							
	SAND - light brown, fine grained, trace silt, moist, no odor	5-6'	HA-LAB		BG		
7.5							
	odor present at 9'						
	(Groundwater at 9.5 feet)	9-10'	HA		8		
10		10-11'	HA-LAB		5		
	END OF BORING AT 11 FEET						
12.5							
15							
17.5							

NOTES: 1. HA - HAND AUGER SAMPLES NOT SENT TO LABORATORY.
2. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
3. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: HA-7	BORING/WELL LOCATION
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 3.5 FT.
DATE STARTED: 1/23/92	DATE COMPLETED: 1/23/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: J. BELL	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE						
	SAND - light brown, medium-fine grained, trace clay, silt, and gravel, no odor						
2.5		2-3'	HA		BG		
	WOOD BLOCKS END OF BORING AT 3.5 FEET					Wood Blocks at 3.5' - refusal	
5							
7.5							
10							
12.5							
15							
17.5							

NOTES: 1. HA - HAND AUGER SAMPLES NOT SENT TO LABORATORY.
2. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
3. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: HA-8	BORING/WELL LOCATION
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 10 FT.
DATE STARTED: 1/23/92	DATE COMPLETED: 1/23/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: J. BELL	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	CONCRETE				(ppm)		
	SAND - (fill), brown, medium grained, trace silt and gravel, no odor						
2.5		2-3'	HA-LAB		BG		
5	SAND -brown, medium-coarse grained, some gravel, trace silt, no odor	5-6'	HA-LAB		1		
	SAND - light brown-brown, fine grained, trace silt, moist-wet at 9 feet						
7.5	(odor present at 7.5 feet)						
	(Groundwater at 9 feet)	9-10'	HA-LAB		8	Duplicate sample HA-100	
10	END OF BORING AT 10'						
12.5							
15							
17.5							

NOTES: 1. HA - HAND AUGER SAMPLES NOT SENT TO LABORATORY.
2. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
3. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-13	PROJECT NAME: GM POWERTRAIN - AREA E-49		BORING/WELL DESIGNATION: HA-9	BORING/WELL LOCATION
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 10 FT.
DATE STARTED: 1/24/92	DATE COMPLETED: 1/24/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: J. BELL	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE						
	SAND - (fill), brown, medium grained						
	CONCRETE						
2.5	SAND - dark brown, fine grained, trace silt, clay and gravel, slight odor	3-4'	HA-LAB		BG		
5	SAND - light brown, fine grained, trace silt, no odor	6-7'	HA-LAB		BG	Duplicate sample HA-101	
7.5	8.5-8.7' - Layer of black sand, odor present						
	(Groundwater at 9 feet)	9-10'	HA-LAB		3		
10	END OF BORING AT 10 FEET						
12.5							
15							
17.5							

NOTES: 1. HA - HAND AUGER SAMPLES NOT SENT TO LABORATORY.
2. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
3. BG - BACKGROUND READING.

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: HA-10 SHEET 1 OF 1

CLIENT	GROUND WATER			
General Motors Corporation	DATE	DEPTH	ELEVATION	FILE No.: 4585.015
PROJECT LOCATION	N/A	N/A	N/A	DRILLING METHOD: Hand Auger
GM Powertrain, Ypsilanti, Michigan				SAMPLER TYPE:
				HAMMER:

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond
BORING LOCATION: Bay E-49
GROUND ELEVATION: N/A
DATES: STARTED: 3/25/93 ENDED: 3/25/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	Hand Augered	Full		Concrete						
						Brown, damp sandy CLAY	1'					
	2	2'-4'	Hand Augered	Full		Auger refusal concrete encountered EOB @ 2'6"bg						
5												
10												
15												
20												

HA10

Notes:

PID readings are in parts per million (ppm).

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: HA-11 SHEET 1 OF 1
CLIENT General Motors Corporation PROJECT LOCATION GM Powertrain, Ypsilanti, Michigan	GROUND WATER DATE N/A DEPTH N/A ELEVATION N/A	FILE No.: 4585.015 DRILLING METHOD: Hand Auger SAMPLER TYPE: HAMMER:
O'BRIEN & GERE GEOLOGIST: Anthony J. Finch BORING CO.: Carlo Environmental Technologies FOREMAN: Mike Bond	BORING LOCATION: Bay E-49 GROUND ELEVATION: 99.23' DATES: STARTED: 3/25/93	ENDED: 3/25/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	R M K S*
0	1	0'-2'	Hand	Full		Concrete					0.0	
			Augered			Black stained, damp sandy CLAY	8"					
	2	2'-4'	Hand	Full							0.0	
			Augered			Tan, damp fine SAND	2'6"					
	3	4'-6'	Hand	Full		Same					0.0	
			Augered									
5												
	4	6'-8'	Hand	Full							0.0	
			Augered			Same						
	5	8'-10'	Hand	Full		Same, wet					0.0	*
			Augered									
						EOB @ 9fbg						
10												
15												
20												

HA11

Notes:

PID readings are in parts per million (ppm).

"*" denotes top of 24" discrete sampled interval.

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: HA-12 SHEET 1 OF 1

CLIENT	GROUND WATER			
General Motors Corporation	DATE	DEPTH	ELEVATION	FILE No.: 4585.015
PROJECT LOCATION	N/A	N/A	N/A	DRILLING METHOD: Hand Auger
GM Powertrain, Ypsilanti, Michigan				SAMPLER TYPE:
				HAMMER:

O'BRIEN & GERE GEOLOGIST: Anthony J. Finch
BORING CO.: Carlo Environmental Technologies
FOREMAN: Mike Bond

BORING LOCATION: Bay E-49
GROUND ELEVATION: 99.85'
DATES: STARTED: 4/29/93 ENDED: 4/29/93

DEPTH (ft.)	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND	FIELD TESTING PID	RMKS*
0	1	0'-2'	Hand	Full		Concrete					0.0	
			Augered			Brown, damp medium SAND, slight hydrocarbon odor	10"					
	2	2'-4'	Hand	Full							0.0	
			Augered									
	3	4'-6'	Hand	Full							0.0	
			Augered									
5						Grey, damp fine SAND	5'					
	4	6'-8'	Hand	Full							0.0	
			Augered									
	5	8'-10'	Hand	Full		Same, wet					0.0	*
			Augered									
						EOB @ 9fbg						
10												
15												
20												

HA12

Notes:

PID readings are in parts per million (ppm).

"*" denotes top of 24" discrete sampled interval.

AREA 7

HYDRAULIC LIFT

AREA 8

BAY EE-10

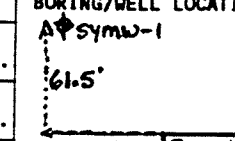
AREA 9

SCRAP YARD

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-23	PROJECT NAME: GM - POWERTRAIN		BORING/WELL DESIGNATION: SYMW-1	BORING/WELL LOCATI
DRILLING CONTRACTOR: PIEDMONT REMEDIAL SERVICES	DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 9 IN.	BOREHOLE DEPTH: 11 FT.	
DATE STARTED: 3/16/95	DATE COMPLETED: 3/16/95	GROUND ELEV.: NA FT.	MEASURING POINT ELEV: 98.16 FT.	WELL DEPTH: 10.2 FT.
RIG: D-53	DRILLER: N. MARTIN	HELPER: A. BOGOSKI	LOGGED BY: D. BELAN	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	PI METER	COMMENTS	WELL DATA
0	RUBBLE					WELL COMPLETED AT GRADE WITH AN EXPANDABLE LOCKING WELL CAP	
2.5	SAND - medium brown to yellow brown, trace black, very fine-fine grained, well graded, some gravel, little silt, trace clay, dry, no odor	1-3'	SS	7-10-12-10	0	CEMENT CHUNK BENTONITE	
5	SAND - grayish brown-yellowish brown, medium grained, poorly graded, trace fine and coarse, little gravel, damp, no odor	3-5'	SS	2-13-17-19	0	2-INCH FLUSH-THREADED PVC RISER PIPE	
7.5	SAND - medium grayish brown, trace yellowish brown, very fine-fine grained, poorly graded, wet at 6 feet, slight sewer odor at 7 feet, (3 inches of dark gray sand)	5-7'	SS	5-7-12-14	0		
10	CLAY - medium gray, slightly plastic, stiff, trace fine gravel, damp, no odor	7-9'	SS	1-2-4-2	0	2-INCH 10-SLOT PVC WELL SCREEN	
12.5	END OF BORING AT 11 FEET	9-11'	SS	2-4-7-8	0	SAND FILTER PACK	

NOTES: SS - SOIL COLLECTED USING A SPLIT-SPOON SAMPLER.
PI METER - CUTTINGS SCREENED USING A PHOTOIONIZATION METER, EXPRESSED IN PPM.

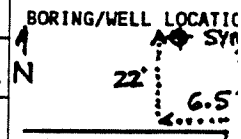
PI-LOG1

MI28

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-23	PROJECT NAME: GM - POWERTRAIN		BORING/WELL DESIGNATION: SYMW-2	BORING/WELL LOCATIO
DRILLING CONTRACTOR: PIEDMONT REMEDIAL SERVICES	DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 9 IN.	BOREHOLE DEPTH: 14 FT.	
DATE STARTED: 3/16/95	DATE COMPLETED: 3/16/95	GROUND ELEV.: NA FT.	MEASURING POINT ELEV: 98.46 FT.	WELL DEPTH: 13.2 FT.
RIG: D-53	DRILLER: N. MARTIN	HELPER: A. BOGOSKI	LOGGED BY: D. BELAN	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	PI METER	COMMENTS
0	GRAVELLY SAND - medium gray-olive brown, fine-coarse grained, well graded, dry, very slight odor	0-2'	SS	6-20-18-14	0	WELL COMPLETED AT GRADE WITH AN EXPANDABLE LOCKING WELL CAP; CEMENT
2.5	SAND - light-medium yellow brown, very fine-fine grained, poorly graded, trace silt and gravel, damp, no odor	2-4'	SS	11-7-5-4	0	CHUNK BENTONITE
5	SAND - brown-grayish brown, very fine-fine grained, poorly graded, little medium, trace gravel, damp, no odor	4-6'	SS	4-4-3-2	0	2-INCH FLUSH-THREADED PVC RISER PIPE
7.5	SAND - light yellow brown, fine grained, poorly graded, trace medium grained and fine gravel, damp, no odor	6-8'	SS	3-4-2-3	0	
10	SAND - brown-grayish brown, fine grained, poorly graded, coarse gray sand at 9-9.5 feet, wet at 9 feet, no odor	8-10'	SS	1-1-1-1	0	
	SAND - dark gray, fine-medium grained, poorly graded, trace silt and fine gravel, wet, no odor	10-12'	SS	2-2-9-4	0	SAND FILTER PACK
	CLAY - medium-dark gray, slightly plastic, stiff, some silt and sand seams, damp, no odor					
12.5	SILTY CLAY - medium-dark gray, slightly plastic, stiff, damp, some very fine sand seams (wet at 13.5 and 13.8 feet), no odor	12-14'	SS	2-4-7-8	0	2-INCH 10-SLOT PVC WELL SCREEN
	END OF BORING AT 14 FEET					
15						

WELL DATA

NOTES: SS - SOIL COLLECTED USING A SPLIT-SPOON SAMPLER.
PI METER - CUTTINGS SCREENED USING A PHOTOIONIZATION METER, EXPRESSED IN PPM.

PI-LOG1

MI286

AREA 10

ATF AREA

PROJECT: Hydramatic
LOCATION: Ypsilanti
DATE: 04/12/87

ENVIRONMENTAL SCIENCE DEPARTMENT
GMR
FIELD LOG

07-12-13-6-23
BORING #
WELL # 23
DRILLER Paul

DRILL TYPE Hollow Stem
BORING DIAMETER 10"OD 6½"ID
BORING DEPTH 12'6"
GROUND ELEVATION
SAMPLES

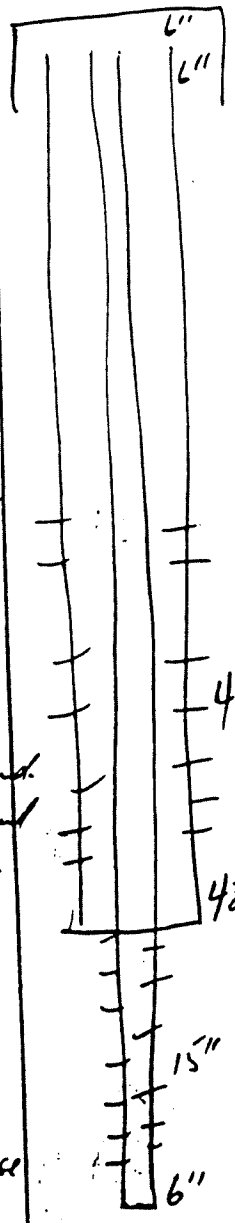
INITIAL WATER LEVEL 24HRS
BACKFILL MATERIAL #3 Silica Sand
COMMENTS

WELL CONSTRUCTION SPECIFICATIONS
WELL TYPE: Combination
WELL MATERIAL: PVC
SCREEN MATERIAL: PVC
PACKING MATERIAL: #3 Silica Sand
SEALING MATERIAL: 1' bentonite
CASING ELEVATION:
COMMENTS

SCIENTIST/ENGINEER

DEPTH (ft)	SOIL DESCRIPTION
	concrete
1'2"	m/f sand & gravel.
1'6"	dark compact f/m sand & gravel
2'4"	brown f/sand.
3'	yellow brown m/f sand few thin lens
4'	light brown m/f sand
5'	layer of yellow/brown m/f sand
6"	light brown m/f sand.
6"	sat with ATF
7'	7'6" layer of yellow/brn m/f sand.
8'	f/m. sand some coarse sand
8'6"	2' layer of v/f sand/silt - clean coarse sand
9'	uniform m/f sand
10	3" layer of fine at 9'6"
11	m/f sand with coarse sand & v/f pebbles
12.5	m/f sand with coarse sand & v/f pebbles
	TILL
20	

WELL CONSTRUCTION



strong ATF odor
distinct ATF odor
faint odor of ATF

AREA 11

DYNAMOMETER AREA

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-18 Sheet 1 of 1
Project Location: Ypsilanti, Michigan Client: GM Hydra-Matic, Ypsilanti	SAMPLER Type: Split-Spoon Hammer: 140 lbs. Fall: 30 in.	Ground Water Depth 7.86 Date 12-18-8 Depth Date File No.: 2488.225.205

Boring Co.: Professional Service Industries, Inc.
Foreman: Paul Libby
OBG Geologist: James O'Meara

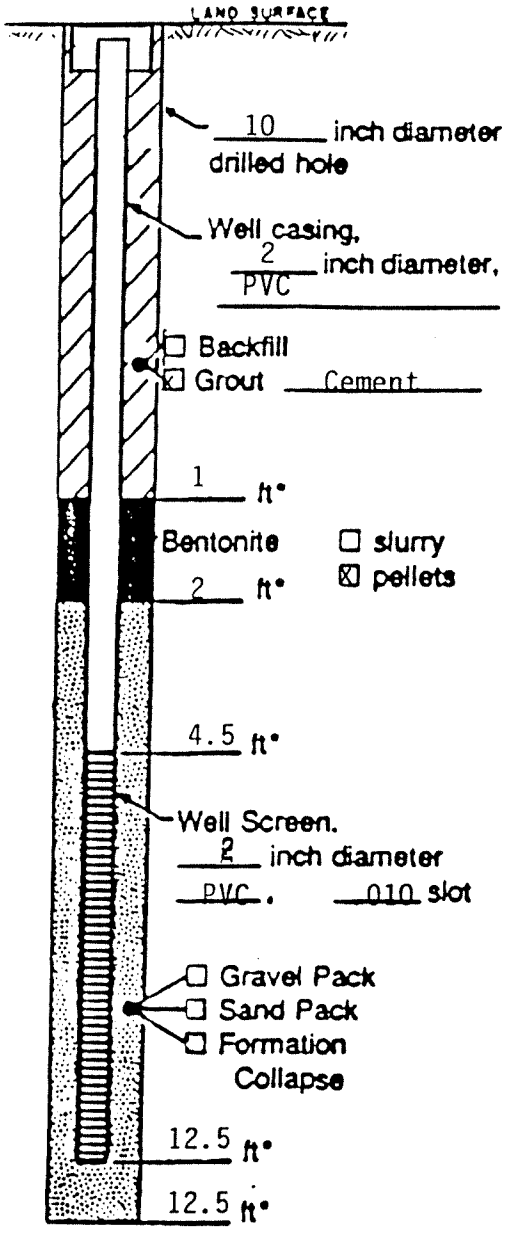
Boring Location: Downgradient from dynamometer cells
Ground Elevation:
Dates: Started: 12-18-89 Ended: 12-1

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testin pH	Sp Cond	HN
0						CONCRETE, 10 in. thick	10"				
						Damp, dark brown, medium to fine silty SAND, little fine gravel	3.5'				
						Damp, brown, fine silty SAND					
5											
	1	6-8	8-16-22	18							
						Same, moist, gray Water table approx. 7.5 ft.					
10											
						Wet, gray, CLAY, trace of silt	12.0'				
						EOB @ 12.5 ft.	12.5'				
15											

12.5-4.5 .010 slot PVC screen
12.5-2 uniform washed silica sand
2-1 bentonite
1-0 manhole (cement)

O'BRIEN & GERE

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Ypsilanti Well MW-18

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. _____

Well Casing Elevation and Datum _____ feet

☒ surveyed

☐ estimated

Installation Dates(s) 12/18/89

Drilling Method Hollow Stem Auger

Drilling Contractor Professional Service Industries (PSI)

Drilling Fluid _____

Development Techniques(s) and Date(s)

Bailing, 12/19/89

Fluid Loss During Drilling _____ gallo

Water Removed During Development _____ gallo

Static Depth to Water 7.86 feet below M.

Pumping Depth to Water _____ feet below M.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose Ground Water Monitoring

Remarks

Prepared by JA O'Meara

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

Report of Boring No. MW-19
Sheet 1 of 1

Project Location: Ypsilanti, Michigan
Client: GM Hydra-Matic, Ypsilanti

SAMPLER
Type: Split-Spoon
Hammer: 140 lbs. Fall: 30 in.

Ground Water Depth Date
Depth Date
File No.: 2488.225.205

Boring Co.: Professional Service Industries, Inc.
Foreman: Paul Libby
OBG Geologist: James O'Meara

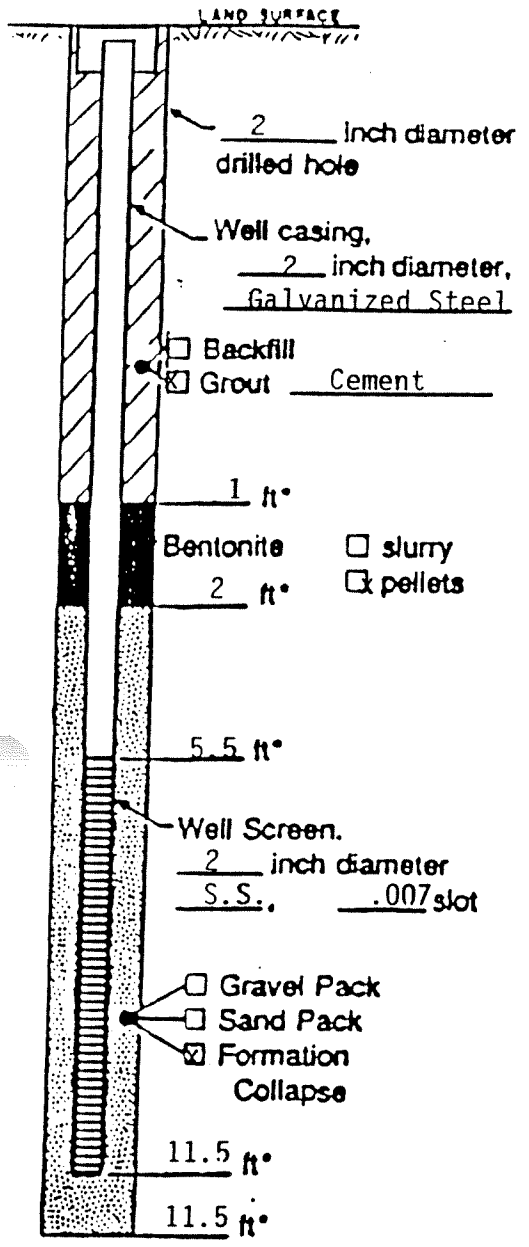
Boring Location: In dynamometer test area
Ground Elevation:
Dates: Started: 12-18-89 Ended: 12-19-89

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0						CONCRETE, 14 in. thick						
							14"					
						Damp, dark brown, medium to fine silty SAND, little fine gravel Debris at 3.0 ft.						
							4.0'					
5						Damp, light brown, medium to fine SAND, trace of silt						
	1	6.5-8				Same, moist, dark gray					340	
						Water table approx. 8.0 ft.						
10												
							11.5'					
						EOB @ 11.5 ft.						

.5-5.5 .007 slot stainless steel screen
.5-2 formation collapse
2-1 bentonite
1-0 manhole (cement)

O'BRIEN & GERE

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Ypsilanti Well MW-19

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. _____

Well Casing Elevation and Datum 721.0 feet USGS ☒ surveyed ☐ estimated

Installation Dates(s) 12/18/89-12/19/89

Drilling Method Hand Auger/Driven Well-Point

Drilling Contractor Professional Service Industries (PSI)

Drilling Fluid _____

Development Techniques(s) and Date(s)
Bailing, 12/19/89

Fluid Loss During Drilling _____ gallon

Water Removed During Development _____ gallon

Static Depth to Water _____ feet below M.P

Pumping Depth to Water _____ feet below M.P

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose Ground Water Monitoring

Remarks

Prepared by JA O'Meara

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-20 Sheet 1 of 1
Project Location: Ypsilanti, Michigan Client: GM Hydra-Matic, Ypsilanti	SAMPLER Type: Split-Spoon Hammer: 140 lbs. Fall: 30 in.	Ground Water Depth 7.70 Date 12-18-89 Depth Date File No.: 2488.225.205

Boring Co.: Professional Service Industries, Inc.
Foreman: Paul Libby
O'B Geologist: James O'Meara

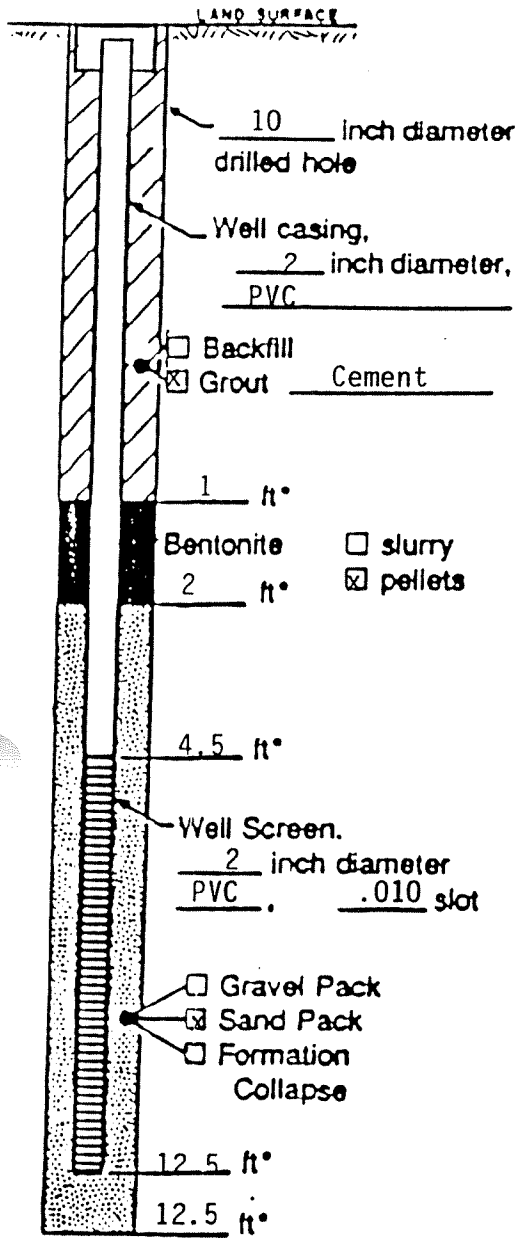
Boring Location: Downgradient from dynamometer cells
Ground Elevation:
Dates: Started: 12-18-89 Ended: 12-18-89

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
0						CONCRETE, 10 in. thick	10"					
						Damp, dark brown, medium to fine silty SAND, some fine gravel						
5							6.0'					
	1	6-8		18		Wet, gray, medium to fine SAND, trace of silt Water table approx. 7.0 ft.					0.4	
						Wet, gray, CLAY	12.0'					
						EOB @ 12.5 ft.	12.5'					

' 5-4.5 .010 slot PVC screen
..5-2 uniform washed silica sand
2-1 bentonite
1-0 manhole (cement)

O'BRIEN & GERE

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Ypsilanti Well MW-20

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. _____

Well Casing Elevation and Datum _____ feet USGS ☒ surveyed ☐ estimated

Installation Dates(s) 12/18/89

Drilling Method Hollow Stem Auger

Drilling Contractor Professional Service Industries (PSI)

Drilling Fluid _____

Development Techniques(s) and Date(s) Bailing, 12/19/89

Fluid Loss During Drilling _____ gallo

Water Removed During Development _____ gallo

Static Depth to Water 7.70 feet below M.

Pumping Depth to Water _____ feet below M.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose Ground Water Monitoring

Remarks

Prepared by JA O'Meara

O'RRIEN & GERE E INEERS, INC.	TEST BORING LOG	Report of Boring No. RW-1 Sheet 1 of 1
Project Location: Ypsilanti, Michigan nt: GM Hydra-Matic, Ypsilanti	SAMPLER Type: Hammer: Fall:	Ground Water Depth Date Depth Date File No.: 2488.225.205

Bc. ng Co.: Professional Service Industries, Inc.
Foreman: Paul Libby
OBG Geologist: James O'Meara

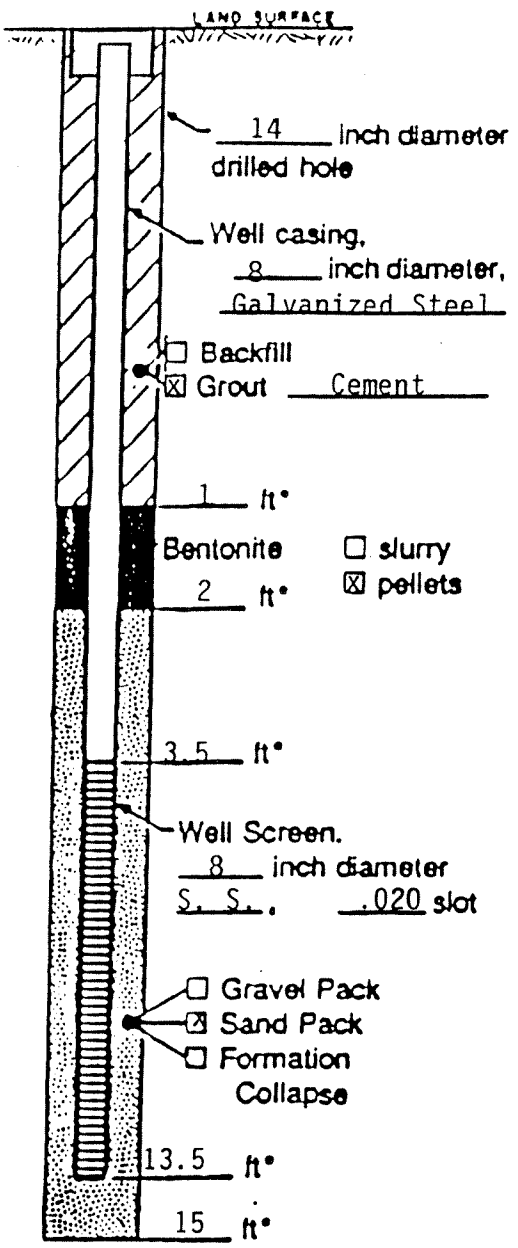
Boring Location: Downgradient of dynamometer test cells
Ground Elevation:
Dates: Started: 10-16-89 Ended: 10-18-89

Depth	Sample No.	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
						CONCRETE, 10 in. thick	10"					
						Damp, dark brown, medium to fine silty SAND, little fine gravel	2.5'					
						Damp, brown, fine silty SAND Concrete, 4 in. thick approx. 4.0 ft.						
5												
						Damp, gray, fine silty SAND Water table approx. 8.0 ft.						
10												
						Wet, gray, plastic CLAY, trace of silt EOB @ 12.5 ft.	12.0'					
1						EOB @ 15.0 ft.	15.0'					

5-3.5 .020 slot stainless steel screen
.5-2 uniform washed silica sand
2-1 bentonite
1-0 manhole (cement)

O'BRIEN & GERE

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Ypsilanti Well RW-1

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. _____

Well Casing Elevation and Datum _____ feet ☐ surveyed
USGS ☐ estimated

Installation Dates(s) _____

Drilling Method _____

Drilling Contractor Professional Service Industries (PSI)

Drilling Fluid _____

Development Techniques(s) and Date(s)
Compressed air with low yield pumping, 10/18/89

Fluid Loss During Drilling _____ ga

Water Removed During Development 160 ga

Static Depth to Water _____ feet below

Pumping Depth to Water _____ feet below

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose Product recovery/aquifer remediation

Remarks _____

Prepared by JA O'Meara

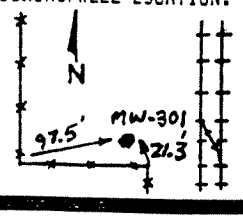
AREA 12

NORTH YARD

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: MW-301	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 11 FT.
DATE STARTED: 2/14/89	DATE COMPLETED: 2/14/89	GROUND ELEV.: 99.79 FT.	MEASURING POINT ELEV: 97.79 FT.
WELL DEPTH: 10.0 FT.			
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



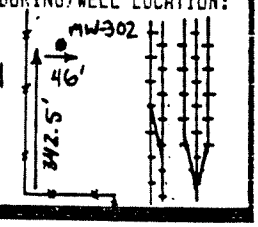
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	SAND (FILL)	N/A	N/A	N/A	BG	WELL FINISHED ABOVE GRADE W/A LOCKABLE PROTECTIVE CASING	XXX XXX XXX XXX XXX
						CEMENT	XX
						BENTONITE SEAL	//
2.5	SAND - orange-brown, medium grained, moist.					TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	...
	(groundwater encountered @ approx. 3 feet)						==
5.0						SAND FILTER PACK	..
	SAND - gray-brown, wet, trace silt.						
7.5						TWO-INCH 10-SLOT PVC WELL SCREEN	
10.0	CLAY - gray, moist, some silt.						.....
	END OF BORING AT 11 FEET						
12.5							
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: MW-302	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 2/14/89	DATE COMPLETED: 2/14/89	GROUND ELEV.: 102.63 FT.	MEASURING POINT ELEV: 100.13 FT.	WELL DEPTH: 12.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



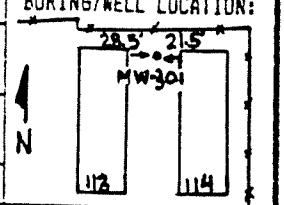
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	ASPHALT DEBRIS SAND & GRAVEL (FILL)	N/A	N/A	N/A	BG (ppm)	WELL FINISHED ABOVE GRADE W/A LOCKABLE PROTECTIVE CASING CEMENT BENTONITE SEAL	XX XXX
2.5	SAND - orange-brown, medium grained, moist, some fine gravel.					TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
5.0						SAND FILTER PACK	
7.5	SAND - gray-brown, wet, trace fine gravel and silt. (groundwater encountered @ approx. 6-feet)					TWO-INCH 10-SLOT PVC WELL SCREEN	
10.0							
12.5	CLAY - gray, moist, some silt.						
	END OF BORING AT 13 FEET						
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: MW-303	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13.5 FT.
DATE STARTED: 2/14/89	DATE COMPLETED: 2/14/89	GROUND ELEV.: 102.02 FT.	MEASURING POINT ELEV: 100.02 FT.	WELL DEPTH: 13 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	ASPHALT DEBRIS; SAND & GRAVEL (FILL)	N/A	N/A	N/A	(ppm) BG	WELL FINISHED ABOVE GRADE W/A LOCKABLE PROTECTIVE CASING	
	SAND - orange-brown, medium grained, moist, some fine gravel.					CEMENT	
2.5						BENTONITE SEAL	
5.0	SAND - gray-brown, fine-medium grained, moist, some silt.					TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
7.5						SAND FILTER PACK	
	SAND - gray, medium grained, wet, some silt.						
10.0	(groundwater encountered @ approx. 9 feet)					TWO-INCH 10-SLOT PVC WELL SCREEN	
12.5	CLAY - gray, moist, some silt.						
	END OF BORING AT 13.5 FEET						
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

AREA 13

BUILDING #17

PROJECT NO: 13-2370-00	NTH CONSULTANTS, LTD.	SHEET 1 OF 2

DRAFT

LOG OF HAND AUGER BORINGS

HAB NO.	GROUND SURFACE ELEV.	DEPTH (ft)	DESCRIPTION	SAMPLE INFORMATION			
				Sample No.	Depth (ft) From	Depth (ft) To	HNu (ppm)
1	99.0	0.0-0.4	**CONCRETE**				
		0.4-0.6	**ASPHALT**				
		0.6-1.1	**CONCRETE**				
		1.1-2.0	FILL: Brown **CLAYEY SAND** with Trace of Concrete Fragments (very moist--chemical odor)				
		2.0-6.0	FILL: Black & Brown **SAND** with Trace of Gravel (dry--chemical odor)	S-1 S-2	2.4 5.1	2.6 5.3	4 5
		6.0-7.6	FILL: Black **CLAYEY SAND** with Little Gravel (moist--strong chemical odor)	S-3	7.4	7.6	2
			[Refusal due to obstruction @ 7.6']				
2A	99.0	0.0-2.3	**CONCRETE**				
2B	99.0	0.0-1.1	**CONCRETE**				
		1.1-5.0	FILL: Brown **SILTY SAND** with Trace of Clay, Trace of Gravel & Concrete Fragments				
		5.0-7.0	FILL: Brown **SAND** with Trace of Gravel & Occasional Clay Inclusions	S-1	5.5	5.7	<1
		7.0-7.9	Brown **SILTY SAND** with Trace of Clay	S-2	7.4	7.6	<1
		7.9-10.4	Brown **SAND** (wet at 10.2')	S-3	10.2	10.4	<1
2C	99.0	0.0-1.1	**CONCRETE**				
		1.1-1.9	FILL: Brown **SILTY SAND** with Trace of Clay, Trace of Gravel & Concrete Fragments				
			[Refusal due to obstruction @ 1.9']				

NOTES:

[1] Hand Auger Boring No. 1 drilled approximately 12.0 feet east and 12.0 feet north from center of alum storage tank in Bldg-17.
[2] Hand Auger Boring Nos. 2A, 2B & 2C were drilled approximately 20.0 feet east of center of oil skimmer tank in Bldg-17.
[3] No groundwater encountered in HAB-1, HAB-2A or HAB-2C. Groundwater encountered at 10.2 ft below ground surface in HAB-2B.
[4] Hand auger borings backfilled with hydrated bentonite pellets and capped with concrete.

DRILLED BY: M. Dueweke **DATE:** 08/25/92 & 08/26/92 **FIGURE NO:** A-1

PROJECT NO: 13-2370-00	NTH CONSULTANTS, LTD.	SHEET 2 OF 2

DRAFT

LOG OF HAND AUGER BORINGS

HAB NO.	GROUND SURFACE ELEV.	DEPTH (ft)	DESCRIPTION	SAMPLE INFORMATION			
				Sample No.	Depth (ft) From	Depth (ft) To	HNu (ppm)
3	99.0	0.0-1.2	**CONCRETE**	--	--	--	--
		1.2-4.6	FILL: Brown **SILTY SAND** with Trace of Gravel	--	1.2	4.6	<1.0
		4.6-8.0	Light Brown **SILTY FINE SAND**	--	4.6	8.0	<1.0
		8.0-8.5	Black **SILTY FINE SAND** (odor noted)	S-1	8.0	8.5	1.5
		8.5-9.6	Grayish-Brown **SAND** with Trace of Gravel (mild odor)	--	8.5	9.6	1.0
		9.6-10.2	Dark Gray **SAND** (apparent black streaking, odor noted)	S-2	9.6	10.2	<1.0
		10.2-10.4	Gray **SAND** (odor noted)	S-3	10.2	10.4	3.0
4	99.0	0.0-1.2	**CONCRETE**	--	--	--	--
		1.2-5.9	FILL: Dark Brown **SILTY SAND** with Little Gravel	--	--	--	<1
		5.9-9.1	FILL: Dark Brown **CLAYEY SAND** with Little Gravel & Trace of Slag	S-1	7.3	7.5	<1
				S-2	8.3	8.5	<1
				S-3	8.9	9.1	<1

NOTES:

[1] Hand Auger Boring No. 3 drilled approximately 22.0 feet east and 10.0 feet north form center of alum storage tank in Bldg. 17. Hand Auger Boring No. 4 drilled approximately 7.0 feet north of south end of waste oil storage tanks, between tanks.
[2] Groundwater encountered in HAB-3 at 10.2 feet below ground surface. No groundwater was encountered in HAB-4.
[3] Hand auger borings backfilled with excavated soil and capped with concrete.

DRILLED BY: M. Dueweke **DATE:** 02/03/93 **FIGURE NO:** A-2

DRAFT

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-1

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]

NTH Proj. No: 13-2370 00

Project Location : YPSILANTI, MICHIGAN

Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 98.7 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
		PAVEMENT: CONCRETE 0.8	
95		FILL: MEDIUM COMPACT BROWN SAND WITH TRACE OF CLAY & TRACE OF GRAVEL 6.5	5
90		COMPACT BROWN SAND WITH TRACE OF SILT 10.0	10
		MEDIUM COMPACT GRAY SAND 11.7	
85		MEDIUM TO STIFF GRAY SILTY CLAY WITH TRACE OF SAND 14.0	15
		END OF BORING	20
80			

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
S-1	3 6 8	14	-	-	<1
S-2	7 6 8	14	-	-	<1
S-3	3 4 10	14	-	-	<1
S-4	13 14 17	31	-	-	<1
S-5	11 11 12	23	-	-	<1
S-6	8 8 4	12	-	-	<1
S-7	4 6 8	14	-	-	<1

Total Depth : 14.0 FT
Drilling Date : 08/27/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 TRAILER-MOUNTED DRILL RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
OBSERVATION WELL NO. OW-1 INSTALLED IN BOREHOLE WITH SCREEN TIP SET @ 11.7 FEET BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 10.0 FEET BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-3

DRAFT

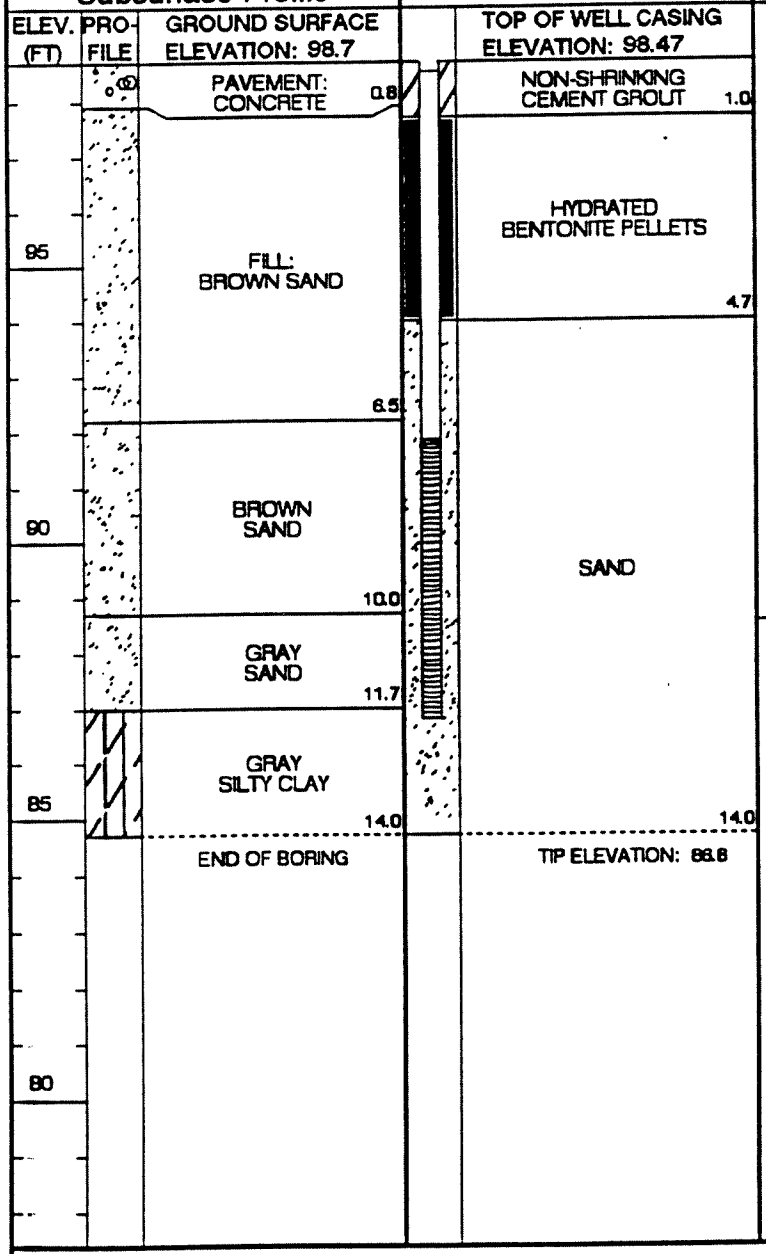
NTH Consultants, Ltd.

OBSERVATION WELL NO. OW-1

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
NTH Proj. No: 13-2370 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

LOG OF OBSERVATION WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
08/27/92	89.07	BEFORE DEVELOPMENT
09/04/92	89.15	
03/10/93	89.33	

NOTES :

[1] TOP OF CASING ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

[2] REFER TO LOG OF TEST BORING NO. TB-1 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

Started: 08/27/92
Completed: 08/27/92
Inspector: M. DUEWEKE
Driller: G. QUALLS
Contractor: GEO-TEK, INC.
Equipment: DIEDRICH D-50
Well Type: OBSERVATION

Casing Diameter: 4.0"
Casing Length: 6.7'
Casing Type: PVC
Screen Diameter: 4.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-8

DRAFT

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-2

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
Project Location : YPSILANTI, MICHIGAN

NTH Proj. No: 13-2370 00
Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 99.1 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
		PAVEMENT: CONCRETE 1.1							
		FILL: MEDIUM COMPACT BROWN SAND WITH TRACE OF CLAY & TRACE OF GRAVEL		S-1	4 6 7	13	-	-	<1
95		4.2		S-2	11 14 13	27	-	-	<1
		MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT	5	S-3	5 8 8	16	-	-	2
				S-4	11 12 15	27	-	-	1
90		10.0	10	S-5	11 12 16	28	-	-	1
		MEDIUM COMPACT GRAY SAND 11.5		S-6	8 4 4	8	-	-	<1
		STIFF GRAY SILTY CLAY END OF BORING 12.0							
85			15						
80			20						

Total Depth : 12.0 FT
Drilling Date : 08/27/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 TRAILER-MOUNTED DRILL RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
OBSERVATION WELL NO. OW-2 INSTALLED IN BOREHOLE WITH SCREEN TIP SET @ 11.5 FEET BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 10.0 FEET BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-4

DRAFT

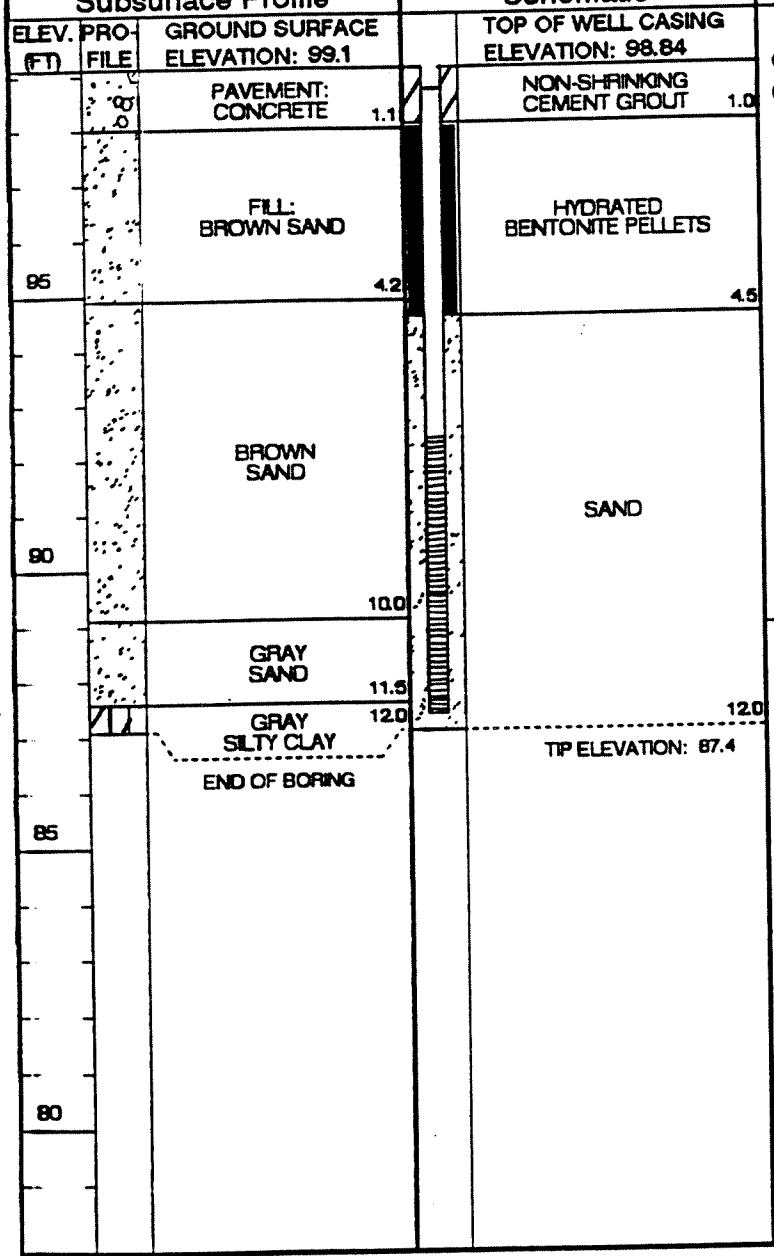
NTH Consultants, Ltd.

OBSERVATION WELL NO. OW-2

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
NTH Proj. No: 13-2370 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

LOG OF OBSERVATION WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
09/04/92	88.85	
03/10/93	89.19	

NOTES :

[1] TOP OF CASING ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

[2] REFER TO LOG OF TEST BORING NO. TB-2 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

Started: 08/27/92
Completed: 08/27/92
Inspector: M. DUEWEKE
Driller: G. QUALLS
Contractor: GEO-TEK, INC.
Equipment: DIEDRICH D-50
Well Type: OBSERVATION

Casing Diameter: 4.0"
Casing Length: 6.5'
Casing Type: PVC
Screen Diameter: 4.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-9

DRAFT

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-3

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
NTH Proj. No: 13-2370 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 98.5 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	HNu READING (PPM)
		PAVEMENT: CONCRETE 1.1							
95		FILL: MEDIUM COMPACT BROWN SAND WITH TRACE OF CLAY, TRACE OF GRAVEL & TRACE OF SLAG MATERIAL 4.0		S-1	3 7 8	15	-	-	<1
				S-2	15 14 10	24	-	-	<1
			5	S-3	9 11 11	22	-	-	<1
90		MEDIUM COMPACT BROWN SAND WITH TRACE OF SILT 10.0		S-4	7 9 11	20	-	-	<1
			10	S-5	8 10 11	21	-	-	<1
		MEDIUM COMPACT GRAY SAND 12.0		S-6	8 8 9	17	-	-	<1
85		STIFF GRAY SILTY CLAY 14.0		S-7	1 3 4	7	-	-	<1
		END OF BORING	15						
80			20						

Total Depth : 14.0 FT
Drilling Date : 08/27/92
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : G. QUALLS

Drilling Method :
DIEDRICH D-50 TRAILER-MOUNTED DRILL RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
OBSERVATION WELL NO. OW-3 INSTALLED IN BOREHOLE WITH SCREEN TIP SET @ 12.0 FEET BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 10.0 FEET BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-5

DRAFT

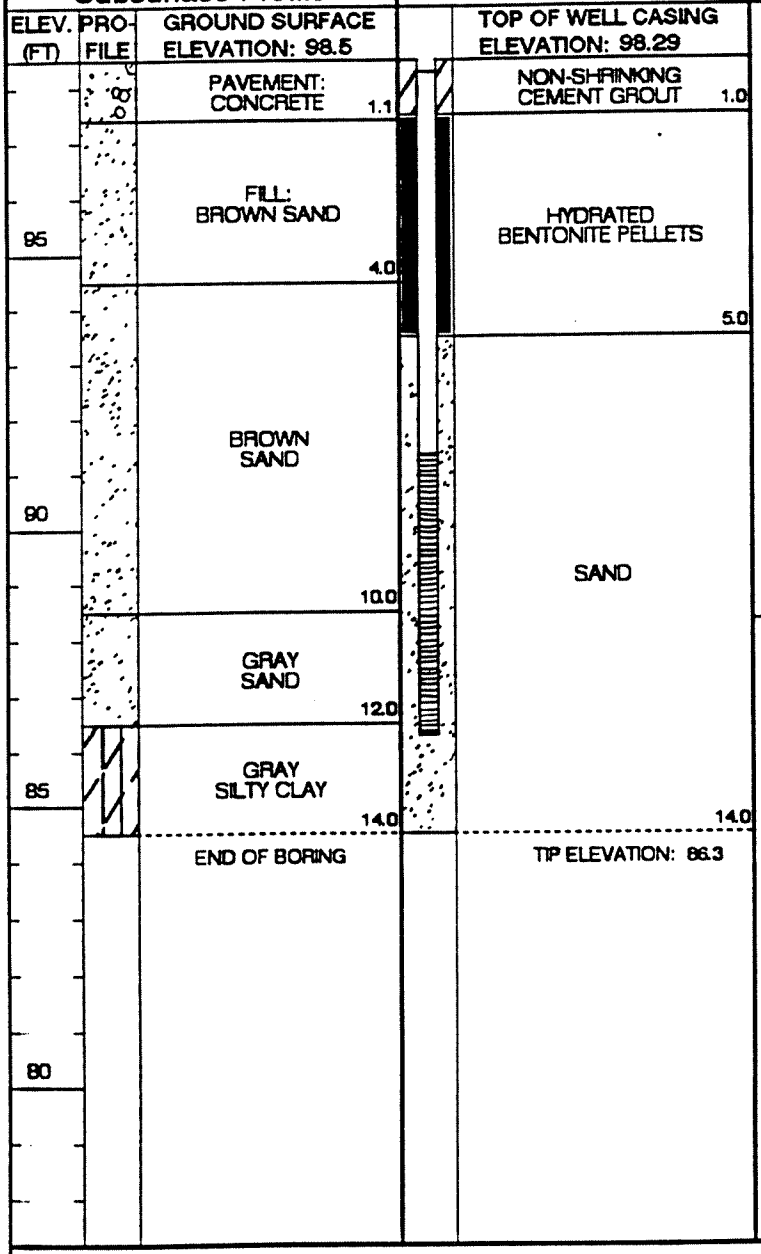
NTH Consultants, Ltd.

OBSERVATION WELL NO. OW-3

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
NTH Proj. No: 13-2370 00

Project Location : YPSILANTI, MICHIGAN
Checked By :

LOG OF OBSERVATION WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
08/27/92	88.08	BEFORE DEVELOPMENT
09/04/92	88.09	
03/10/93	88.34	

NOTES :

[1] TOP OF CASING ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD. USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FEET.

[2] REFER TO LOG OF TEST BORING NO. TB-3 FOR DETAILS OF SUBSURFACE STRATIGRAPHY.

Started: 08/27/92
Completed: 08/27/92
Inspector: M. DUEWEKE
Driller: G. QUALLS
Contractor: GEO-TEK, INC.
Equipment: DIEDRICH D-50
Well Type: OBSERVATION

Casing Diameter: 4.0"
Casing Length: 7.0'
Casing Type: PVC
Screen Diameter: 4.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-10

DRAFT

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-4

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]

NTH Proj. No: 13-2370 02

Project Location : YPSILANTI, MICHIGAN

Checked By :

SUBSURFACE PROFILE

GROUND SURFACE ELEVATION: 98.0 FT

ELEV. (FT)	PRO-FILE		DEPTH (FT)
95		FILL: CRUSHED STONE	0.3
		FILL: MEDIUM COMPACT DARK BROWN SILTY SAND WITH TRACE OF GRAVEL	5
			5.5
		FILL: MEDIUM COMPACT LIGHT BROWN TO GRAY SAND [2" SEAM OF SLAG-LIKE MATERIAL AT 6.5']	6.5
90		MEDIUM COMPACT LIGHT BROWN SAND	9.5
		MEDIUM COMPACT GRAY FINE SAND	10 10.5
85		STIFF GRAY SILTY CLAY	12.5
		END OF BORING	
80			15
			20

SOIL SAMPLE DATA

SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	UNCONF COMP.ST (PSF)
S-1	15 6 8	14	-	-	<1
S-2	3 2 1	3	-	-	<1
S-3	4 6 10	16	-	-	<1
S-4	5 10 9	19	-	-	3
S-5	4 5 4	9	-	-	<1

Total Depth : 12.5 FT
Drilling Date : 02/09/93
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : C. WITHERELL

Drilling Method :
DIEDRICH D-50 TRAILER-MOUNTED DRILLING RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
OBSERVATION WELL NO. OW-4 INSTALLED IN BOREHOLE WITH SCREEN TIP SET AT 11.5 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 8.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-6

DRAFT

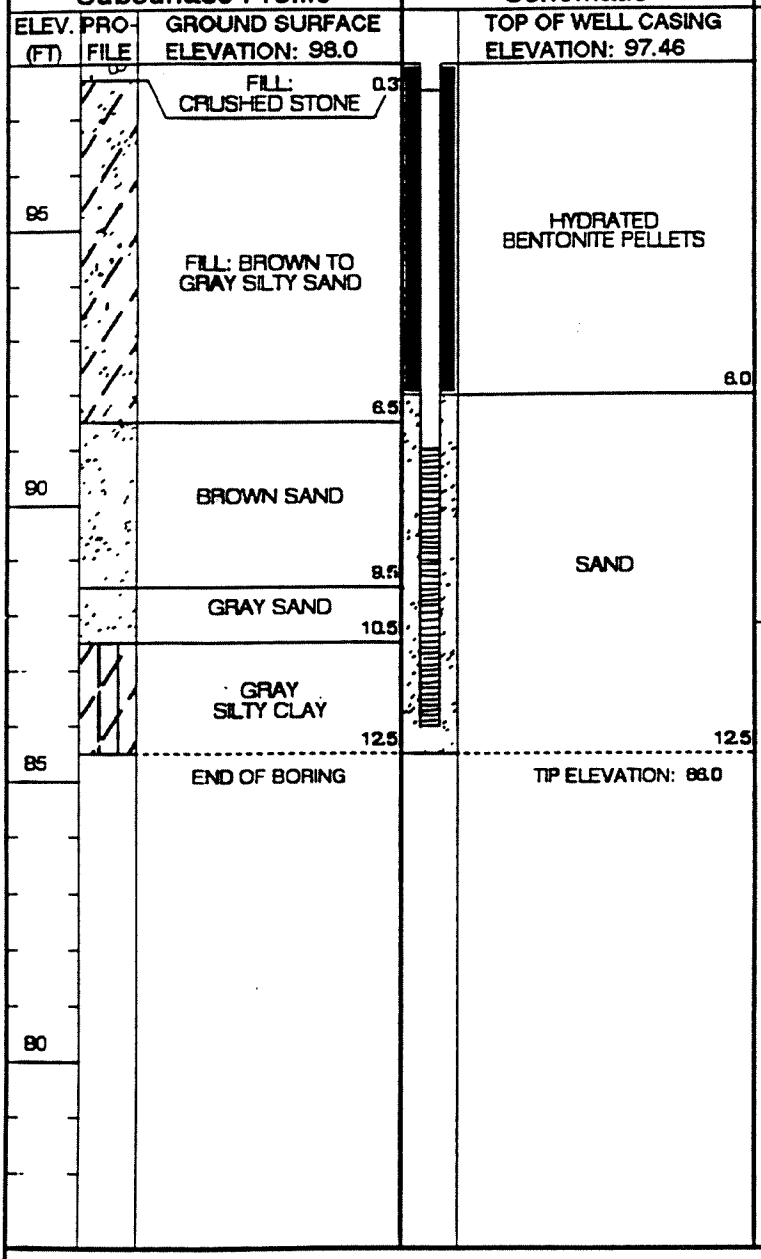
NTH Consultants, Ltd.

OBSERVATION WELL NO. OW-4

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
NTH Proj. No: 13-2370 02

Project Location : YPSILANTI, MICHIGAN
Checked By :

LOG OF OBSERVATION WELL



GROUNDWATER DATA

Date	Ground-water Elev.(ft)	Comments
02/09/93	89.58	BEFORE DEVELOPMENT
03/10/93	89.40	

NOTES :

[1] TOP OF CASING ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FT.

[2] FOR DETAILS OF SUBSURFACE STRATIGRAPHY, SEE LOG OF TESTING BORING NO. TB-4.

Started: 02/09/93
Completed: 02/09/93
Inspector: M. DUEWEKE
Driller: C. WITHERELL
Contractor: GEO-TEK, INC.
Equipment: DIEDRICH D-50, TRAILER-MOUNTED
Well Type: OBSERVATION

Casing Diameter: 4.0"
Casing Length: 6.5'
Casing Type: PVC
Screen Diameter: 4.0"
Screen Length: 5.0'
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-11

DRAFT

NTH Consultants, Ltd.

LOG OF TEST BORING NO:TB-5

Project Name : GM POWERTRAIN [BLDG-17 PE #2392]
NTH Proj. No: 13-2370 02

Project Location : YPSILANTI, MICHIGAN
Checked By :

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (FT)	PRO-FILE	GROUND SURFACE ELEVATION: 98.4 FT	DEPTH (FT)	SAMPLE TYPE NO.	BLOWS/ 6-INCHES	STD.PEN. RESISTANCE (N)	MOISTURE CONTENT (PERCENT)	DRY DENSITY (PCF)	UNCONF COMP.ST (PSF)
		PAVEMENT: CONCRETE 0.8							
		FILL: MEDIUM COMPACT GRAY SAND WITH LITTLE GRAVEL 1.8		S-1	6 4 8	12	-	-	<1
95		FILL: MEDIUM COMPACT BROWN SAND & GRAVEL 3.7							
		FILL: LOOSE GRAY PEA GRAVEL 4.8	5	S-2	2 2 6	8	-	-	<1
		FILL: LOOSE BROWN SAND 6.2							
		MEDIUM COMPACT BROWN TO GRAY SAND WITH TRACE OF GRAVEL 7.8		S-3	8 11 13	24	-	-	<1
90		MEDIUM COMPACT BROWN FINE SAND 10.5	10	S-4	7 10 11	21	-	-	5
		MEDIUM COMPACT GRAY FINE SAND 13.0		S-5	11 11 9	20	-	-	1
85		STIFF GRAY SILTY CLAY 15.0	15	S-6	4 6 7	13	-	-	-
		END OF BORING							
80			20						

Total Depth : 15.0 FT
Drilling Date : 02/09/93
Inspector : M. DUEWEKE
Contractor : GEO-TEK, INC.
Driller : C. WITHERELL

Drilling Method :
DIEDRICH D-50 TRAILER-MOUNTED DRILLING RIG WITH 6-1/4" INSIDE-DIAMETER, HOLLOW-STEM AUGER TO END OF BORING.

Plugging Procedure :
OBSERVATION WELL NO. OW-5 INSTALLED IN BOREHOLE WITH SCREEN TIP SET AT 14.0 FT BELOW GROUND SURFACE.

Water Level Observation :
GROUNDWATER ENCOUNTERED AT 9.0 FT BELOW GROUND SURFACE DURING DRILLING.

Figure No. A-7

DRAFT

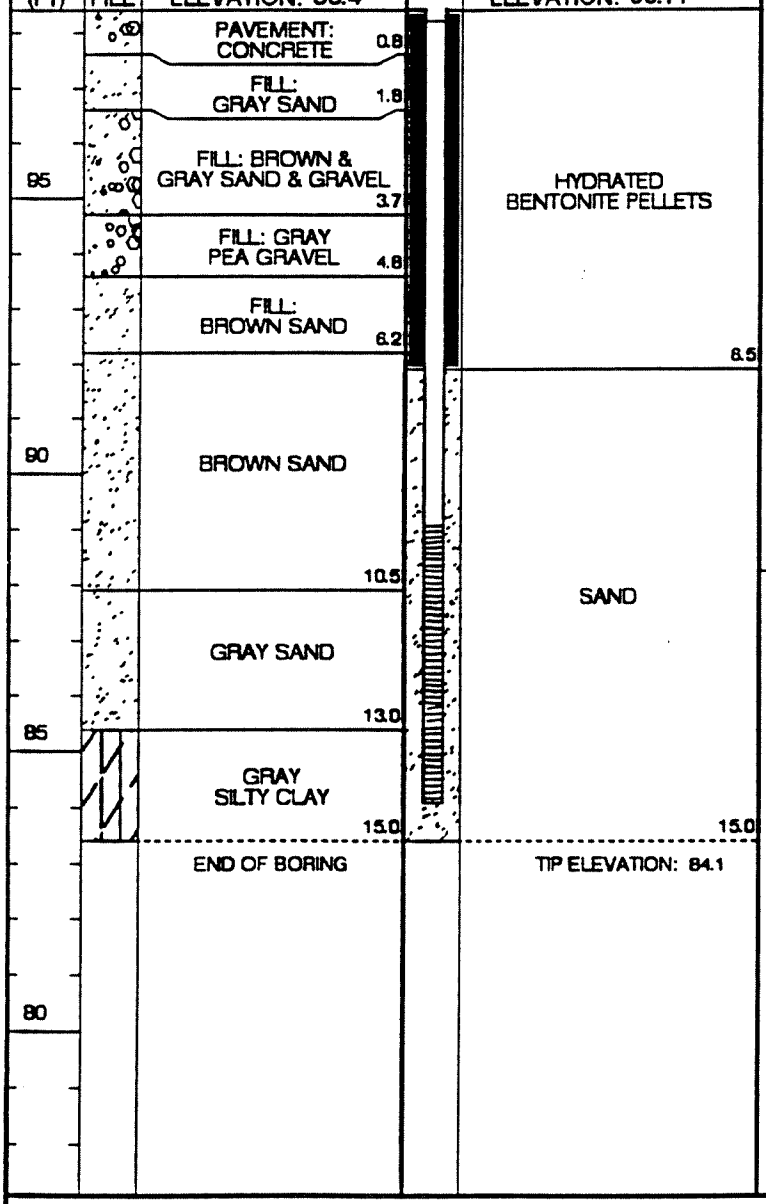
NTH Consultants, Ltd.

OBSERVATION WELL NO. OW-5

Project Name : GM POWERTRAIN [BLDG-17 PE #2392] NTH Proj. No: 13-2370 02

Project Location : YPSILANTI, MICHIGAN Checked By :

LOG OF OBSERVATION WELL



GROUNDWATER DATA

Date	Ground-water Elev. (ft)	Comments
02/09/93	89.34	BEFORE DEVELOPMENT
03/10/93	89.51	

NOTES :

[1] TOP OF CASING ELEVATIONS ESTABLISHED BY NTH CONSULTANTS, LTD USING ON-SITE DATUM. DATUM ELEVATION ARBITRARILY SET AT 100 FT.

[2] FOR DETAILS OF SUBSURFACE STRATIGRAPHY, SEE LOG OF TESTING BORING NO. TB-5.

Started: 02/09/93
Completed: 02/09/93
Inspector: M. DUEWEKE
Driller: C. WITHERELL
Contractor: GEO-TEK, INC.
Equipment: DIEDRICH D-50, TRAILER-MOUNTED
Well Type: OBSERVATION

Casing Diameter: 4.0"
Casing Length: 9.0'
Casing Type: PVC
Screen Diameter: 4.0"
Screen Length: 5.0"
Screen Mesh: 0.010"
Screen Type: PVC

Figure No. A-12

AREA 14

PRODUCT ENGINEERING TANK FARM

DRILLING LOG

Well No. MW-1

Project: GM HYDRA-MATIC PETF
Owner: SAME
Location: YPSILANTI, MICHIGAN
Project Number: 400-312-9400
Date Drilled: 9/11/89
Total Depth: 17.0'
Diameter: O.D. 10"
Surface Elevation: 101.60'
Water depth (Init.): N/A
24-hrs.: 12.83'
Screen: Dia.: 2"
Length: 10.0'
Slot Size: 0.010"
Casing: Dia.: 2"
Length: 9.0'
Type: PVC-SCH 40
Drilling Company: PSI
Drilling Method: HOLLOW STEM AUGER
Driller: P. LIBBY
Log by: HATHCOCK
Sampling Method: SPLIT SPOON

Sketch Map

Notes
SEE SITE MAP FOR LOCATION

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0		roadbox			GRASS
1		concrete			Yellow-brown, moist, loose, silty SAND
2		bentonite			
3					
4		casing			
5			SS-1-1		
6					
7			SS-1-2		Brown, moist, medium dense, medium to fine SAND with trace fine gravel
8					
9			SS-1-3		Brown, wet, medium dense, medium to fine SAND with trace fine gravel
10		screen			
11			SS-1-4		Yellow-brown, moist, medium dense, silty SAND
12					
13		sand pack	SS-1-5		Dark, grey, moist, very stiff CLAY
14					
15					
16			SS-1-6		
17					End of Boring = 17.0'

GROUNDWATER TECHNOLOGY, INC.

Well No. MW-2

DRILLING LOG

Project: GM HYDRA-MATIC PETF | Owner: SAME

Location: YPSILANTI, MICHIGAN | Project Number: 400-312-9400

Date Drilled: 9/11/89 | Total Depth: 13.0' | Diameter: O.D. 10"

Surface Elevation: 95.38' | Water depth (Init.): N/A | 24-hrs.: 8.64'

Screen: Dia.: 2" | Length: 10.0' | Slot Size: 0.010"

Casing: Dia.: 2" | Length: 2.5' | Type: PVC - SCH 40

Drilling Company: PSI | Drilling Method: HOLLOW STEM AUGER

Driller: P. LIBBY | Log by: HATHCOCK | Sampling Method: SPLIT SPOON

Sketch Map

Notes: SEE SITE MAP FOR LOCATION

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0		roadbox, concrete			ASPHALT
1					Yellow-brown, moist, medium dense, medium-fine SAND
2		bentonite	SS-2-1		with trace fine gravel
3					
4		casing	SS-2-2		Yellow, moist, medium dense, fine SAND
5					
6			SS-2-3		Yellow, moist, medium dense, silty SAND
7					
8			SS-2-4		Yellow, brown, wet, medium dense, silty SAND
9					
10		screen	SS-2-5		Dark grey, moist, stiff, CLAY
11					
12		sand pack	SS-2-6		
13					End of Boring = 13.0'

GROUNDWATER TECHNOLOGY, INC.

Well No. MW-3

DRILLING LOG

Project GM HYDRA-MATIC PETF Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9400

Date Drilled 9/11/89 Total Depth 10.5' Diameter O.D. 10"

Surface Elevation 95.36' Water depth (Init.) 9.28' 24-hrs. N/A

Screen: Dia. 2" Length 8.0' Slot Size 0.010"

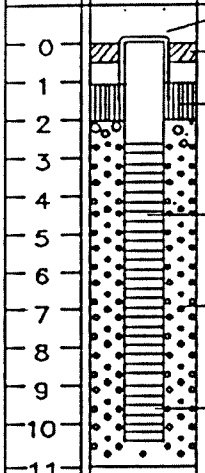
Casing: Dia. 2" Length 2.0' Type PVC- SCH 40

Drilling Company PSI Drilling Method HOLLOW STEM AUGER

Driller P. LIBBY Log by HATHCOCK Sampling Method SPLIT SPOON

Sketch Map

Notes
SEE SITE MAP FOR LOCATION



Depth (ft)	Sample No. & Blow Count	Description/Soil Classification (Color, Texture, Structure)
0		ASPHALT
1	SS-3-1	Brown, moist, medium dense, medium to fine SAND with trace medium to fine gravel
2	SS-3-2	
3		
4		
5	SS-3-3	Brown, wet, medium dense, silty SAND
6		
7	SS-3-4	Dark grey, moist, stiff, CLAY
8		
9		
10	SS-3-5	
11		End of Boring = 10.5'

GROUNDWATER TECHNOLOGY, INC.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. SB-1 Sheet 1 of 1
Project Location: Hydra-Matic Ypsilanti Petroleum Engineering Tank Farm Client: GM Hydra-Matic	SAMPLER Type: Split-spoon Hammer: 140 lbs. Fall: 30 in.	Ground Water Depth Date Depth Date File No.: 4585.008

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: West of backfilled tank excavation
Ground Elevation:
Dates: Started: 7/21/90 Ended: 7/21/90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks
0						Bituminous ASPHALT	8"					
	1	8"-3'				CONCRETE	1'				0.0	
						brown, damp, medium SAND, little fine gravel	3'					
	2	3-5				brown, damp, coarse SAND	5'				0.0	
5						brown,moist,medium SAND,some orange stain	6'					
	3	5-7				brown-gray, wet SILT, some fine sand	7.5'				0.0	
	4	7-9				gray, wet, CLAY, some silt	9.5'				0.0	
10	5	9-11				same, moist, little silt	11'				0.4	
						gray, moist-damp CLAY	12'					
	6	11-13				gray, wet SILT and fine SAND	13'				42	
						EOB at 13'						
15												

13'-12' Bentonite to seal second water bearing zone
'-6" Backfilled with cuttings
-0 Concrete

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. SB-3 Sheet 1 of 1
Project Location: Hydra-Matic Ypsilanti Petroleum Engineering Tank Farm Client: GM Hydra-Matic	SAMPLER Type: Split-spoon Hammer: 140 lbs. Fall: 30 in.	Ground Water Depth Date Depth Date File No.: 4585.008

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: East of backfilled tank excavation
Ground Elevation:
Dates: Started: 7/21/90 Ended: 7/21/9

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Remarks
0						Bituminous ASPHALT	2"					
	1	0"-2'				brown, damp, sandy, silty CLAY, little fine gravel					0.3	
	2	2-4					3.5'				0.2	
						light brown, damp, coarse to fine SAND	4'					
5	3	4-6				same, moist, little medium to fine gravel	5'				0.4	
						brown-gray, moist SILT, trace fine sand	6'					
	4	6-8				same, wet	7.5'				0.2	
						gray, wet, SILT and CLAY	8'					
	5	8-10									0.4	
10						gray, moist CLAY, trace silt						
	6	10-12									0.5	
							12'					
						EOB at 12'						
15												

12'-6" Backfilled with cuttings
-0" Concrete

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. SB-4 Sheet 1 of 1
Project Location: Hydra-Matic Ypsilanti Petroleum Engineering Tank Farm Client: GM Hydra-Matic	SAMPLER Type: Split-spoon Hammer: 140 lbs. Fall: 30 in.	Ground Water Depth 6.5' Date 7/11/90 Depth Date File No.: 4585.008

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: Backfilled tank excavation - East
Ground Elevation:
Dates: Started: 7/11/90 Ended: 7/11/90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
0						Bituminous ASPHALT	7"					
	1	7"-3'				brown, damp, coarse to fine SAND, some fine gravel, little silt and clay					1.2	
							3'					
	2	3-5									4.0	
5						same, gray, petroleum odor						
	3	5-7									280	
	4	7-9					8.5'				220	
						same, gray, wet 1" gray clay at 9' petroleum odor						
10	5	9-11					11'				18	
	6	11-13				gray, wet, medium to fine GRAVEL, some sand, little silt and clay, petroleum odor 1/4" fiberglass at 13'	13'				49	
						gray, wet, medium to fine GRAVEL	14'					
	7	13-15				EOB at 14'					35	
15												

14'-1' Backfilled with cuttings
7" Bentonite
Concrete

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. SB-5 Sheet 1 of 1
Project Location: Hydra-Matic Ypsilanti Petroleum Engineering Tank Farm Client: GM Hydra-Matic	SAMPLER Type: Split-spoon Hammer: 140 lbs. Fall: 30 in.	Ground Water Depth 7' Date 7/11/90 Depth Date File No.: 4585.008

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: Backfilled tank excavation - West
Ground Elevation:
Dates: Started: 7/11/90 Ended: 7/11/90

Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Field Testing Sp Cond	Field Testing HNU	Rmks*
0						Bituminous ASPHALT	8"					
	1	8"-3'									0	
						brown, damp, coarse to fine SAND, some fine gravel, little silt and clay						
	2	3-5									0	
5							6					
	3	5-7									12.0	
						same, gray, moist, petroleum odor	8'					
	4	7-9										
10	5	9-11									220	
						same, wet, strong petroleum odor						
	6	11-13									95	
	7	13-15				1/4" thick fiberglass at 15'	15'				73	
15						EOB at 15'						

15'-1' Backfilled with cuttings
1' 6" Bentonite
Concrete

ENGINEERS, INC. | SOIL BORING LOG | LOG NUMBER: MW-2

SHEET 1 OF 1

CLIENT: GM Powertrain PROJECT LOCATION: Ypsilanti-PETF	GROUND WATER DATE: 8/27/91 DEPTH: 7.29' ELEVATION: 713.73'	FILE No.: 4585.008 DRILLING METHOD: Hollow Stem Au SAMPLER TYPE: 2" Splitspoon HAMMER: 140 lbs FALL: 30"
O'BRIEN & GERE GEOLOGIST: James A. O'Meara BORING CO.: Professional Services Ind. FOREMAN: Paul Libby	BORING LOCATION: GROUND ELEVATION: 721.53' DATES: STARTED: 7/16/91	ENDED: 7/16/91

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TEST SAL. 0/00	FIELD TEST SP. COND
0	1	0'-2'				Asphalt				
						Moist, Brown, Medium to Fine, Fill, SAND, Little Fine Gravel, Some Crushed Gravel	6"			
	2	2'-4'								
	3	4'-6'				Wet, Brown, Fine SAND and SILT	4'			
5										
	4	6'-8'				Saturated at 5'10" Same, Saturated				
						Gray, CLAY	6'4"			
	5	8'-10'				Moist, Gray, SILT Saturated, Gray, SILT, Some Fine, Sand	7'10" 8'			
10	6	10'-12'				Moist, Gray, CLAY, Little to Some Silt, Trace of Fine Gravel	10'			
						E.O.B. @ 12 fbg				
	8	14'-16'								
15										
	9	16'-18'								
	10	18'-20'								

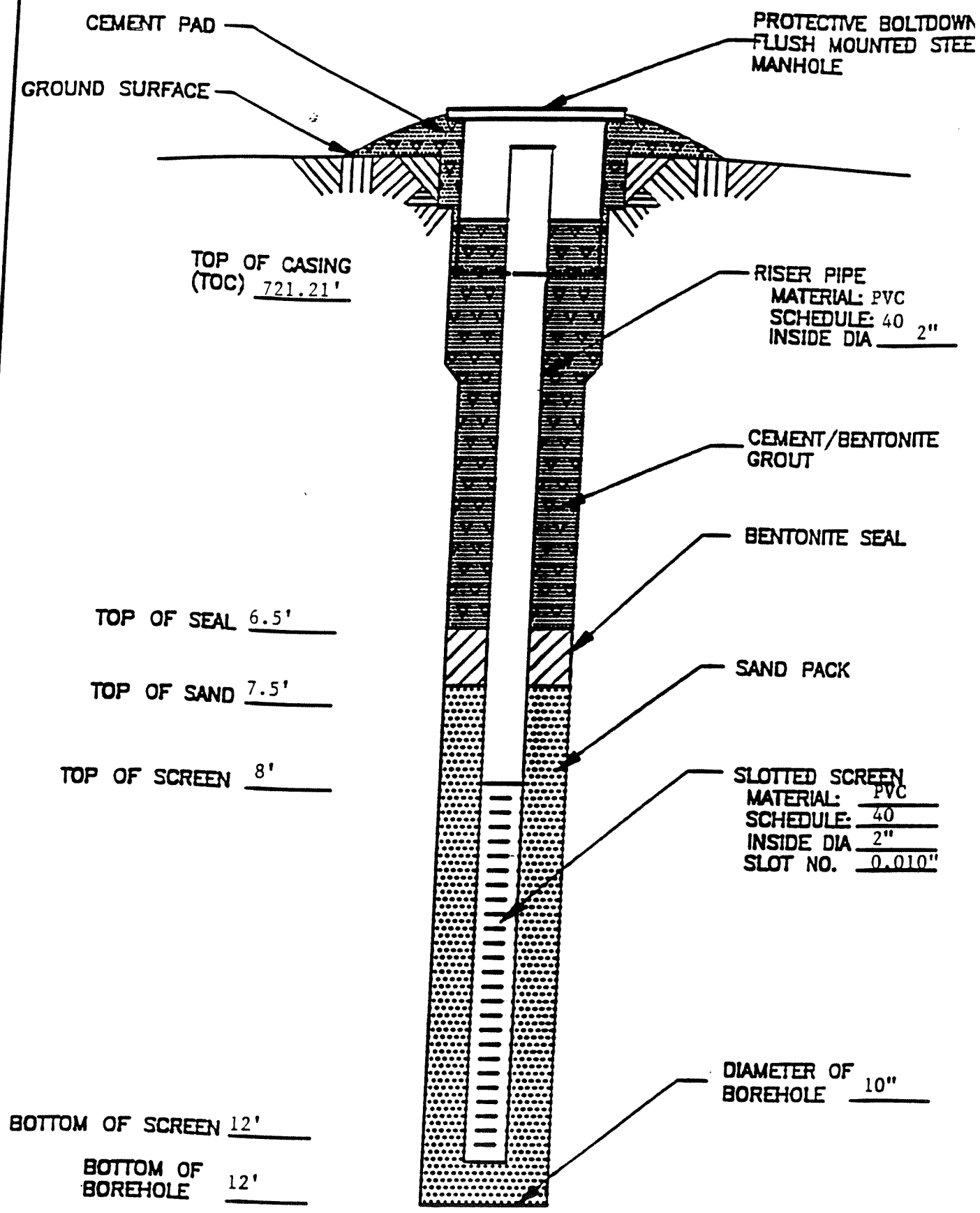
NOTES:

Monitoring well constructed of 2" diameter, Schedule 40 PVC well casing with 4' of 0.010 inch slot well screen extending from 8'to 12'fbg.

PID Readings are shown in parts per Million (ppM).

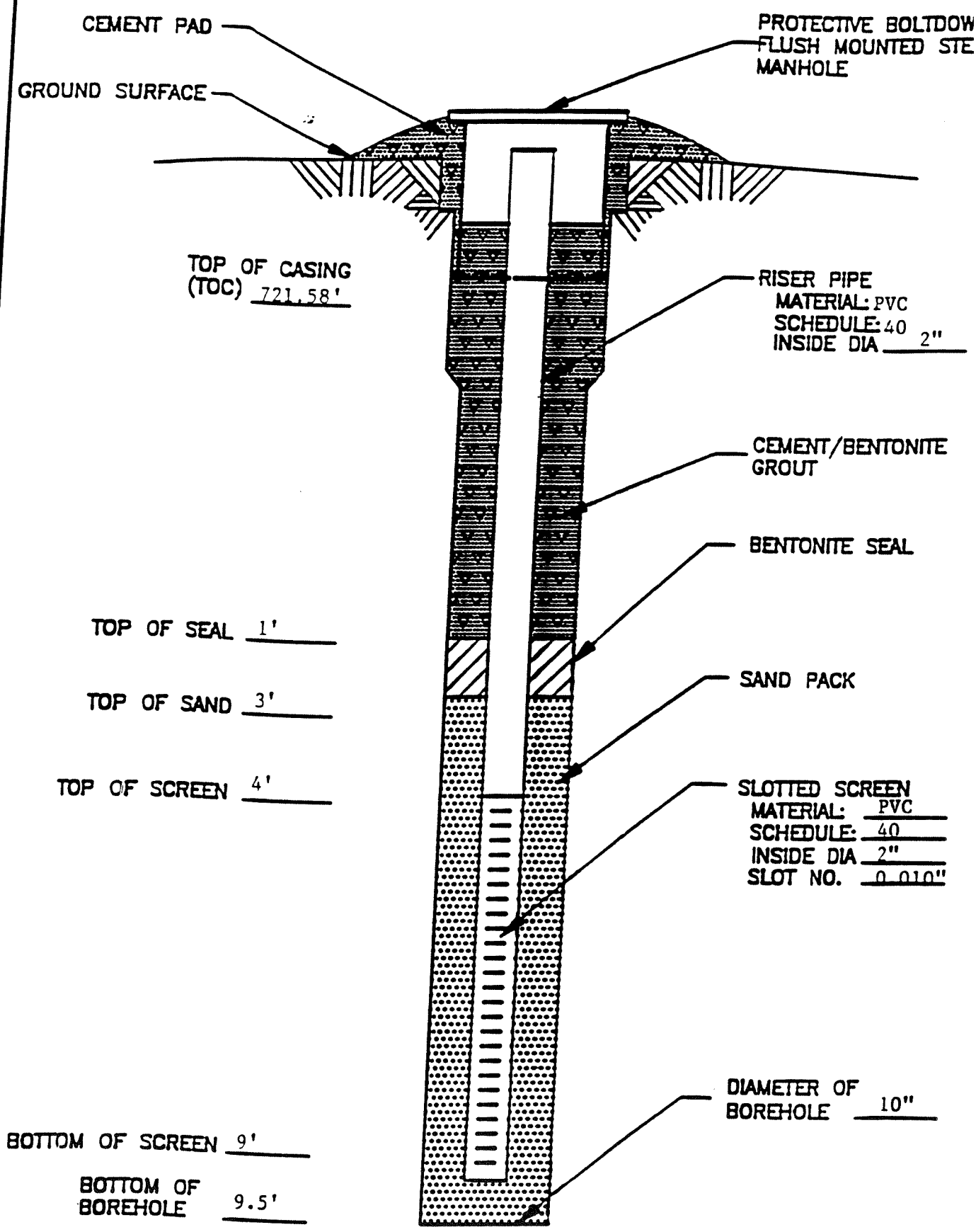
BMNGMY.pm3

ENGINEERS INC.



General Motors Powertrain
Product Engineering Tank Farm
Ypsilanti, Michigan
Monitoring Well 2D

ENGINEERS INC.



General Motors Powertrain
Product Engineering Tank Farm
Ypsilanti, Michigan
Monitoring Well 4S

O'BRIEN & GERE ENGINEERS, INC.	SOIL BORING LOG	LOG NUMBER: MV SHEET 1 OF

CLIENT	GROUND WATER			
GM Powertrain	DATE	DEPTH	ELEVATION	FILE No.: 4585.008
PROJECT LOCATION	8/30/91	8.18' fbg	713.80'	DRILLING METHOD: Hollo
Ypsilanti - PETF				SAMPLER TYPE: 2" Splitspc
				HAMMER: 140 lbs FALL:

O'BRIEN & GERE GEOLOGIST: JC Jennings
BORING CO.: PSI
FOREMAN: Paul Libby

BORING LOCATION:
GROUND ELEVATION: 721.48'
DATES: STARTED: 07/17/91 ENDED: 07/17/91

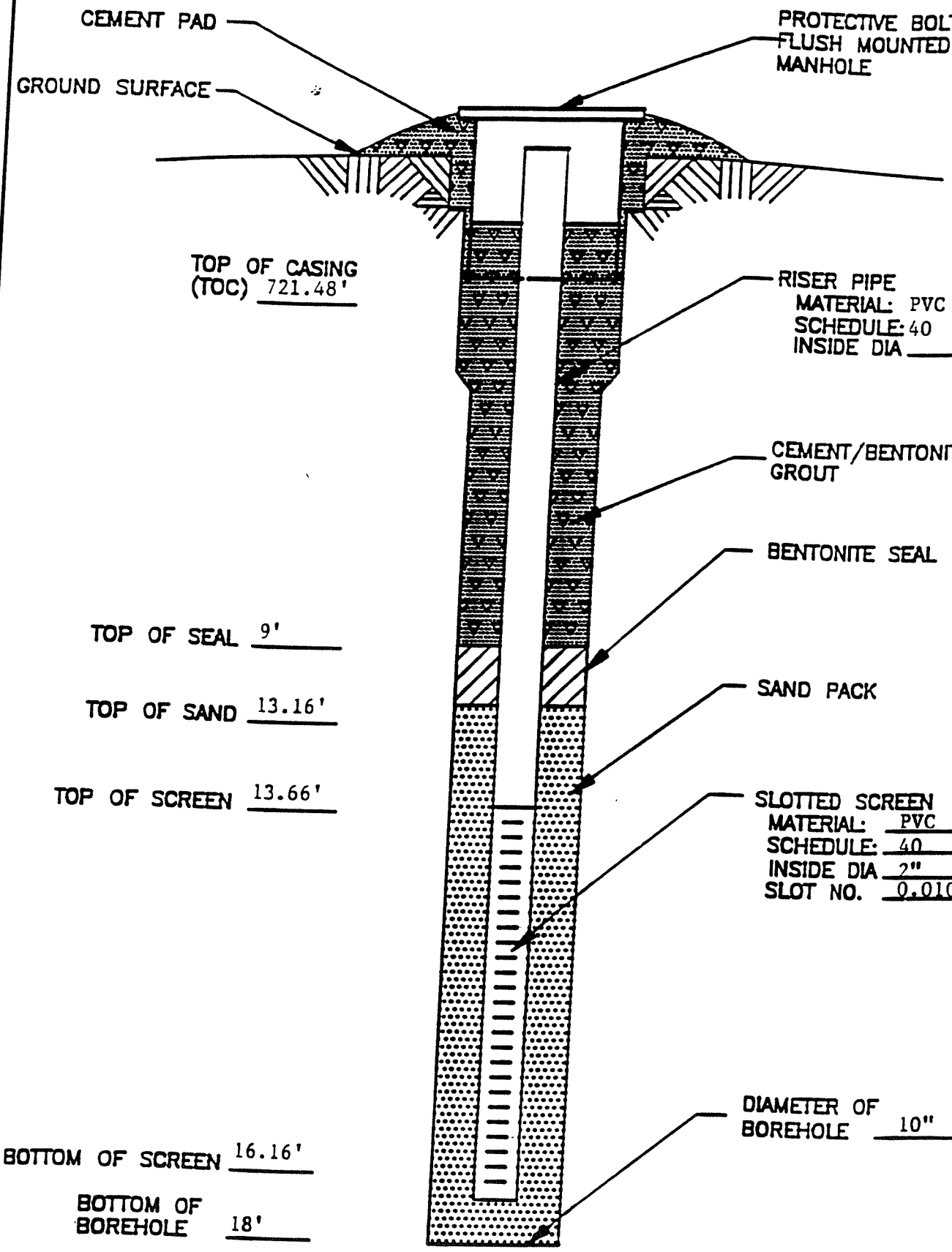
DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTI SAL. 0/00	SP. COND	
0	1	0-2		19"/8"		Concrete	5"				
						Brown Damp Loose Medium Fill SAND					
	2	2-4		24"/12"		Same dry some coarse sand					
	3	4-6		24"/18"							
5											
	4	6-8		24"/12"							
						Same saturated	7'8"				
	5	8-10		24"/20"		Brown/green SILT with trace of fine sand					
						Very soft grey moist CLAY	9'				
10	6	10-12		24"/22"							
	7	12-14		24"/22"							
						Same wet silty					
						Grey saturated SILT	13'4"				
	8	14-16		24"/24"							
15											
	9	16'-18'		24"/24"		Soft grey CLAY	15'8"				
	10	18'-20'				EOB @ 18' fbg					
20											

Notes:

Monitoring well constructed of 2" diameter, Schedule 40 PVC, In well casing with 2'6" of 0.010 inch slot well screen extending from 13'8" to 16'2" fbg.

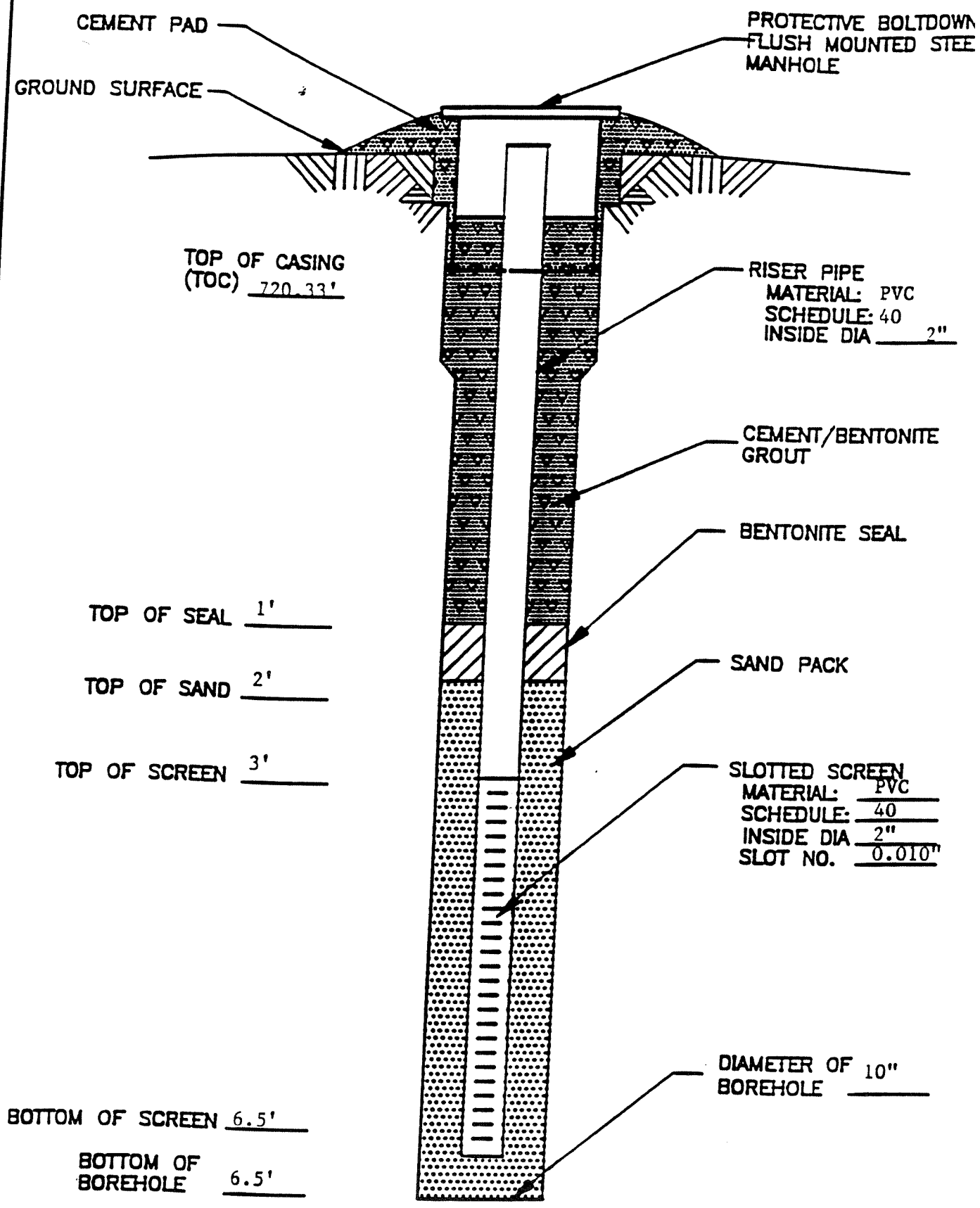
PID Readings are shown in parts per Million (ppM).

ENGINEERS INC.



General Motors Powertrain
Product Engineering Tank Farm
Ypsilanti, Michigan
Monitoring Well 4D

ENGINEERS INC.



General Motors Powertrain
Product Engineering Tank Farm
Ypsilanti, Michigan
Monitoring Well 5S

O'BRIEN & GERE ENGINEERS, INC. | SOIL BORING LOG | LOG NUMBER: MW-5I

SHEET 1 OF 1

CLIENT: GM Powertrain
PROJECT LOCATION: Ypsilanti-PETF

GROUND WATER

DATE	DEPTH	ELEVATION
8/27/91	6.55'	713.71'

FILE No.: 4585.008
DRILLING METHOD: Hollow Stem Auge
SAMPLER TYPE: 2" Splitspoon
HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: James A. O'Meara
BORING CO.: Professional Services Ind.
FOREMAN: Paul Libby

BORING LOCATION:
GROUND ELEVATION: 720.48'
DATES: STARTED: 7/16/91 ENDED: 7/16/91

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTIN SAL. 0/00	SP. COND	P
0	1	0'-2'				Asphalt					
						Moist, Brown, Fine Gravel and Sand, FILL With Little Silt and Clay	6"				
	2	2'-4'									
	3	4'-6'									
						Wet, Brown , Fine SAND	4'3"				
5						Saturated, Brown, SILT, Little Fine Sand	5'				
	4	6'-8'				Moist, Gray, CLAY, Some Silt	6'				
	5	8'-10'				Saturated, Gray, SILT, Little Clay SAME, Little Fine Sand 1" Clay lens at 8'10" and 9'6"	7'9" 8'				
10	6	10'-12'				Moist, Gray, CLAY, Little Silt 1" Wet Silt Band at 11'	10'				
	7	12'-14'				E.O.B. @ 12 fbg					
	8	14'-16'									
15											
	9	16'-18'									
	10	18'-20'									

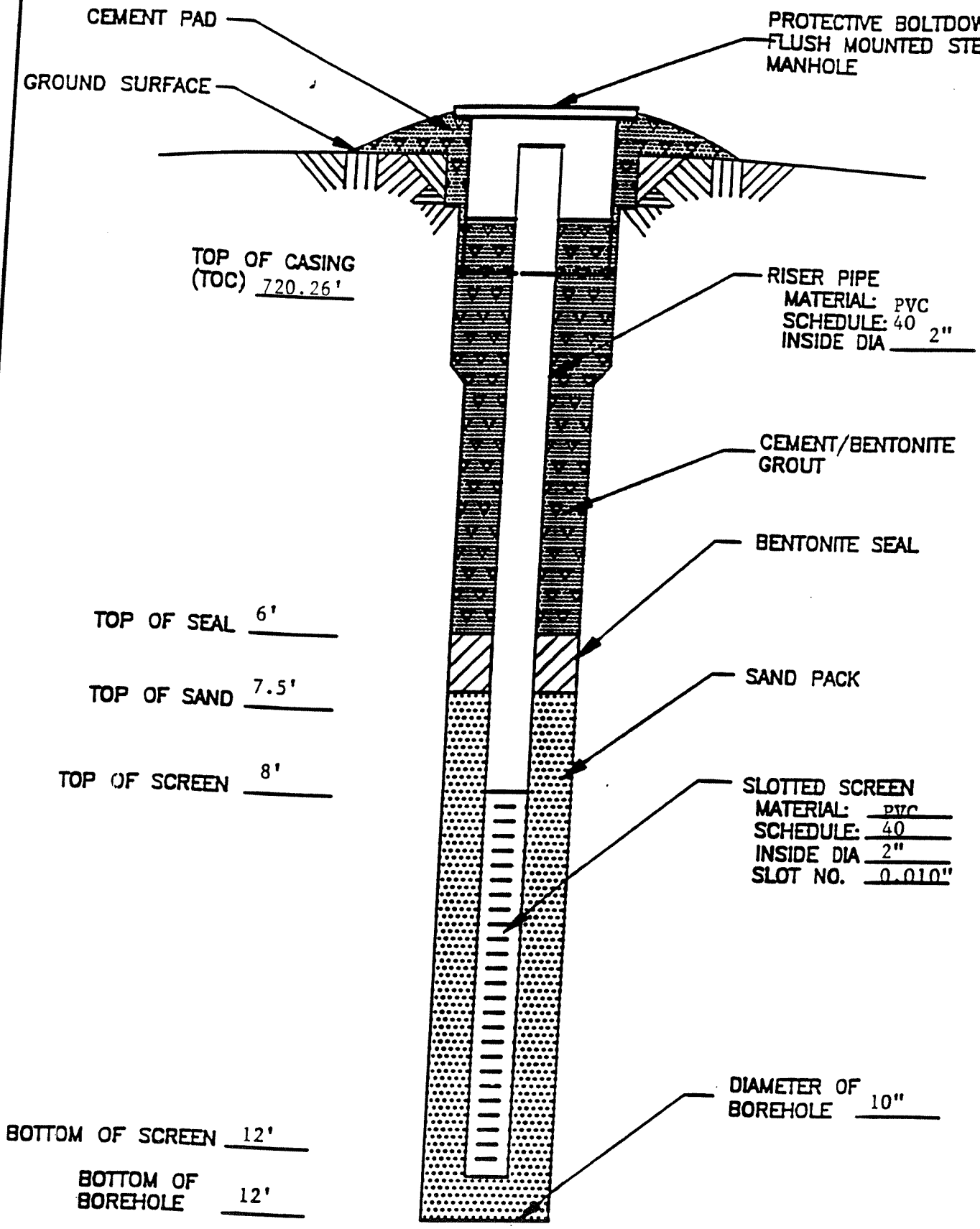
NOTES:

Monitoring well constructed of 2" diameter, Schedule 40 PVC well casing with 4'of 0.010 inch slot well screen extending from 8' to 12' fbg

PID Readings are shown in parts per million (ppM).

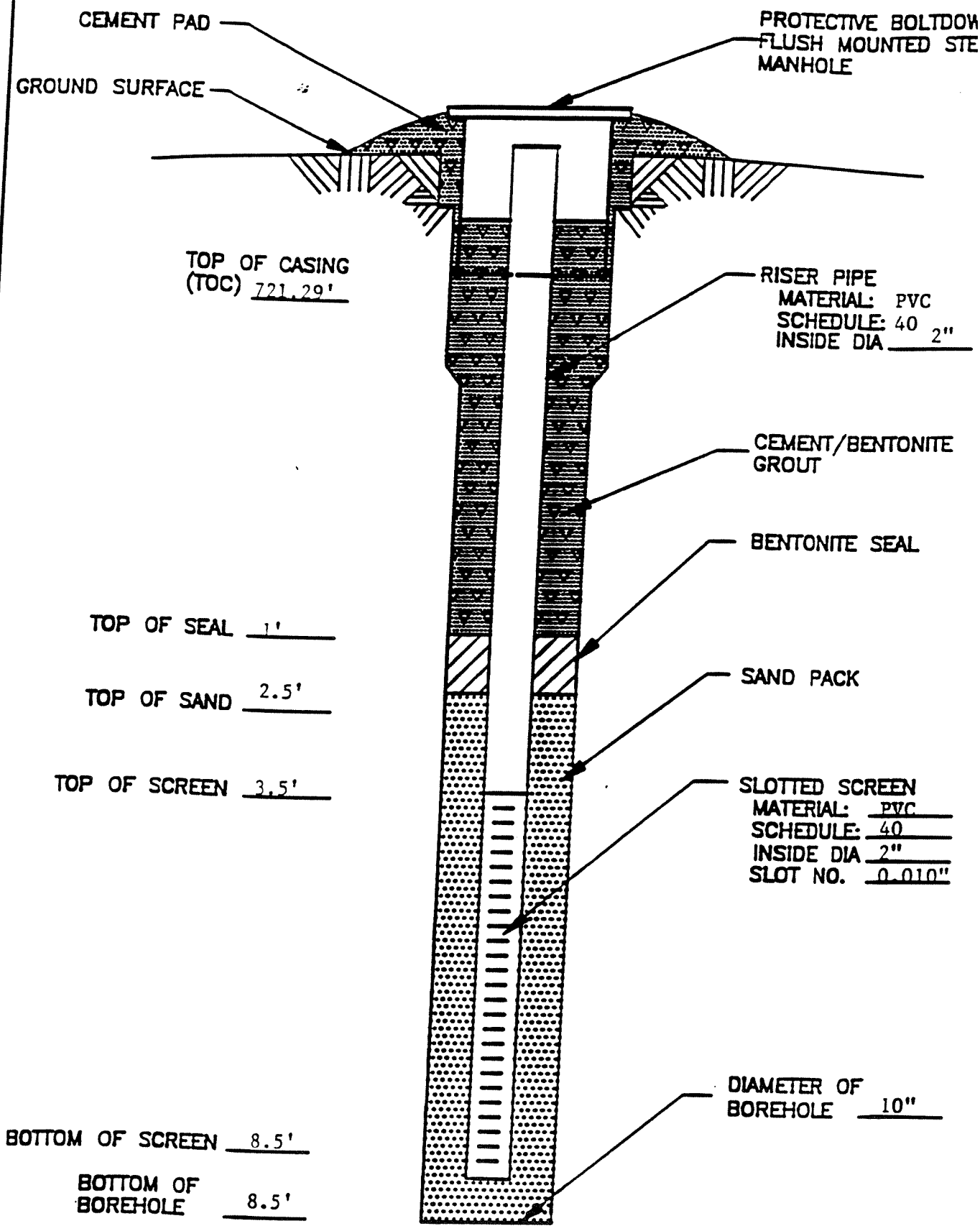
BMNOMYpm2

ENGINEERS INC.



General Motors Powertrain
Product Engineering Tank Farm
Ypsilanti, Michigan
Monitoring Well 5D

ENGINEERS INC.



General Motors Powertrain
Product Engineering Tank Farm
Ypsilanti, Michigan
Monitoring Well 6S

O'BRIEN & GERE ENGINEERS, INC. | SOIL BORING LOG | LOG NUMBER: MW-61

SHEET 1 OF 1

CLIENT	GROUND WATER			
GM Powertrain	DATE	DEPTH	ELEVATION	FILE No.: 4585.008
PROJECT LOCATION	8/27/91	7.29'	713.73'	DRILLING METHOD: Hollow Stem Aug
Ypsilanti-PETF				SAMPLER TYPE: 2" Splitspoon
				HAMMER: 140 lbs FALL: 30"

O'BRIEN & GERE GEOLOGIST: James A. O'Meara
BORING CO.: Professional Services Ind.
FOREMAN: Paul Libby

BORING LOCATION:
GROUND ELEVATION: 721.53'
DATES: STARTED: 7/16/91 ENDED: 7/16/91

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRATION RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTI SAL. 0/00	SP. COND	
0	1	0'-2'				Asphalt					
						Moist, Dark Brown, Sandy, Clayey, FILL for 2"	6"				
						Moist, Golden Brown, Medium to Coarse SAND Fill					
	2	2'-4'				Moist, Dark Gray, Coarse to Fine Crushed GRAVEL	2'2"				
						Fill With Sand and Silt					
						Moist, Golden Brown, Medium to Fine SAND	2'6"				
	3	4'-6'				With Little Coarse Gravel at 4'					
						Same light brown little fine gravel					
5						Gravel					
	4	6'-8'				Wet, Brown, Medium to Fine SAND					
						Saturated, Brown, Fine SAND and SILT					
	5	8'-10'				Saturated, Dark Brown, Fine SAND and Silt					
						Damp, Light Gray, CLAY With a Trace of Silt	8'6"				
10	6	10'-12'				Same, With Little Silt					
	7	12'-14'									
						Saturated, Gray SILT With Little Clay	12'4"				
						Moist, Gray, Silty CLAY	13'				
	8	14'-16'				Saturated, Gray, SILT	13'6"				
15											
	9	16'-18'									
						Moist, Gray Silty CLAY	16'3"				
	10	18'-20'				E.O.B. @ 18 fbg					

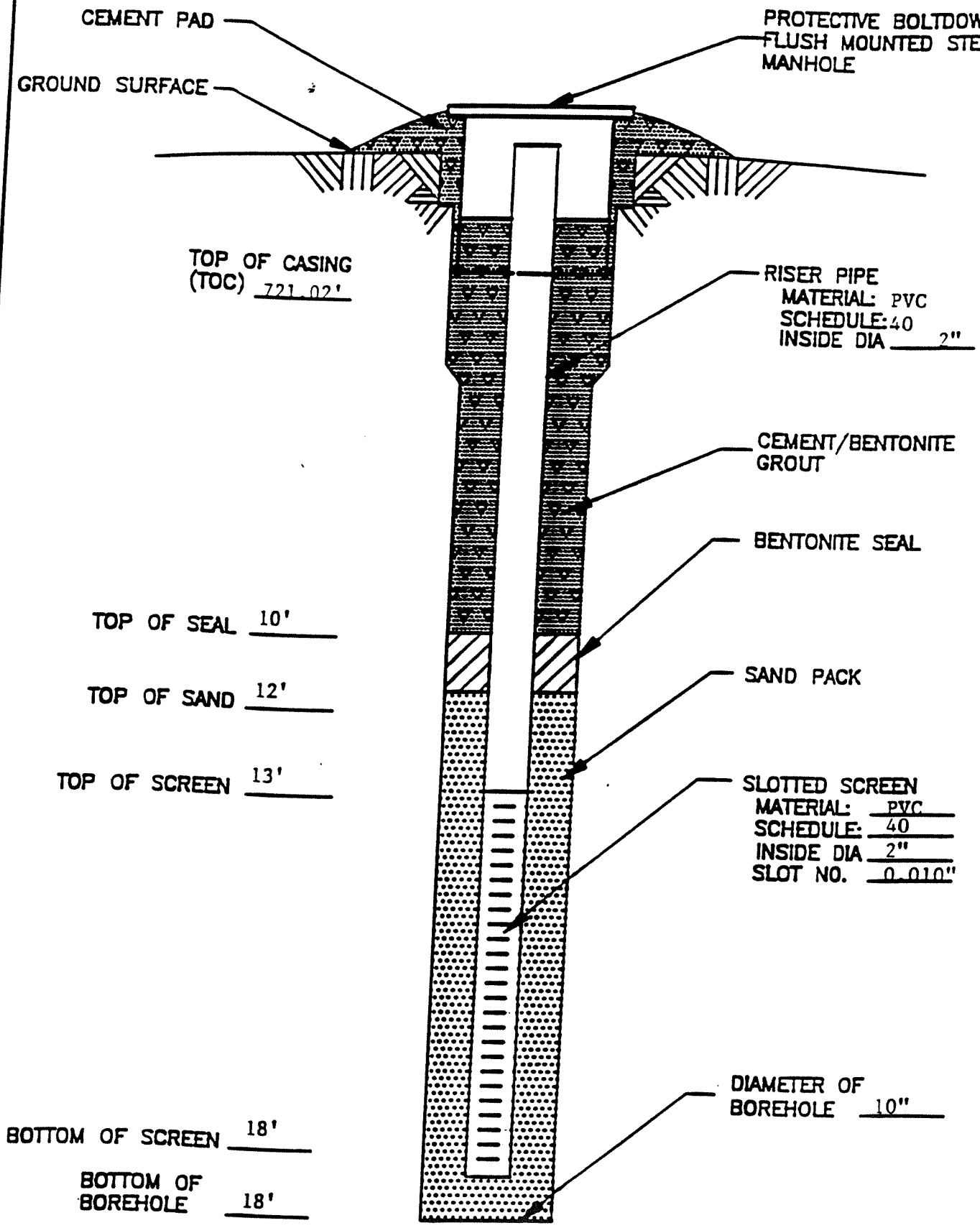
NOTES:

Monitoring well constructed of 2" diameter, schedule 40 PVC well casing with 5' of 0.010 inch slot well screen extending from 13' to 18' fbg.

PID Readings are shown in parts per million (ppM).

BMONMYpm

ENGINEERS INC.



General Motors Powertrain
Product Engineering Tank Farm
Ypsilanti, Michigan
Monitoring Well 6D

AREA 15

BAY L-5 AND E-5

BAY L-5

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA L-5		BORING/WELL DESIGNATION: HA-1	BORING/WELL LOCAT
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 3 FT.
DATE STARTED: 1/15/92	DATE COMPLETED: 1/15/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: T.WINEBRENNER	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						
	SAND - light brown, medium grained, trace silt						
2.5		2-2.5'	REF		BG		
	CONCRETE END OF BORING AT 3 FEET					REFUSAL AT 3 FEET	
5							
7.5							
10							
12.5							
15							

NOTES: 1. REF - REFERENCE SAMPLE.
2. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA L-5		BORING/WELL DESIGNATION: HA-3		BORING/WELL LOCATI
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 9 FT.	
DATE STARTED: 1/15/92	DATE COMPLETED: 1/15/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	SEE FIGURE 3-1
RIG: N/A	DRILLER: T.WINEBRENNER	HELPER: - -	LOGGED BY: S. MURRAY		

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	CONCRETE				(ppm)		
	SAND - light brown, medium grained, trace silt						
2.5		2-3'	HA-LAB		BG		
	CLAYEY SAND - brown, dry						
		4-5'	HA-LAB		BG		
5							
	CLAYEY SILT - brown, dry						
	SAND - brown, medium grained, trace silt						
7.5	CLAYEY SILT - gray, damp, no odor						
		7.5-8.5'	HA-LAB		BG		
	END OF BORING AT 9 FEET						
10							
12.5							
15							

NOTES: 1. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA L-5		BORING/WELL DESIGNATION: HA-5	BORING/WELL LOCATI
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 14 FT.
DATE STARTED: 1/16/92	DATE COMPLETED: 1/16/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: T.WINEBRENNER	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						
	SAND - light brown, fine-medium grained, trace silt						
2.5		3-4'	HA-LAB		BG		
	SAND - brown, medium grained, trace fine gravel						
5		6-7'	HA-LAB		BG		
7.5	CLAYEY SILT - gray, dry, compact						
10							
12.5							
	SILTY SAND - gray, fine grained, wet, no odor	13.5-14'	HA-LAB		BG	Duplicate sample taken (HA-109)	
	END OF BORING AT 14 FEET						
15							

NOTES: 1. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. BG - BACKGROUND READING.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA L-5	BORING/WELL DESIGNATION: HA-11	BORING/WELL LOCATIO
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 14.5 FT.
DATE STARTED: 2/5/92	DATE COMPLETED: 2/5/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: - - FT.	SEE FIGURE 3-1		
RIG: N/A	DRILLER: J. KRALIK	HELPER: - -	LOGGED BY: T. WINEBRENNER

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE						
	SAND - brown, fine-medium grained, trace silt, dry, no odor						
2.5							
	SANDY CLAY - brown, slightly damp, no odor						
		3.5-4'	HA		BG		
	SAND - brown, medium-coarse grained, some clay and gravel, moist, no odor						
5							
	SAND - brown, coarse grained, with gravel, moist-wet, no odor						
		7-7.5'	HA-LAB		BG		
7.5							
	SANDY CLAY - brown, medium-coarse sand, some gravel, moist, no odor						
	SILTY CLAY - gray brown, dry, stiff, no odor						
10							
12.5							
	SILTY SAND - gray, fine grained, wet, no odor	14-14.5	HA-LAB		BG		
15	END OF BORING AT 14.5 FEET						

NOTES: 1. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. BG - BACKGROUNG READING.
3. HA - HAND-AUGER SAMPLE.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA L-5	BORING/WELL DESIGNATION: MW-904A	BORING/WELL LOCATI

DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: IN.	BOREHOLE DEPTH: 1.4 FT.

DATE STARTED: 2/5/92	DATE COMPLETED: 2/5/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.

RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						NO WELL INSTALLED
	SAND (fill)						
	CONCRETE					REFUSAL AT 1.4 FEET	
2.5	END OF BORING AT 1.4 FEET						
5							

NOTES:

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA L-5		BORING/WELL DESIGNATION: MW-906A	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I		DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: IN.	BOREHOLE DEPTH: 8 FT.
DATE STARTED: 2/6/92	DATE COMPLETED: 2/6/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						NO WELL INSTALLED
	SAND - (fill) brown, medium grained, moist, no odor						
2.5							
5							
		6-8'	SS	5-5-4-8	BG		
7.5	CONCRETE END OF BORING AT 8 FEET					REFUSAL AT 8 FEET	

NOTES: 1. BG - BACKGROUND READINGS.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA L-5		BORING/WELL DESIGNATION: MW-906C	BORING/WELL LOCATI
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER		BOREHOLE SIZE: IN.	BOREHOLE DEPTH: 4 FT.
DATE STARTED: 2/7/92	DATE COMPLETED: 2/7/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: S. MURRAY	HELPER:	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						NO WELL INSTALLED
	SAND - (fill) brown, medium grained, moist, no odor						
2.5						REFUSAL AT 2.5 FEET	
	CONCRETE END OF BORING AT 4 FEET						
5							

NOTES:

BAY E-5

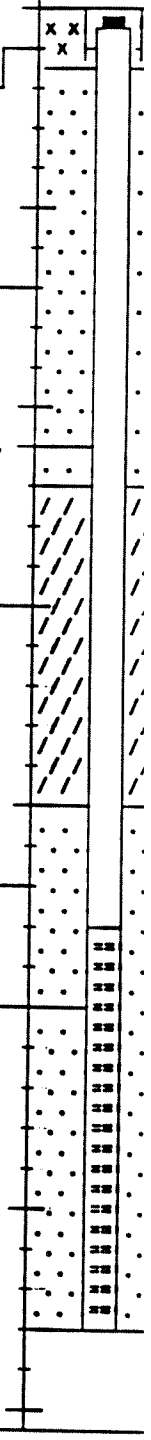
BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5		BORING/WELL DESIGNATION: MW-901	BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 18 FT.
DATE STARTED: 02/04/92	DATE COMPLETED: 02/04/92	GROUND ELEV.: 100.22 FT.	MEASURING POINT ELEV: 99.85 FT.	WELL DEPTH: 16.5 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY	SEE FIGURE 3-2

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0					(ppm)	WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	CONCRETE					CONCRETE
	SAND (fill) - yellow brown, medium grained, trace clay and silt, trace fine gravel, loose, dry, no apparent odor	10"-2'	SS	2-7	BG	
2.5	SAND (fill) - yellow brown, medium grained, trace clay and silt, trace fine gravel, loose, dry, no apparent odor	2-4'	SS	8-5-2-5	BG	SAND PACK
5	SAND - light brown, fine grained, medium dense, dry, no apparent odor	4-6'	SS	6-10-9-12	BG	2-INCH, FLUSH-THREADED, PVC RISER PIPE
		6-8'	SS	5-8-16-20	BG	
7.5	SAND - light brown, coarse-medium grained, trace silt and fine gravel, no apparent odor					CHUNK BENTONITE
	SILTY CLAY - grey, stiff, slightly plastic, damp, no apparent odor	8-10'	SS	3-4-7-9	BG	
10		10-12'	SS	2-6-8-20	BG	SAND PACK
	SILTY SAND - grey, fine grained, medium dense, wet, no apparent odor, becoming very dense at depth					
12.5		12-14'	SS	5-13-24-29	BG	4-INCH, 10-SLOT, PVC WELL SCREEN
15		14-16'	SS	23-30-38-35	BG	
	SILTY CLAY - grey, very stiff, slightly plastic, no apparent odor	16-18'	SS	3-6-12-12	BG	
17.5						

WELL DATA



NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5	BORING/WELL DESIGNATION: MW-902A	BORING/WELL LOCATIO
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 4 FT.
DATE STARTED: 02/04/92	DATE COMPLETED: 02/04/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: FT.	SEE FIGURE 3-2		
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						NO WELL INSTALLED
	SAND (fill) - yellow brown, medium grained, trace silt and clay, medium dense, dry, no odor	1-2'	SS	5-10	BG		
2.5		2-4'	SS	10-12-11-X	BG		
	CONCRETE AT 3.5 FEET, END OF BORING					REFUSAL AT 3.5 FEET	
5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5		BORING/WELL DESIGNATION: MW-902	BORING/WELL LOCATI
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 8.25 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 02/06/92	DATE COMPLETED: 02/06/92	GROUND ELEV.: 100.22 FT.	MEASURING POINT ELEV: 99.85 FT.	WELL DEPTH: 13 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY	SEE FIGURE 3-2

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0	CONCRETE	11"			(ppm)	WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	SAND (fill) - brown grey, medium grained, trace silt and gravel, loose, dry, no apparent odor					CONCRETE
2.5						CHUNK BENTONITE
						2-INCH, SCHEDULE-40, FLUSH-THREADED, PVC WELL CASING
5						
	SAND - brown grey, medium grained, trace silt and gravel, loose, moist, slight odor, moist to wet at depth	6-8'	SS	2-3-2-4	BG	SAND PACK
7.5	(groundwater at 8 feet)					
		8-10'	SS	1-2-1-2	BG	
10	SILT - light brown, some fine sand, water above may be perched					2-INCH, 10-SLOT, PVC WELL SCREEN
	SAND (fill) - brown, medium grained, little silt, very loose, wet, apparent odor	10-12'	SS	1-1-1-2	BG	
12.5		12-14'	SS	1-1-200-X	BG	REFUSAL AT 13 FEET
	END OF BORING AT 13 FEET					
15						

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA D-5	BORING/WELL DESIGNATION: MW-903B	BORING/WELL LOCATIO
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 4 IN.	BOREHOLE DEPTH: 3.5 FT.
DATE STARTED: 02/06/92	DATE COMPLETED: 02/06/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: - - FT.	SEE FIGURE 3-2		
RIG: N/A	DRILLER: S. MURRAY	HELPER: C. McDONNELL	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE						NO WELL INSTALLED
	SAND - light brown, medium grained, trace silt and clay, medium dry, no apparent odor						
2.5	CONCRETE AT 3.5, END OF BORING						
5							

NOTES:

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5		BORING/WELL DESIGNATION: MW-903	BORING/WELL LOCAT
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 4 IN.	BOREHOLE DEPTH: 10 FT.
DATE STARTED: 02/25/92	DATE COMPLETED: 02/25/92	GROUND ELEV.: 100.19 FT.	MEASURING POINT ELEV: 99.42 FT.	WELL DEPTH: 10 FT.
RIG: N/A	DRILLER: C. KIELTY	HELPER:	LOGGED BY: T. WINEBRENNER	SEE FIGURE 3-2

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	CONCRETE				(ppm)	WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER	
	SAND - light brown, medium grained, (fill) moist, no apparent odor					CONCRETE	
2.5						STEEL COUPLING	
	SAND - brown, medium grained, some clay, dense, damp, no apparent odor					CHUNK BENTONITE	
5						2-INCH, SCHEDULE-40, GALVANIZED STEEL, RISER PIPE	
						SAND PACK	
7.5		7-8'	HA-LAB		BG		
						2-INCH, 80 GAUZE, STAINLESS STEEL, DRIVE POINT WELL SCREEN	
10	END OF BORING AT 10 FEET						

NOTES: 1. HA-LAB - SAMPLE SUBMITTED FOR LABORATORY ANALYSIS.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - E-5		BORING/WELL DESIGNATION: MW-905	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 6.25 IN. / BOREHOLE DEPTH: 17.5 FT.	
DATE STARTED: 10/28/92	DATE COMPLETED: 10/28/92	GROUND ELEV.: 99.78 FT. / MEASURING POINT ELEV: 99.85 FT.	WELL DEPTH: 17.5 FT.	SEE FIGURE 3-1
RIG: CME-45	DRILLER: C. O'MALLEY	HELPER: - - -	LOGGED BY: C. KIELTY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND FLUSH-MOUNT COVER
	SAND - fill, reddish-brown, medium-grained, moist, trace fine gravel					CONCRETE
2.5	SAND - light brown to light gray-brown, medium-grained, moist, trace to some fine and coarse gravel					CHUNK BENTONITE
5						4-INCH, FLUSH-THREADED, PVC RISER PIPE
7.5	CLAY - brown-gray, plastic, moist, stiff, trace to some silt	7-9'	SS	6-8-10-9	BG	
10		9-11'	SS	3-4-8-7	BG	SAND FILTER PACK
		11-13'	SS	4-4-7-16	BG	
12.5	SILTY SAND - gray-brown, fine to medium, wet, very dense					4-INCH, 10-SLOT, PVC WELL SCREEN
15						
17.5	END OF BORING AT 17.5 FEET					BOTTOM OF WELL SCREEN SET ON TOP OF GRAY CLAY LAYER AT 17.5 FEET

NOTES: 1. SS - SPLIT SPOON SAMPLE.
2. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5		BORING/WELL DESIGNATION: MW-905B	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW STEM AUGERS	BOREHOLE SIZE: 10.2 IN.	BOREHOLE DEPTH: 8.5 FT.
DATE STARTED: 8/19/92	DATE COMPLETED: 8/19/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: CME-45	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	BOREHOLE FILLED WITH CUTTINGS AND BENTONITE. CONCRETE TO GRADE	NO WELL INSTALLED
	CONCRETE						
	SAND/FILL - yellow brown, coarse-medium grained, some fine gravel, trace cobbles, dry-damp, no apparent odor	0-2'	SS	NR	BG		
2.5		2-4'	REF	NR	BG		
5		4-6'	SS	NR	BG		
		6-8'	SS	NR	BG		
7.5		8-8.5'	SS	NR	BG	REFUSAL AT 8.5 FEET	
	CONCRETE END OF BORING AT 8.5 FEET						

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. REF - SPLIT-SPOON SAMPLE RETAINED AS REFERENCE SAMPLE.
3. NR - NOT RECORDED.
4. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.
5. BG - BACKGROUND READING

BORING LOG / MONITORING WELL DIAGRAM

A&B ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5		BORING/WELL DESIGNATION: MW-906B	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10.2 IN. / BOREHOLE DEPTH: 8.5 FT.	SEE FIGURE 3-1
DATE STARTED: 8/19/92	DATE COMPLETED: 8/19/92	GROUND ELEV.: - - FT. / MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	
RIG: CME-45	DRILLER: K. DANTES	HELPER: C. McDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS AND BENTONITE. CONCRETE TO GRADE	NO WELL INSTALLED
	SAND/FILL - yellow brown, coarse-medium grained, some fine gravel, no apparent odor						
2.5							
5							
7.5							
	SAND/FILL - yellow brown, coarse-medium grained, some fine gravel, trace clay, wet	8-8.5'	SS	NR	BG	REFUSAL AT 8.5 FEET	
	CONCRETE END OF BORING AT 8.5 FEET						
10							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. NR - NOT RECORDED.
3. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.
4. BG - BACKGROUND READING

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5	BORING/WELL DESIGNATION: HA-6	BORING/WELL LOCATIO
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 10 FT.
DATE STARTED: 1/16/92	DATE COMPLETED: 1/16/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: - - FT.	SEE FIGURE 3-2		
RIG: N/A	DRILLER: T.WINEBRENNER	HELPER: - -	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE						
	SAND - medium-fine grained, trace silt and gravel, damp-moist at 4.5 feet						
2.5		2-3'	REF		BG		
5		5-6'	HA-LAB		BG		
7.5	Alternating layers CLAYEY SILT - brown, compact SAND - medium to fine grain, trace silt and gravel						
	(groundwater at 9 feet)	9-10'	HA-LAB		BG		
10	END OF BORING AT 10'						
12.5							
15							

NOTES: 1. HA-LAB - HAND AUGER SAMPLES SENT TO LABORATORY FOR ANALYSIS.
2. BG - BACKGROUND READING.
3. REF - REFERENCE SAMPLE.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5		BORING/WELL DESIGNATION: HA-8	BORING/WELL LOCATION
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER		BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 3 FT.
DATE STARTED: 1/17/92	DATE COMPLETED: 1/17/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: N/A	DRILLER: T.WINEBRENNER	HELPER: - -	LOGGED BY: S. MURRAY	SEE FIGURE 3-2

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE						
	SAND - (fill) brown, medium grained, trace silt and gravel						
2.5		2-3'	REF		BG		
	CONCRETE					REFUSAL AT 3 FEET	
	END OF BORING AT 3 FEET						
5							
7.5							
10							
12.5							
15							

NOTES: 1. REF - REFERENCE SAMPLE.
2. BG - BACKGROUND READING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - E-5		BORING/WELL DESIGNATION: HA-10	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 11 FT.
DATE STARTED: 8/10/92	DATE COMPLETED: 8/10/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG:	DRILLER: T. WINEBRENNER	HELPER:	LOGGED BY: T. WINEBRENNER	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE AND WOOD BLOCKS					BOREHOLE FILLED WITH BENTONITE AND CUTTINGS. CONCRETE TO GRADE	NO WELL INSTALLED
	SAND - brown, fine-medium grained, dry, no apparent odor						
2.5							
5							
7.5	SILTY SAND - brown, dry, no apparent odor						
	SILTY CLAY - brown, dry, no apparent odor						
10							
	SAND - gray, fine grained, wet	10.5-11'	HA		BG		
	END OF BORING AT 11 FEET						
12.5							

NOTES: 1. HA - HAND AUGER SAMPLE
2. BG - BACKGROUND READING

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5	BORING/WELL DESIGNATION: HA-12	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER - DRIVE POINT	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 9 FT.
DATE STARTED: 8/12/92	DATE COMPLETED: 8/12/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: - - FT.	SEE FIGURE 3-1		
RIG:	DRILLER: C. KIELTY	HELPER: T. WINEBRENNER	LOGGED BY: T. WINEBRENNER

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					EMPLACEMENT OF A 2-INCH DRIVE POINT WELL WAS ATTEMPTED; DUE TO SUBSURFACE CONDITIONS. WELL WAS ABANDONED: BOREHOLE FILLED WITH BENTONITE. CONCRETE TO GRADE	NO WELL INSTALLED
	SAND - brown, medium-fine grained, trace silt, no apparent odor						
	CONCRETE DEBRIS						
2.5	SAND - brown, medium-fine grained, no apparent odor						
	SAND - light brown, medium grained, well sorted, no apparent odor						
5							
7.5	SAND - brown, coarse grained, some fine gravel, wet, no apparent odor	8-9'	HA		BG		
	SILTY CLAY - brown, dry END OF BORING AT 9 FEET						
10							

NOTES: 1. HA - HAND AUGER SAMPLES
2. BG - BACKGROUND READING

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - AREA E-5	BORING/WELL DESIGNATION: HA-14/SB-1	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I/ABB-ES	DRILLING METHOD: HOLLOW-STEM/ HAND-AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 8 FT.
DATE STARTED: 8/18/92	DATE COMPLETED: 8/18/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: - - FT.	SEE FIGURE 3-1		
RIG: CME-45	DRILLER: DANTES/KIELTY	HELPER:	LOGGED BY: C. KIELTY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	BOREHOLE FILLED WITH CUTTINGS. CONCRETE TO GRADE	NO WELL INSTALLED
	WOOD BLOCKS AND CONCRETE	0-2'	SS	0-0-NR	BG		
	SAND - yellow brown, coarse-medium grained, some gravel, dry						
2.5	OBSTRUCTION						
	SAND - yellow brown-brown, coarse-medium grained, trace-some fine gravel, moist-wet, no apparent odor						
5							
7.5	wet at 7.5 feet	7.5-8'	HA		BG	REFUSAL AT 8 FEET	
	CONCRETE END OF BORING AT 8 FEET						
10							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. NR - NOT RECORDED.
3. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.
4. HA - HAND AUGER SAMPLE.
5. BG - BACKGROUND READING

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - E-5		BORING/WELL DESIGNATION: HA-16	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL		DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN. / BOREHOLE DEPTH: 9.5 FT.	
DATE STARTED: 10/23/92	DATE COMPLETED: 10/23/92	GROUND ELEV.: - - FT. / MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	SEE FIGURE 3-1
RIG: - - -	DRILLER: C. KIELTY	HELPER: - - -	LOGGED BY: C. KIELTY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH BENTONITE AND CUTTINGS. CONCRETE TO GRADE	NO WELL INSTALLED
	SAND - fill, reddish-brown, medium-grained, moist, trace fine gravel						
2.5	SAND - light brown to light gray-brown, medium-grained, moist, trace to some fine and coarse gravel						
5							
		7-7.5'	HA		BG		
7.5	CLAY - brown-gray, plastic, moist, trace fine gravel, trace to some silt						
	END OF BORING AT 9.5 FEET						
10							
12.5							

NOTES: 1. HA - HAND AUGER SAMPLE
2. BG - BACKGROUND READING

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-12	PROJECT NAME: GM POWERTRAIN - E-5		BORING/WELL DESIGNATION: SB-4	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 18 FT.
DATE STARTED: 8/18/92	DATE COMPLETED: 8/18/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG: CME-55	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	BOREHOLE FILLED WITH BENTONITE CHIPS TO 8 FEET. CUTTINGS AND CONCRETE TO GRADE	NO WELL INSTALLED
	CONCRETE AND WOOD BLOCKS	0-2'	SS	NR	BG		
	FILL - yellow brown, coarse sand and gravel, some clay, dry, no apparent odor						
2.5	FILL/SAND - yellow brown-pale yellow gray, coarse grained, some gravel and clay, dry, no apparent odor	2-4'	SS	NR	BG		
	FILL/SAND - pale yellow gray, coarse-medium grained, some gravel and clay, damp, no apparent odor	4-6'	SS	NR	BG		
5							
	FILL/SAND - medium gray-pale yellow gray, coarse-medium grained, some coarse gravel, trace fine gravel, dry, no apparent odor	6-8'	SS	NR	BG		
7.5							
	CLAY - brown-gray, trace silt, soft, dry, no apparent odor	8-10'	SS	NR	BG		
10		10-12'	SS	NR	BG		
	SILTY SAND - gray-light olive gray, fine grained, wet, no apparent odor						
12.5		12-14'	SS	NR	BG		
15		14-16'	SS	NR	BG		
		16-18'	SS	NR	BG		
17.5							

NOTES: 1. SS -SPLIT-SPOON SAMPLE.
2. NR - NOT RECORDED.
3. BG - BACKGROUND READING

AREA 16

TANK #84

The Chester Engineers

BORING LOG

Project	Job No.	Sheet No.	Hole No.
GM Willow Run, Hydrogeological Investigation	3776-02	1/1	HA-0

Site	Coordinates	Angle from horizon	Bearing
Storm Retention Skimmer Tank #100		90°	NA

Began	Completed	Driller	Drill make and model	Hole size	Overburden (ft.)	Rock (ft.)	Total depth (
12/11/91	12/11/91	Bowser-Morner	Hand Auger	3"	7'	NA	7'

Core recovery (ft./%)	Core boxes	Samples	Elev. top of casing	Ground elev.	Depth/Elev. ground water	Depth/Elev. top of rock
NA	NA	3	NA	NA	NA	NA

Sample hammer weight/Fall	Casing left in hole: Diameter/Length	Logged by:
NA	NA	J.S. Brown

Sampler Type and Diameter	Sampler Advance/ Sample Recovery	Penetration blows 1st 6"	2nd 6"	3rd 6"	4th 6"	Elevation/ PID	Depth (ft.)	Sample	Description and Classification	Notes on: Water levels. Water return, Character of Drilling, etc.
							1		Gravel	
Stainless Steel Hand Auger						0 ppm	3		Medium grained silty brown sand	Moist
								1	Brown-gray silty clay	
						5 ppm	5			
								2	Medium grained silty clay Brown sand	
						2 ppm	7	3		

- end of boring at 7.4' below grade when hand auger encountered large rock.
- boring filled with grout.
- auger cuttings put in drum with drill cuttings from MW-001 for disposal by owner.

SS = SPLIT SPOON; ST = SHELBY TUBE;
D = DENNISON; P = PITCHER; O = OTHER

The Chester Engineers

BORING LOG

Project	Job No.	Sheet No.	Hole No.
GM Willow Run, Hydrogeological Investigation	3776-02	1/1	MW-0(

Site	Coordinates	Angle from horizon	Bearing
Storm Retention Skimmer Tank #100		90°	NA

Began	Completed	Driller	Drill make and model	Hole size	Overburden (ft.)	Rock (ft.)	Total depth (f
12/10/91	12/10/91	Bowser-Morner	Mobil Drill B-51	6"	15'	NA	15'

Core recovery (ft./%)	Core boxes	Samples	Elev. top of casing	Ground elev.	Depth/Elev. ground water	Depth/Elev. top of rock
NA	NA	7	97.49	NA	8.58/88.91	NA

Sample hammer weight/Fall	Casing left in hole: Diameter/Length	Logged by:
140#/30"	2" PVC/13'	J.S. Brown

Sampler Type and Diameter	Sampler Advance/ Sample Recovery	Penetration blows 1st 6"	2nd 6"	3rd 6"	4th 6"	Elevation/ PID	Depth (ft.)	Sample	Description and Classification	Notes on: Water levels. Water return, Character of Drilling, etc.
SS/2"									Concrete	
SS/2"		11	11	11	19	2 ppm	3	1	Medium grained brown silty sand with gravel 6" gray silty stiff clay	Dry
SS/2"		4	3	3	3	20 ppm	5	2	Medium grained gray silty sand, some gravel	Moist
SS/2"		3	3	4	3	2 ppm	7	3	Pea gravel	Moist
SS/2"		5	4	4	2	500 ppm	9	4	Medium grained brown and gray silty sand (stained black at 9')	Wet at 10'
SS/2"		1	1	3	3	20 ppm	11	5	3" black stained pea gravel Medium grained brown silty sand	
SS/2"		1	1	0	3	NA	13	6	Pea gravel	Wet Oily sheen
SS/2"		3	1	0	1	NA	15	7		
									- end of boring 15'. - water measured through augers at 11.2' below grade. - Well set at 13' below grade with 3' screen. - Drill cuttings drummed for owner's disposal.	

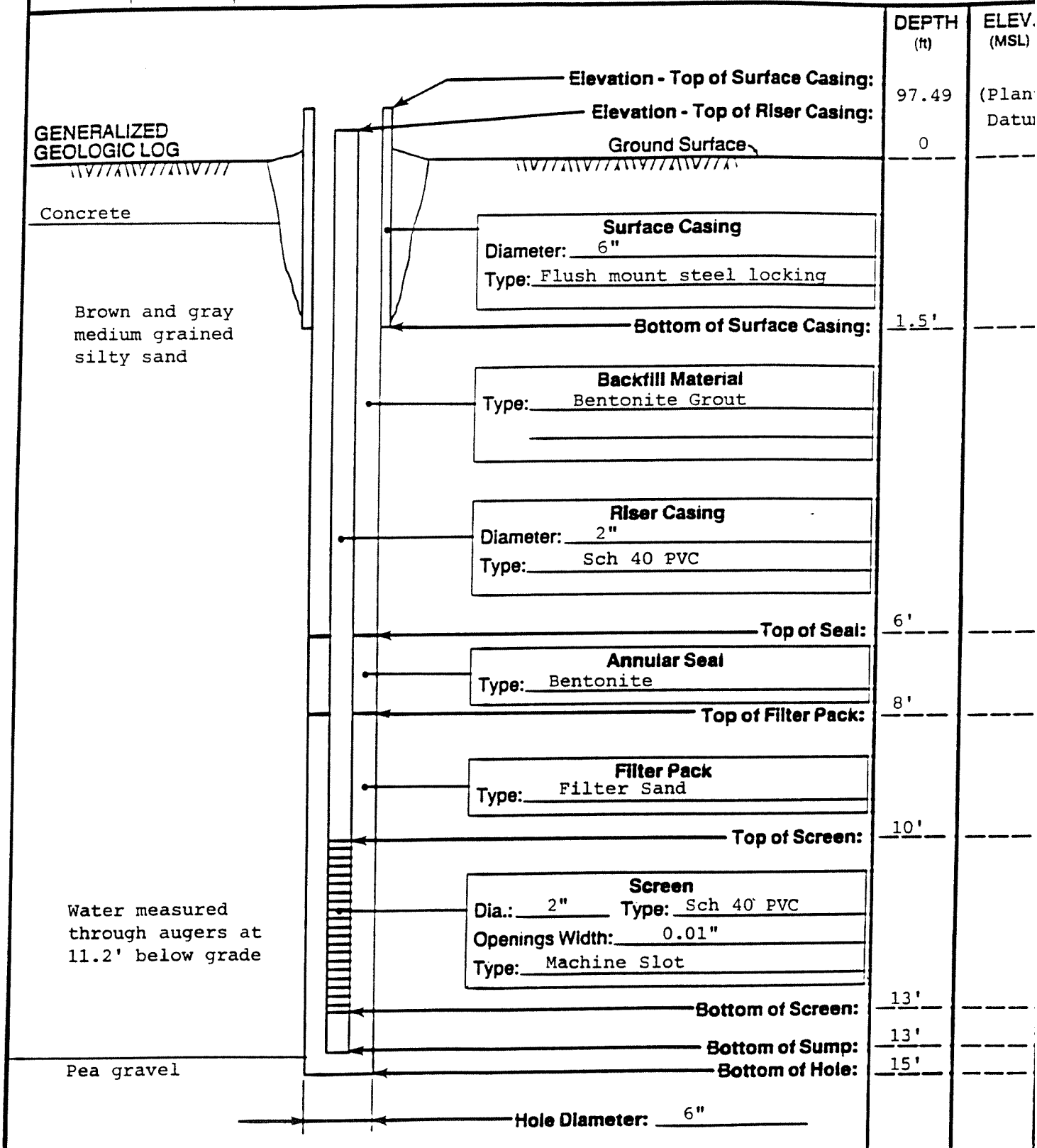
SS = SPLIT SPOON; ST = SHELBY TUBE;
D = DENNISON; P = PITCHER; O = OTHER

Project
GM Willow Run, Hydrogeological Investigation

Hole No.
MW-001

Monitoring Well

PROJECT: Hydrogeological Site Investigation in the Area of Storm Retention Skimmer Tank #84		WELL NO.: MW-001
CHARGE NO.: 3776-02	SITE: General Motors Corp. Willow Run Transmission Plant	COORDINATES: West Side of Skimmer Tank #84
BEGAN: 12/10/91	COMPLETED: 12/10/91	PREPARED BY: J.S. Brown
REFERENCE POINT FOR MEASUREMENTS: North Side of PVC Casing		



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BORING LOG

Project	Job No.	Sheet No.	Hole No.
GM Willow Run, Hydrogeological Investigation	3776-02	1/1	MW-0(

Site	Coordinates	Angle from horizon	Bearing
Storm Retention Skimmer Tank #100		90°	NA

Began	Completed	Driller	Drill make and model	Hole size	Overburden (ft.)	Rock (ft.)	Total depth (f
12/10/91	12/10/91	Bowser-Morner	Mobil Drill B-51	6"	15'	NA	15'

Core recovery (ft./%)	Core boxes	Samples	Elev. top of casing	Ground elev.	Depth/Elev. ground water	Depth/Elev. top of rock
NA	NA	7	97.49	NA	8.58/88.65	NA

Sample hammer weight/Fall	Casing left in hole: Diameter/Length	Logged by:
140#/30"	2" PVC/13'	J.S. Brown

Sampler Type and Diameter	Sampler Advance/ Sample Recovery	Penetration blows 1st 6"	2nd 6"	3rd 6"	4th 6"	Elevation/ PID	Depth (ft.)	Sample	Description and Classification	Notes on: Water levels. Water return. Character of Drilling, etc.
SS/2"							1		Concrete	
SS/2"		10	10	11	12	3 ppm	3	1	Brown silty sand, some gravel, at 2.5' gray silty sand	Moist
SS/2"		4	5	4	5	3 ppm	5	2	Medium grained brown silty sand	
SS/2"		3	4	3	4	2 ppm	7	3		
SS/2"		3	1	2	1	30 ppm	9	4		Moist/wet
SS/2"		1	1	1	4	2 ppm	11	5	Medium grained gray silty sand	
SS/2"		3	1	1	0	3 ppm	13	6		Wet Oily sheen
SS/2"		1	1	1	6	NA	15	7		
									- end of boring 15'. - water measured through augers at 11.4' below grade. - Well set at 13' below grade with 3' screen. - Drill cuttings drummed for owner's disposal.	

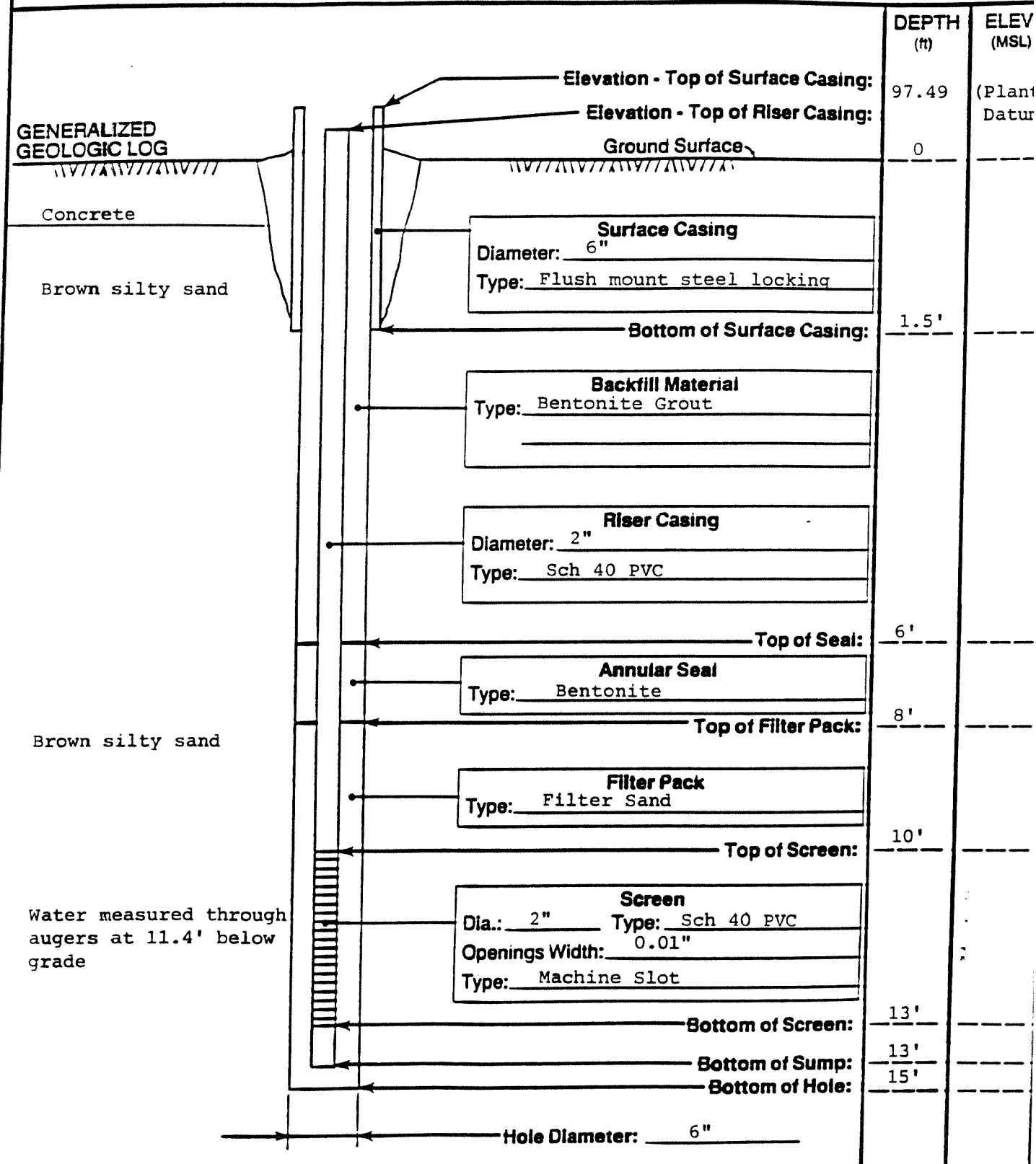
SS = SPLIT SPOON; ST = SHELBY TUBE;
D = DENNISON; P = PITCHER; O = OTHER

Monitoring Well

PROJECT	WELL NO.
Hydrogeological Site Investigation in the Area of Storm Retention Skimmer Tank #84	MW-002

CHARGE NO.	SITE	COORDINATES
3776-02	General Motors Corp. Willow Run Transmission Plant	West Side of Skimmer Tank #84

BEGAN	COMPLETED	PREPARED BY	REFERENCE POINT FOR MEASUREMENTS
12/10/91	12/10/91	J.S. Brown	North Side of PVC Casing



TheChesterEngineers

The Chester Engineers

BORING LOG

Project	Job No.	Sheet No.	Hole No.
GM Willow Run, Hydrogeological Investigation	3776-02	1/1	SB-0

Site	Coordinates	Angle from horizon	Bearing
Storm Retention Skimmer Tank #100	12' east of MW104	90°	NA

Began	Completed	Driller	Drill make and model	Hole size	Overburden (ft.)	Rock (ft.)	Total depth (
12/9/91	12/9/91	Bowser-Morner	Mobil Drill B-51	6"	15'	NA	15'

Core recovery (ft./%)	Core boxes	Samples	Elev. top of casing	Ground elev.	Depth/Elev. ground water	Depth/Elev. top of rock
NA	NA	7	None	NA	NA	NA

Sample hammer weight/Fall	Casing left in hole: Diameter/Length	Logged by:
140#/30"	None	J.S. Brown

Sampler Type and Diameter	Sampler Advance/ Sample Recovery	Penetration blows 1st 6"	2nd 6"	3rd 6"	4th 6"	Elevation/ PID	Depth (ft.)	Sample	Description and Classification	Notes on: Water levels. Water return. Character of Drilling, etc.
SS/2"							1		Concrete	
SS/2"		19	15	11	11	40 ppm	3	1	Medium grained brown silty sand some gravel	Dry
SS/2"		6	6	6	6	0 ppm	5	2		
SS/2"		5	4	4	5	45 ppm	7	3	Medium grained brown silty sand, some clay	Moist
SS/2"		2	3	3	2	20 ppm	9	4	6" gray silty moist clay Medium grained gray silty sand	Wet at 10'
SS/2"		1	0	0	1	NA	11	5		
SS/2"		2	2	2	2	NA	13	6		
SS/2"		1	1	2	2	NA	15	7		
									- end of boring 15'. - boring filled with grout, drill cuttings drummed for owner's disposal.	

SS = SPLIT SPOON; ST = SHELBY TUBE;
D = DENNISON; P = PITCHER; O = OTHER

AREA 17

BUILDING #19 TANK FARM

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: MW-101	BORING/WELL LOCATION: MW-101, N, 86.8', 81.3', 33'
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 2/15/89	DATE COMPLETED: 2/15/89	GROUND ELEV.: 97.64 FT.	MEASURING POINT ELEV: 100.14 FT.
WELL DEPTH: 11 FT.			
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY

BLDG. # 19

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0	GRAVEL FILL				(ppm)	WELL FINISHED ABOVE GRADE W/LOCKABLE PROTECTIVE COVER SET IN CONCRETE
	SAND - brown, medium grained, moist, firm, some fine gravel.	1-3	SS	11/16/15/10	BG	CEMENT
2.5						BENTONITE SEAL
	SAND - brown, medium grained, moist, loose, some fine gravel, trace clay.	3-5	SS	3/5/8/6	BG	
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING
	SAND - light brown, fine to medium, moist, loose, trace silt.	5-7	SS	2/3/3/3	BG	
7.5	SAND - brown, medium to coarse, moist, loose, some fine gravel, some clay. (groundwater encountered @ 9-ft.)	7-9	SS	2/2/3/4	BG	SAND FILTER PACK
	SILTY SAND - brown to gray, fine to medium, wet, firm.	9-11	SS	6/9/13/11	BG	TWO-INCH 10-SLOT PVC WELL SCREEN
10.0	GRAVEL SEAM - black staining.					
	SILTY CLAY - gray to brown, moist, firm, non-plastic.	11-13	SS	2/3/6/7	BG	
12.5						
	END OF BORING AT 13 FEET					
15.0						

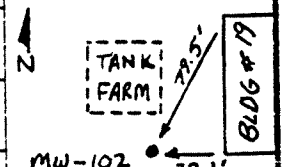
WELL DATA

NOTES: BG - BACKGROUND
SS - SPLIT SPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: MW-102	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 2/16/89	DATE COMPLETED: 2/16/89	GROUND ELEV.: 98.54 FT.	MEASURING POINT ELEV: 101.04 FT.	WELL DEPTH: 11 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



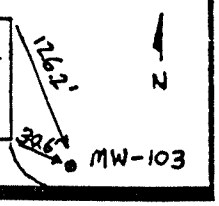
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
					(ppm)	
0	SAND AND GRAVEL (FILL)- stained black					WELL FINISHED ABOVE GRADE W/LOCKABLE PROTECTIVE COVER SET IN CONCRETE
	SAND (FILL)- brown, medium grained, moist, dense, some gravel, some black staining.	1-3	SS	8/18/18/17	BG	CEMENT; BENTONITE SEAL
2.5						
	SILTY SAND - fine-medium grained, dark staining, moist, firm, some clay and gravel.	3-5	SS	5/6/8/10	BG	
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING
	SILTY SAND - brown, moist, trace fine gravel, odor.	5-7	SS	3/5/2/8	BG	
7.5						SAND FILTER PACK
	SAND - light brown, medium grained, moist, very firm, some fine gravel, odor.	7-9	SS	6/13/12/23	BG	
	SAND - gray-brown, fine grained, moist to wet, dense, some silt, faint odor.	9-11	SS	8/16/17/25	BG	TWO-INCH 10-SLOT PVC WELL SCREEN
10.0	(groundwater encountered @ 9.5-ft.)					
	SILTY CLAY - gray-brown, moist, very stiff, plastic.	11-13	SS	3/5/13/25	BG	
12.5						
	END OF BORING AT 13-FEET					
15.0						

NOTES: BG - BACKGROUND
SS - SPLIT SPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: MW-103	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 2/22/89	DATE COMPLETED: 2/22/89	GROUND ELEV.: 98.41 FT.	MEASURING POINT ELEV: 98.04 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



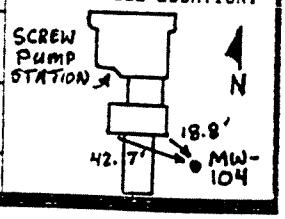
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0					(ppm)	
	CONCRETE - 1-FOOT					WELL FINISHED BELOW GRADE W/A 2-INCH LOCKABLE PVC CAP
	SANDY CLAY (FILL)- brown, fine to medium grained, moist, firm, poorly sorted.					CEMENT
		1-3	SS	20/15/9/9	BG	
2.5						BENTONITE SEAL
		3-5	SS	3/3/4/4	BG	
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING
	SAND - light brown, fine-medium grained, moist, loose, trace fine gravel.	5-7	SS	2/3/4/6	BG	
7.5	SAND - light brown to gray, fine-medium grained, moist, firm, trace silt.					SAND FILTER PACK
		7-9	SS	5/8/16/18	BG	
	(groundwater encountered @ 9-ft.)					
	SAND - gray to brown, fine grained, wet, firm, some silt.					
10.0		9-11	SS	5/11/16/20	BG	TWO-INCH 10-SLOT PVC WELL SCREEN
	CLAY - gray, moist, firm, plastic, some silt.					
		11-13	SS	2/3/5/7	BG	
12.5						
	END OF BORING AT 13-FEET					
15.0						

NOTES: BG - BACKGROUND
SS - SPLIT SPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5983-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: MW-104	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13.5 FT.	
DATE STARTED: 2/15/89	DATE COMPLETED: 2/15/89	GROUND ELEV.: 97.80 FT.	MEASURING POINT ELEV: 99.85 FT.	WELL DEPTH: 12.8 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	SAND AND GRAVEL FILL.				(ppm)	WELL FINISHED ABOVE GRADE W/LOCKABLE PROTECTIVE COVER SET IN CEMENT	
	SAND - brown, fine-medium grained, moist, firm, trace fine gravel and silt.	1.0-3.0	SS	10/15/12/9	BG	CEMENT	
2.5						BENTONITE SEAL	
		3.0-5.0	SS	5/6/7/13	BG		
5.0	CONCRETE CHUNK					TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
	SAND - light brown, fine-medium grained, moist, firm, trace fine gravel.	5.5-7.5	SS	3/9/12/16	BG		
7.5						SAND FILTER PACK	
		7.5-9.5	SS	6/9/18/20	BG		
	(groundwater encountered @ 9.5-ft.)						
10.0	SILT - gray, wet, firm, some fine sand.	9.5-11.5	SS	3/9/12/15	BG	TWO-INCH 10-SLOT PVC WELL SCREEN	
	SILTY CLAY - gray, moist, stiff.						
12.5		11.5 - 13.5	SS	6/16/11/14	BG		
	END OF BORING AT 13.5-FEET						
15.0							

NOTES: BG - BACKGROUND
SS - SPLIT SPOON

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-09	PROJECT NAME: GM - BUILDING #19		BORING/WELL DESIGNATION: MW-105	BORING/WELL LOCATION: SEE FIG. 3-1
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS		BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 12.5 FT.
DATE STARTED: 8/5/91	DATE COMPLETED: 8/5/91	GROUND ELEV.: 98.7 FT.	MEASURING POINT ELEV: 98.38 FT.	WELL DEPTH: 12 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	ASPHALT					WELL COMPLETE WITH A FLUSH-MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE	
	SAND - light brown, fine-coarse grained, trace fine gravel	1-3'					
2.5	SAND - black-dark brown, medium-coarse grained, trace clay and gravel	3-5'			1-2	2-INCH, SCHEDULE-40, PVC RISER PIPE BENTONITE SEAL	
5	SAND - yellow-brown, medium grained, moist, trace fine gravel	5-9'				SAND FILTER PACK	
7.5	SAND - gray, fine-medium grained, moist-wet, trace fine gravel						
10	(groundwater at 10.7 feet)	9-12.5'				2-INCH, 10-SLOT, PVC WELL SCREEN	
12.5	CLAY - gray, plastic END OF BORING AT 12.5 FEET					NATIVE CLAY	
15							

NOTES: 1. SOIL DESCRIPTIONS LOGGED OF FLIGHTS OF AUGER CUTTINGS.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-09	PROJECT NAME: GM - BUILDING #19		BORING/WELL DESIGNATION: MW-106	BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 11.5 FT.
DATE STARTED: 8/5/91	DATE COMPLETED: 8/5/91	GROUND ELEV.: 98.0 FT.	MEASURING POINT ELEV: 97.50 FT.	WELL DEPTH: 11 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

SEE FIG. 3-1

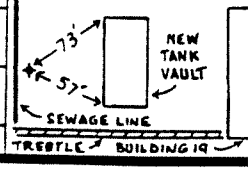
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	ASPHALT					WELL COMPLETED WITH A FLUSH-MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE	
	SAND - gray, medium-coarse grained, damp, trace fine gravel						
2.5						BENTONITE SEAL	
	SAND - black-dark brown, medium-coarse grained, trace gravel					2-INCH, SCHEDULE-40, PVC RISER PIPE	
	SAND - yellow-brown, medium grained, moist, trace fine gravel				1-2		
5							
						SAND FILTER PACK	
7.5	(groundwater at 8.5 feet)						
10						2-INCH, 10-SLOT, PVC WELL SCREEN	
	CLAY - gray, plastic					NATIVE CLAY	
	END OF BORING AT 11.5 FEET						
12.5							
15							

NOTES: 1. SOIL DESCRIPTIONS LOGGED OF FLIGHTS OF AUGER CUTTINGS.

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: SB-1	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 8/24/89	DATE COMPLETED: 8/24/89	GROUND ELEV.: N/A FT.	MEASURING POINT ELEV: N/A FT.
WELL DEPTH: N/A FT.			
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



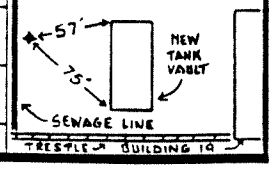
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE - 1-FOOT						NO WELL INSTALLED
	SAND AND GRAVEL (FILL) - brown, medium to coarse grained, firm	1 - 3	SS	12/13/15/18	BG		
2.5							
	SAND - brown, medium grained, moist, loose, trace fine gravel	3 - 5	SS	9/10/8/8	BG		
5.0							
	SAND - light brown/gray, medium to coarse grained, moist, firm, some fine gravel	5 - 7	SS	4/8/12/18	4		
7.5	("Oily" odor noted at 7 feet)	7 - 9	SS	8/16/22/29	10		
	SAND - light brown/gray, coarse grained, moist, firm to very firm, some fine gravel, "oily" appearance on soil	9 - 11	SS	5/10/19/26	60		
10.0	(groundwater encountered @ 11.5-ft.)						
		11 - 13	SS	7/8/7/11	60		
12.5	CLAY - gray, plastic, some silt						
	END OF BORING AT 13-FEET						
15.0							
17.5							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SS - SPLITSPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: SB-2	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 8/24/89	DATE COMPLETED: 8/24/89	GROUND ELEV.: N/A FT.	MEASURING POINT ELEV: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY

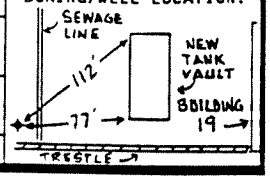


DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE - 1-FOOT						NO WELL INSTALLED
	SAND AND GRAVEL (FILL) - brown, coarse grained, moist, loose, fill materials	1 - 3	SS	5/8/10/8	BG		
2.5		3 - 5	SS	3/4/5/3	BG		
5.0	SAND - light brown, medium grained, moist, very loose, trace fine gravel, slight odor	5 - 7	SS	3/1/2/6	1		
7.5	SAND - light gray/brown, medium to coarse grained, firm, slight odor	7 - 9	SS	6/9/16/22	14		
10.0	SAND - light gray/brown, medium to coarse grained, firm, "oily" appearance on soil (goundwater encountered @ 11-ft.)	9 - 11	SS	9/13/20/27	110		
	CLAY - gray, moist, plastic, some silt	11 - 13	SS	6/3/5/7	8		
12.5	END OF BORING AT 13-FEET						
15.0							
17.5							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SS - SPLITSPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: SB-3	BORING/WELL LOCATION: 
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 8/24/89	DATE COMPLETED: 8/24/89	GROUND ELEV.: N/A FT.	MEASURING POINT ELEV: N/A FT.	WELL DEPTH: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	

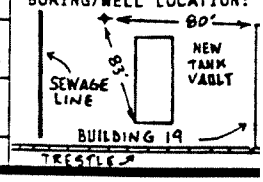
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE - 1-FOOT						NO WELL INSTALLED
	SAND - brown, medium grained, moist, some clay, trace fine gravel	1 - 3	SS	4/5/6/8	BG		
2.5		3 - 5	SS	4/3/3/5	BG		
5.0	SAND - brown, fine to medium grained, moist, loose to firm, trace silt, trace fine gravel, faint odor	5 - 7	SS	2/2/3/6	4		
7.5		7 - 9	SS	10/15/17/22	8		
10.0	SAND - gray/brown, medium grained, moist to wet, firm, faint odor (groundwater encountered @ 10.5-ft.)	9 - 11	SS	9/15/17/18	2		
	SILTY SAND - gray, fine, wet	11 - 13	SS	4/8/8/10	BG		
12.5	CLAY - gray, plastic, some silt						
	END OF BORING @ 13-FEET						
15.0							
17.5							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SS - SPLITSPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: SB-4	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 8/24/89	DATE COMPLETED: 8/24/89	GROUND ELEV.: N/A FT.	MEASURING POINT ELEV: N/A FT.	WELL DEPTH: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	

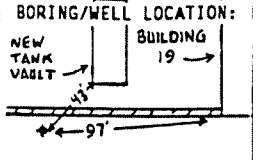


DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE AND ASPHALT - 1-FOOT				BG		NO WELL INSTALLED
	SAND - brown, medium grained, loose, trace fine gravel	1 - 3	SS	3/7/8/9	BG		
2.5		3 -5	SS	3/4/5/4	BG		
5.0	CLAY - brown/gray, plastic						
	SANDY CLAY - brown, trace fine gravel	5 - 7	SS	3/4/4/4	BG		
	SAND - light brown/gray, medium to coarse grained, moist, very firm, trace fine gravel						
7.5		7 - 9	SS	9/18/26/30	BG		
10.0	(groundwater encountered @ 10.5-ft.)	9 - 11	SS	8/14/18/25	BG		
		11 - 13	SS	4/7/3/6	BG		
12.5	CLAY - gray, moist, plastic, some silt						
15.0							
17.5							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SS - SPLITSPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: SB-5	BORING/WELL LOCATION: 
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 8/25/89	DATE COMPLETED: 8/25/89	GROUND ELEV.: N/A FT.	MEASURING POINT ELEV: N/A FT.	WELL DEPTH: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	

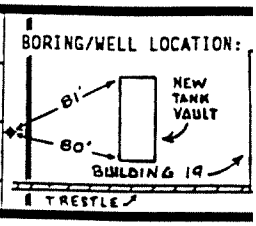
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE - 1-FOOT						NO WELL INSTALLED
	SAND - brown, medium grained, moist, loose, trace fine gravel	1 - 3	SS	3/5/6/7	BG		
2.5							
	SAND - brown, medium grained, moist, some clay, trace silt	3 - 5	SS	2/5/7/9	1		
5.0							
	SAND - light brown, medium grained, moist, loose, trace fine gravel	5 - 7	SS	4/5/7/8	10		
7.5							
	SAND - light brown/gray, medium to coarse grained, firm to very firm, "oily" appearance on soil	7 - 9	SS	9/15/20/23	100		
	(groundwater encountered @ 10-ft.)						
10.0		9 - 11	SS	8/18/20/23	200		
	CLAY - gray, moist, plastic, some silt	11 - 13	SS	3/6/8/9	BG		
12.5							
	END OF BORING @ 13-FEET						
15.0							
17.5							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SS - SPLITSPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: SB-6	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 8/25/89	DATE COMPLETED: 8/25/89	GROUND ELEV.: N/A FT.	MEASURING POINT ELEV: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



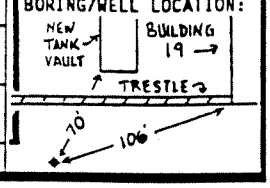
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE - 1-FOOT						NO WELL INSTALLED
	SANDY CLAY - brown, plastic, fine to medium sand, some silt	1 - 3	SS	3/5/7/6	BG		
2.5	SAND - brown, fine to medium grained, moist, some clay, trace fine gravel	3 - 5	SS	6/8/10/11	3		
5.0	SAND - light brown, fine to medium grained, firm, slight odor	5 - 7	SS	6/8/13/17	30		
7.5		7 - 9	SS	8/13/18/23	30		
	SILTY SAND - gray/brown, fine, moist, firm						
10.0		9 - 11	SS	9/15/20/20	BG		
	(groundwater encountered @ 12-ft.)						
		11 - 13	SS	4/5/5/3	BG		
12.5	CLAY - gray, plastic, some silt						
	END OF BORING AT 13-FEET						
15.0							
17.5							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SS - SPLITSPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: SB-7	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 8/25/89	DATE COMPLETED: 8/25/89	GROUND ELEV.: N/A FT.	MEASURING POINT ELEV: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY

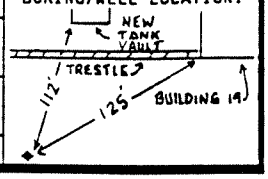


DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE - 1-FOOT						NO WELL INSTALLED
	SILTY SAND - gray, fine, moist, some clay, trace fine gravel, slight odor	1 - 3	SS	5/8/8/8	BG		
2.5		3 - 5	SS	8/13/15/10	20		
5.0	SAND - light brown, medium grained, moist, firm, trace fine gravel	5 - 7	SS	4/6/13/18	15		
7.5	SAND - light brown/gray, medium to coarse grained, very firm, trace fine gravel, odor present	7 - 9	SS	15/20/27/35	20		
	SILTY SAND - gray, fine, moist						
10.0	SAND - gray/brown, medium to coarse grained, firm, moist, trace fine gravel (groundwater encountered @ 10.5-ft.)	9 - 11	SS	9/15/25/15	40		
		11 - 13	SS	10/15/9/6	50		
12.5	CLAY - GRAY, plastic, some silt						
	END OF BORING @ 13-FEET						
15.0							
17.5							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SS - SPLITSPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: SB-8	BORING/WELL LOCATION: 
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 15 FT.
DATE STARTED: 8/25/89	DATE COMPLETED: 8/25/89	GROUND ELEV.: N/A FT.	MEASURING POINT ELEV: N/A FT.
WELL DEPTH: N/A FT.			
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE - 1-FOOT						NO WELL INSTALLED
	SAND - gray, fine, moist, some clay, trace silt	1 - 3	SS	9/15/13/13	BG		
2.5		3 - 5	SS	7/10/13/14	BG		
	SAND - brown, interbedded silt, moist						
5.0		5 - 7	SS	3/3/3/3	BG		
7.5		7 - 9	SS	3/3/2/1	BG		
	(groundwater encountered @ 8-ft.)						
10.0		9 - 11	SS	2/2/1/2	BG		
	SAND - brown, medium to coarse grained, interbedded clay, wet	11 - 13	SS	4/3/4/4	BG		
12.5							
	SAND - brown, medium grained, some clay, wet	13 - 15	SS	4/2/3/2	BG		
15.0							
	END OF BORING @ 15-FEET						

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SS - SPLITSPOON

AREA 18

SALVAGE BUILDING TANK FARM

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-07	PROJECT NAME: GM - SALVAGE BUILDING	BORING/WELL DESIGNATION: MW-509	BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 17 FT.
DATE STARTED: 08-06-91	DATE COMPLETED: 08-06-91	GROUND ELEV.: 98.8 FT.	MEASURING POINT ELEV: 100.61 FT.
			WELL DEPTH: 16.5 FT.
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY

SEE FIGURE 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	GRAVEL					WELL COMPLETE WITH AN ABOVE GROUND, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE	
	SAND - brown, medium-coarse, loose-very firm, dry, trace fine gravel	1-3'	SS	3-4-3-4	BG		
2.5	2" layer of dry fine sand at 3 feet						
		3-5'	SS	3-1-4-9	BG		
5						CEMENT GROUT	
		5-7'	SS	4-7-11-12	BG		
						2-INCH, SCHEDULE-40 PVC RISER PIPE	
7.5		7-9'	LAB	4-13-14-18	BG		
	CLAY - brown-gray, moderately plastic, some silt					BENTONITE PELLETS	
10		9-11'	SS	2-4-7-16	BG		
	1" silty sand layer at 10.9 feet						
	(groundwater encountered at 11 feet) SAND - brown, fine, dense, moist-wet, some silt, trace gravel					SAND FILTER PACK	
		11-13'	LAB	7-24-34-61	BG		
12.5						2-INCH, 10-SLOT, PVC WELL SCREEN	
		13-15'	SS	4-17-26-31	BG		
15							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM (CONT'D)

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-07	PROJECT NAME: GM - SALVAGE BUILDING	BORING/WELL NUMBER: MW-509	BOREHOLE DEPTH: 17

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
15	SAND (continued)	15-17'	SS	9-18-9-8	BG		
	CLAY - gray, moderately plastic					NATIVE CLAY	
17.5	END OF BORING AT 17 FEET						

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-07	PROJECT NAME: GM - SALVAGE BUILDING		BORING/WELL DESIGNATION: MW-510	BORING/WELL LOCATION: SEE FIGURE 3-1
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS		BOREHOLE SIZE: 10 IN. / BOREHOLE DEPTH: 15 FT.	
DATE STARTED: 08-06-91 / DATE COMPLETED: 08-06-91	GROUND ELEV.: 99.3 FT.	MEASURING POINT ELEV: 98.87 FT.	WELL DEPTH: 13.2 FT.	
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0						WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND - brown, medium grained, firm-very firm, dry, trace silt and fine gravel	1-3'	SS	11-12-10-7	BG	
2.5						CHUNK BENTONITE
	trace clay at 3.5 feet	3-5'	SS	3-4-9-14	BG	2-INCH, SCHEDULE-40 PVC RISER PIPE
5	SAND - brown, fine-coarse, very firm-dense, dry, trace fine gravel	5-7'	LAB	10-17-26-29	BG	BENTONTITE PELLETS
7.5		7-9'	LAB	6-12-10-11	BG	SAND FILTER PACK
	CLAY - brown-gray, slightly plastic, very stiff, silty					
10		9-11'	SS	3-7-12-13	BG	
	(groundwater encountered at 11 feet) SILTY SAND - gray, fine, very dense, wet	11-13'	SS	5-33-28-34	BG	2-INCH, 10-SLOT, PVC WELL SCREEN
12.5						
	CLAY - gray, slightly plastic, very stiff, silty	13-15'	SS	2-6-12-14	BG	NATIVE CLAY
15	END OF BORING AT 15 FEET					

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 5883-07	PROJECT NAME: GM - SALVAGE BUILDING		BORING/WELL DESIGNATION: MW-511	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 18 FT.	SEE FIGURE 3-1
DATE STARTED: 08-05-91	DATE COMPLETED: 08-05-91	GROUND ELEV.: 98.8 FT.	MEASURING POINT ELEV: 98.37 FT.	WELL DEPTH: 16.5 FT.
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	ASPHALT					WELL COMPLETE WITH A FLUSH MOUNT, LOCKABLE, PROTECTIVE COVER, SET IN CONCRETE
	SAND - black, medium-coarse, trace gravel, asphalt, wood	0.5-2'	SS	10-18-15	BG	
2.5	SAND - brown, medium-coarse, loose-firm, trace clay and fine gravel	2-4'	SS	5-5-5-10	BG	BENTONITE SEAL
5		4-6'	LAB	3-7-10-22	3-5	
	SAND - brown, coarse, dense, some fine gravel	6-8'	LAB	10-13-22-18	2	
7.5		8-10'	SS	3-7-9-11	BG	
	CLAY - gray-brown, slightly plastic, very stiff, trace silt					
10		10-12'	SS	4-8-12-22	BG	2-INCH, SCHEDULE-40 PVC RISER PIPE
	(groundwater at 11.8 feet) SILTY SAND - gray, fine, very firm-dense, moist-wet					SAND FILTER PACK
12.5		12-14'	SS	9-17-21-25	BG	2-INCH, 10-SLOT, PVC WELL SCREEN
15		14-16'	SS	5-12-17-19	BG	
	CLAY - gray, moderately plastic, very stiff	16-18'	SS	3-7-13-15	BG	NATIVE CLAY
17.5						

WELL DATA

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

PROJECT NO.: 5883-07	PROJECT NAME: GM - SALVAGE BUILDING	BORING/WELL NUMBER: MW-511	BOREHOLE DEPTH: 18 FT.

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
17.5	CLAY (continued)						
	END OF BORING AT 18 FEET						
20							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-07	PROJECT NAME: GM - SALVAGE BUILDING		BORING/WELL DESIGNATION: SB-10	BORING/WELL LOCATION: SEE FIGURE 3-1
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGERS		BOREHOLE SIZE: 8 IN. / BOREHOLE DEPTH: 17 FT.	
DATE STARTED: 08-06-91 / DATE COMPLETED: 08-06-91	GROUND ELEV.: 98.8 FT.	MEASURING POINT ELEV: N/A FT.	WELL DEPTH: N/A FT.	
RIG: CME-45	DRILLER: P. LIBBY	HELPER: D. BOND	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE GROUTED TO SURFACE WITH CEMENT-BENTONITE GROUT	NO WELL INSTALLED
	SAND - dark brown, medium-coarse, loose-dense, trace fine gravel and clay	1-3'	SS	17-17-15-12	BG		
2.5		3-5'	SS	7-5-3-4	BG		
5		5-7'	SS	3-5-11-20	1		
	SAND - light brown, fine-medium, firm-very firm, moist	7-9'	SS	7-12-13-11	BG		
7.5							
	CLAY - brown-gray, moderately plastic, very stiff, very moist, some silt	9-11'	LAB	4-8-12-13	3-13		
10							
	(groundwater encountered at 12 feet)	11-13'	LAB	19-23-30-54	5-7		
12.5	SILTY SAND - gray, fine, hard, wet, little clay						
		13-15'	SS	27-35-37-34	BG		
15							
	CLAY - gray, moderately plastic, trace sand	15-17'	SS	4-8-11-15	BG		
	END OF BORING AT 17 FEET						
17.5							

NOTES: SS - SPLIT-SPOON SAMPLE
LAB - SPLIT-SPOON SAMPLE SUBMITTED FOR LAB ANALYSIS
BG - BACKGROUND
N/A - NOT APPLICABLE

AREA 19

BAY C-40

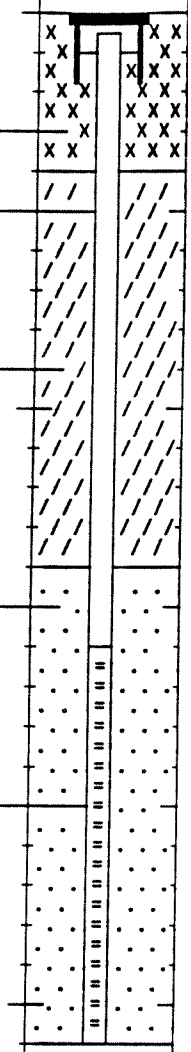
BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40		BORING/WELL DESIGNATION: C-40/MW-1	BORING/WELL LOCATION: see Figure 3-1
DRILLING CONTRACTOR: PSI		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 8/12/92	DATE COMPLETED: 8/18/92	GROUND ELEV.: 100.23 FT.	MEASURING POINT ELEV: 100.00 FT.	WELL DEPTH: 13 FT.
RIG: CME-45	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKABLE WELL CAP
	SAND/FILL - gray, coarse-medium grained, no apparent odor					CONCRETE
2.5	CONCRETE					2-INCH, SCHEDULE-40, FLUSH THREADED, PVC RISER PIPE
						BENTONITE
5	SAND/FILL - pale yellow gray-gray, coarse-medium grained, trace silt, trace gravel, medium dense, dry, no apparent odor	5-7'	SS	5-10-16-24	0	
7.5	SAND - gray, fine-medium grained, trace gravel, medium dense, dry-moist, slight odor present	7-9'	SS	9-12-18-22	0	SILICA SAND PACK
10	SAND - gray, fine grained, trace medium sand, medium dense, wet, slight odor present	9-11'	SS	4-10-12-18	0	2-INCH, SCHEDULE-40, FLUSH THREADED, PVC WELL SCREEN
12.5	CLAY - gray, some silt, firm, wet, plastic, no apparent odor	11-13'	SS	2-2-4-5	0	
	END OF BORING AT 13 FEET					
15						

WELL DATA



NOTES: 1. SS - SPLIT-SPOON SAMPLES.
2. P.I.METER - SAMPLES SCREENED WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40	BORING/WELL DESIGNATION: C-40/MW-2		BORING/WELL LOCATION: see Figure 3-1
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 12.5 FT.	
DATE STARTED: 8/12/92	DATE COMPLETED: 8/12/92	GROUND ELEV.: 100.54 FT.	MEASURING POINT ELEV: 100.18 FT.	WELL DEPTH: 12 FT.
RIG: CME-45	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED WITH A FLUSH-MOUNT WELL COVER AND LOCKABLE WELL CAP	
	SAND/FILL - brown-dark brown, coarse-medium grained, dry, no apparent odor					CONCRETE	
2.5						2-INCH, SCHEDULE-40, FLUSH THREADED, PVC RISER PIPE	
						BENTONITE	
5	SAND/FILL - yellow brown, coarse-medium grained, some gravel, dry, no apparent odor						
7.5	SAND - gray, medium grained, moist, no apparent odor					SILICA SAND PACK	
10						2-INCH, SCHEDULE-40, FLUSH THREADED, PVC WELL SCREEN	
12.5	CLAY - gray, plastic						
	END OF BORING AT 12.5 FEET						
15							

NOTES: 1. P.I.METER - SAMPLES SCREENED WITH A PHOTOIONIZATION METER.
2. DESCRIPTIONS LOGGED FROM SOIL CUTTINGS DURING AUGERING.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40		BORING/WELL DESIGNATION: HA-1	BORING/WELL LOCATION: see Figure 3-1
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER		BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 2 FT.
DATE STARTED: 1/24/92	DATE COMPLETED: 1/24/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG:	DRILLER: S. MURRAY	HELPER: J. BELL	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND/FILL - brown, medium grained, some gravel, trace silt, dry, no apparent odor						
	CONCRETE DEBRIS					HAND AUGER REFUSAL AT 2 FEET, ATTEMPTS TO BYPASS UNSUCCESSFUL	
2.5	END OF BORING AT 2 FEET						
5							

NOTES: 1. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40	BORING/WELL DESIGNATION: HA-2	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 1.5 FT.
DATE STARTED: 1/24/92	DATE COMPLETED: 1/24/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
RIG:	DRILLER: J. BELL	HELPER: S. MURRAY	LOGGED BY: S. MURRAY

see Figure 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND/FILL - brown, medium grained, some fragments of rock, wood, and concrete						
	CONCRETE DEBRIS					HAND AUGER REFUSAL AT 1.5 FEET, ATTEMPTS TO BYPASS UNSUCCESSFUL	
2.5	END OF BORING AT 1.5 FEET						
5							

NOTES: 1. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40		BORING/WELL DESIGNATION: HA-3	BORING/WELL LOCATION: see Figure 3-1
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER		BOREHOLE SIZE: 3 IN. / BOREHOLE DEPTH: 1.5 FT.	
DATE STARTED: 1/24/92 / DATE COMPLETED: 1/24/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	
RIG:	DRILLER: S. MURRAY	HELPER: J. BELL	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND/FILL - brown-gray, medium grained, some gravel						
	CONCRETE DEBRIS END OF BORING AT 1.5 FEET					HAND AUGER REFUSAL AT 1.5 FEET, ATTEMPTS TO BYPASS UNSUCCESSFUL	
2.5							
5							

NOTES: 1. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40	BORING/WELL DESIGNATION: HA-4		BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 1.3 FT.	see Figure 3-1
DATE STARTED: 7/16/92	DATE COMPLETED: 7/16/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG:	DRILLER: T. WINEBRENNER	HELPER: S. MURRAY	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	CONCRETE						
	SAND/FILL - light brown, medium grained, some gravel					HAND AUGER REFUSAL AT 1.3 FEET, ATTEMPTS TO CORE FURTHER WERE UNSUCCESSFUL	
	CONCRETE						
	END OF BORING AT 1.3 FEET						
2.5							
5							

NOTES: 1. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40	BORING/WELL DESIGNATION: HA-4A	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN. / BOREHOLE DEPTH: 7 FT.	see Figure 3-1
DATE STARTED: 7/16/92	DATE COMPLETED: 7/16/92	GROUND ELEV.: - - FT. / MEASURING POINT ELEV: - - FT. / WELL DEPTH: - - FT.	
RIG:	DRILLER: T. WINEBRENNER	HELPER: S. MURRAY	LOGGED BY: S. MURRAY

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND/FILL - dark brown, medium-coarse grained, trace silt, some gravel and wood fragments						
2.5	SAND - yellow brown, medium grained, some clay, trace gravel, no apparent odor						
5	SAND - yellow brown, medium-coarse grained, some clay, trace gravel, no apparent odor						
	SAND - light brown, fine grained, some silt, wet, no apparent odor	6.5-7'	HA		0		
7.5	END OF BORING AT 7 FEET						
10							

NOTES: 1. HA - HAND AUGER SAMPLE TAKEN FOR REFERENCE PURPOSES.
2. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40		BORING/WELL DESIGNATION: HA-5	BORING/WELL LOCATION: see Figure 3-1
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER		BOREHOLE SIZE: 3 IN. / BOREHOLE DEPTH: 7 FT.	
DATE STARTED: 7/16/92	DATE COMPLETED: 7/16/92	GROUND ELEV.: - - FT. / MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	
RIG:	DRILLER: T. WINEBRENNER	HELPER: S. MURRAY	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND - gray-brown, medium grained, trace gravel						
	GRAVELLY CLAY - dark gray, some concrete debris						
2.5	SAND - dark gray-brown, medium grained, trace gravel and clay, no apparent odor						
	SAND - pale brown, medium grained, no apparent odor						
5	SAND - light brown, fine grained, some silt, dry-wet, no apparent odor						
	groundwater at 6.5 feet	6.5-7'	HA		0		
	END OF BORING AT 7 FEET						
7.5							
10							

NOTES: 1. HA - HAND AUGER SAMPLE TAKEN FOR REFERENCE PURPOSES.
2. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40		BORING/WELL DESIGNATION: HA-6	BORING/WELL LOCATION: see Figure 3-1
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 8 FT.	
DATE STARTED: 7/17/92	DATE COMPLETED: 7/17/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG:	DRILLER: C. KIELTY	HELPER: S. MURRAY	LOGGED BY: S. MURRAY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
2.5	SAND - gray brown, medium-coarse grained, some gravel, trace clay, odor present at 4.5 feet						
5							
7.5	SAND - light brown, fine grained, some silt, damp-wet, odor present groundwater at 7.5 feet	7.5-8'	HA		0		
	END OF BORING AT 8 FEET						
10							

NOTES: 1. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.
2. HA - HAND AUGER SAMPLE TAKEN FOR REFERENCE PURPOSES.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40	BORING/WELL DESIGNATION: HA-7		BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 8.5 FT.	see Figure 3-1
DATE STARTED: 8/7/92	DATE COMPLETED: 8/7/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG:	DRILLER: T. WINEBRENNER	HELPER: C. KIELTY	LOGGED BY: C. KIELTY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	CONCRETE						
	SAND - dark brown, medium-fine grained, dry, no apparent odor						
2.5							
	SAND - dark brown, medium-fine grained, dark brown-black staining, dry, no apparent odor	3.5-5.5'	REF		9		
5							
	SAND - light brown, medium-fine grained, dry-damp, no apparent odor						
	SAND - brown, medium grained, trace-some fine gravel, wet, odor present						
7.5							
	END OF BORING AT 8.5 FEET						
10							

NOTES: 1. REF - REFERENCE SAMPLE COLLECTED.
2. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40		BORING/WELL DESIGNATION: HA-8	BORING/WELL LOCATION: see Figure 3-1
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER		BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 8.5 FT.
DATE STARTED: 8/7/92	DATE COMPLETED: 8/7/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.
RIG:	DRILLER: T. WINEBRENNER	HELPER: C. KIELTY	LOGGED BY: C. KIELTY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND - brown, medium-fine grained, some large gravel, dry, no apparent odor						
2.5	SAND - reddish brown, medium-fine grained, trace-some fine gravel, dry, no apparent odor						
5	SAND - light brown, medium-fine grained, trace fine gravel, dry-damp, no apparent odor						
7.5	SAND - brown, medium-coarse grained, trace-some fine gravel, no apparent odor	7-8.5'	HA		0		
	END OF BORING AT 8.5 FEET						
10							

NOTES: 1. HA - HAND AUGER SAMPLE SUBMITTED TO LABORATORY FOR ANALYSIS.
2. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40	BORING/WELL DESIGNATION: HA-9	BORING/WELL LOCATION:
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 2 FT.
DATE STARTED: 8/7/92	DATE COMPLETED: 8/7/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
RIG:	DRILLER: T. WINEBRENNER	HELPER: C. KIELTY	LOGGED BY: C. KIELTY

see Figure 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	CONCRETE				(ppm)	BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND/FILL - brown, medium-fine grained, dry, no apparent odor					HAND AUGER REFUSAL AT 1.5 FEET, FURTHER CORING OF CONCRETE WAS UNSUCCESSFUL	
	CONCRETE						
2.5	END OF BORING AT 2 FEET						
5							

NOTES: 1. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40		BORING/WELL DESIGNATION: HA-10	BORING/WELL LOCATION: see Figure 3-1
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER		BOREHOLE SIZE: 3 IN. / BOREHOLE DEPTH: 8.5 FT.	
DATE STARTED: 8/7/92 / DATE COMPLETED: 8/7/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.	WELL DEPTH: - - FT.	
RIG:	DRILLER: T. WINEBRENNER	HELPER: C. KIELTY	LOGGED BY: C. KIELTY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND - dark brown, medium-fine grained, trace clay, dry, no apparent odor						
2.5	SAND - brown, medium-fine grained, trace fine gravel, dry-wet, no apparent odor						
5							
7.5	groundwater at 8 feet						
	END OF BORING AT 8.5 FEET						
10							

NOTES: 1. P.I. METER - SAMPLE SCREENED WITH A PHOTOIONIZATION METER.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40	BORING/WELL DESIGNATION: SB-1	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW-STEM AUGER	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 2 FT.
DATE STARTED: 2/14/92	DATE COMPLETED: 2/14/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
WELL DEPTH: - - FT.			
RIG: CME-45	DRILLER: M. BOND	HELPER: A. BABB	LOGGED BY: S. MURRAY

see Figure 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)	BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	CONCRETE						
	SAND/FILL		SS	5-9-10-200			
	CONCRETE					SPLIT-SPOON REFUSAL AT 2 FEET, ATTEMPTS TO AUGER THROUGH UNSUCCESSFUL	
2.5	END OF BORING AT 2 FEET						
5							

NOTES: 1. P.I. METER - SAMPLE SCREENING WITH A PHOTOIONIZATION METER.
2. SS - SPLIT-SPOON SAMPLE.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-11	PROJECT NAME: GM POWERTRAIN - BAY C-40	BORING/WELL DESIGNATION: SB-2	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PSI	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 6.25 IN.	BOREHOLE DEPTH: 14 FT.
DATE STARTED: 8/7/92	DATE COMPLETED: 8/7/92	GROUND ELEV.: - - FT.	MEASURING POINT ELEV: - - FT.
RIG: CME-45	DRILLER: K. DANTES	HELPER: C. MCDONNELL	LOGGED BY: J. KRALIK

see Figure 3-1

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					BOREHOLE FILLED WITH CUTTINGS, CONCRETE TO GRADE	NO WELL INSTALLED
	SAND/FILL - dark gray-medium gray, medium-coarse grained, trace gravel, loose, dry, no apparent odor	0-2'	SS	0-0-3-18	0		
2.5		2-4'	SS	11-14-10-10	0.6		
	SILTY CLAY - black, some gravel, trace organic debris, stiff, damp, no apparent odor						
5		4-6'	SS	3-4-6-10	1.5		
	SAND - dark olive gray, coarse-medium grained, moist, no apparent odor						
	SAND - gray, fine-medium grained, dense, moist-wet, no apparent odor	6-8'	SS	6-14-17-20	0-1		
7.5							
	SAND - gray, fine-medium grained, some clay and silt, wet, no apparent odor	8-10'	SS	NR	0		
10							
	CLAY - gray, plastic, wet, no apparent odor	10-12'	SS	NR	0		
12.5		12-14'	SS	NR	0		
	END OF BORING AT 14 FEET						
15							

NOTES: 1. SS - SPLIT-SPOON SAMPLES.
2. NR - NOT RECORDED.

AREA 20

BAY Q-24

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: SB-401	BORING/WELL LOCATION: Q-24 ■ Q-25, 20', SB-401, 18', N, Q-24 ■ Q-25
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 11 FT.	
DATE STARTED: 2/25/89	DATE COMPLETED: 2/25/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 100 FT.	WELL DEPTH: N/A FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	WOOD BLOCK FLOOR (2.5-INCHES)						
	CONCRETE (1-FOOT)						
	SAND (FILL)- fine to medium, brown, dry, firm, trace fine gravel.	1.0-3.0	SS	4/9/11/11	BG		
2.5	SAND - medium grained, well sorted.						
	SAND - medium to coarse, light brown, moist, firm, poorly sorted, trace fine gravel.	3.0-5.0	SS	9/11/17/19	BG		
5.0		5.0-7.0	SS	7/14/18/22	BG	BOREHOLE GROUTED TO SURFACE	NO WELL INSTALLED
	(groundwater encountered 7 feet)						
7.5		7.0-9.0	SS	7/10/17/26	BG		
	SAND - medium to coarse, brown, wet, firm, poorly sorted, some fine gravel.	9.0-11	SS	15/15/20/10	BG		
10.0	CLAY - gray, moist, stiff, plastic, some silt.						
	END OF BORING AT 11-FEET						
12.5							
15.0							

NOTES: BG - BACKGROUND
SS - SPLIT SPOON
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: SB-402	BORING/WELL LOCATION: Q-24 ■ Q-25, 22', SB-402, 9', N, Q-24 ■ Q-25
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 11 FT.
DATE STARTED: 2/25/89	DATE COMPLETED: 2/25/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 100 FT.
WELL DEPTH: N/A FT.			
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY

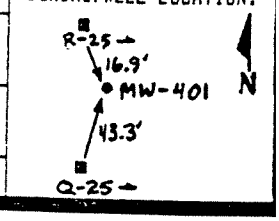
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	WOOD BLOCK FLOOR (2.5-INCHES)						
	CONCRETE (1-FOOT)						
	SAND (FILL)- medium grained, brown, dry, loose, some fine gravel.	1.0-3.0	SS	5/10/10/12	BG		NO WELL INSTALLED
2.5							
	SAND - medium grained, brown, dry, loose, some fine gravel.	3.0-5.0	SS	3/4/4/4	BG		
5.0							
	SAND - medium, light brown, dry, loose, some fine gravel.	5.0-7.0	SS	7/15/18/22	BG	BOREHOLE GROUTED TO SURFACE	
	(groundwater encountered @ 7 feet)						
7.5	SAND - fine to medium, gray to brown, wet, firm, trace fine gravel.	7.0-9.0	SS	9/11/19/22	BG		
	SAND - fine, silty.						
	SAND - medium to coarse, brown, wet.						
10.0		9.0-11	SS	6/8/9/8	BG		
	CLAY - gray, moist, stiff, some silt						
	END OF BORING AT 11-FEET						
12.5							
15.0							

NOTES: BG - BACKGROUND
SS - SPLIT SPOON
N/A - NOT APPLICABLE

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: MW-401	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 11 FT.
DATE STARTED: 2/26/89	DATE COMPLETED: 2/26/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.31 FT.	WELL DEPTH: 10 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS
0	WOOD BLOCK FLOOR (2.5-INCHES) CONCRETE (1.5-FEET)				(ppm)	WELL FINISHED BELOW GRADE W/A 2-INCH LOCKABLE PVC CAP CEMENT
2.5	SANDY CLAY (FILL)- brown, dry, firm, some fine gravel.	1.5-3.0	SS	6/7/9/10	BG	BENTONITE SEAL
5.0	SAND - medium grained, orange brown, dry, firm, well sorted.	3.0-5.0	SS	9/10/13/15	BG	TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING
	SAND - medium grained, light brown, moist, firm, trace fine gravel. (groundwater encountered @ 7 feet)	5.0-7.0	SS	7/9/19/20	BG	SAND FILTER PACK
7.5	SAND - medium-coarse, brown, wet, very firm, some fine gravel.	7.0-9.0	SS	7/14/20/22	BG	TWO-INCH, 10-SLOT PVC WELL SCREEN
10.0	SILTY SAND - fine, gray, wet, firm.	9.0-11	SS	6/3/4/4	BG	
	CLAY - gray, moist, firm, plastic, some silt. END OF BORING AT 11-FEET					
12.5						
15.0						

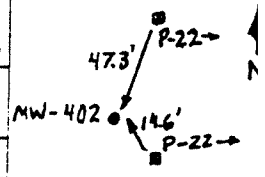
WELL DATA

NOTES: BG - BACKGROUND
SS - SPLIT SPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: MW-402	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8.0 IN.	BOREHOLE DEPTH: 11 FT.	
DATE STARTED: 2/26/89	DATE COMPLETED: 2/26/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.52 FT.	WELL DEPTH: 10 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



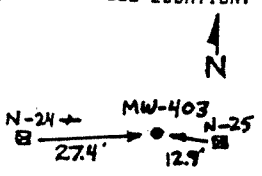
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0					(ppm)		
	WOOD BLOCK FLOOR (2.5-INCHES)					WELL FINISHED BELOW GRADE W/A 2-INCH LOCKABLE PVC CAP	
	CONCRETE (1-FOOT)					CEMENT	XX XXX
	SAND (FILL)- fine to medium, light brown, dry, firm, poorly sorted, some fine gravel.	1.0-3.0	SS	7/10/15/20	BG	BENTONITE SEAL	/// // /// /// ///
2.5							
	SAND - fine to medium, brown, moist, very firm, poorly sorted, trace fine gravel.	3.0-5.0	SS	14/20/24/22	BG	TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	...
5.0							
		5.0-7.0	SS	7/12/14/20	BG	SAND FILTER PACK	==
	(groundwater encountered @ 7 feet)						
	SAND - fine grained, gray-brown, wet, firm , some silt.						
7.5		7.0-9.0	SS	7/13/16/20	BG	TWO-INCH 10-SLOT PVC WELL SCREEN	==
10.0		9.0-11	SS	6/5/4/6	BG		
	CLAY - gray, moist, firm, plastic, some silt.						
	END OF BORING AT 11 FEET						
12.5							
15.0							

NOTES: BG - BACKGROUND
SS - SPLIT SPOON

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5893-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: MW-403	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 11 FT.
DATE STARTED: 2/26/89	DATE COMPLETED: 2/26/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.45 FT.	WELL DEPTH: 11 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	WOOD BLOCK FLOOR (2.5-INCHES) CONCRETE (1-FOOT)					WELL FINISHED BELOW GRADE W/A 2-INCH LOCKABLE PVC CAP
	SANDY CLAY (FILL)- orange-brown, dry, firm, poorly sorted, trace fine gravel.	1.0-3.0	SS	5/10/11/12	BG	CEMENT
2.5	SAND - medium grained, light brown, moist, loose, trace fine gravel.	3.0-5.0	SS	3/7/9/15	BG	BENTONITE SEAL
5.0	SAND - medium-coarse, light brown, moist, firm, poorly sorted, trace fine gravel	5.0-7.0	SS	13/13/17/20	BG	TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING
	(groundwater encountered @ 7 feet)					SAND FILTER PACK
7.5	SAND - medium-coarse, brown, wet, very firm, poorly sorted, some fine gravel.	7.0-9.0	SS	15/10/15/18	BG	TWO-INCH, 10-SLOT PVC WELL SCREEN
	SILTY SAND - fine, gray to brown, wet, very firm.					
10.0		9.0-11	SS	8/10/8/9	BG	
	CLAY - gray, moist, stiff, plastic, some silt					
	END OF BORING AT 11-FEET					
12.5						
15.0						

NOTES: BG - BACKGROUND
SS - SPLIT SPOON

AREA 21

BAY E-28

Well No. MW-1

DRILLING LO

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 9/9/89 Total Depth 13.0' Diameter 10"

Surface Elevation 99.53' Water depth (init.) 8.0' 24-hrs. N/A

Screen: Dia. 2" Length 10' Slot Size 0.010"

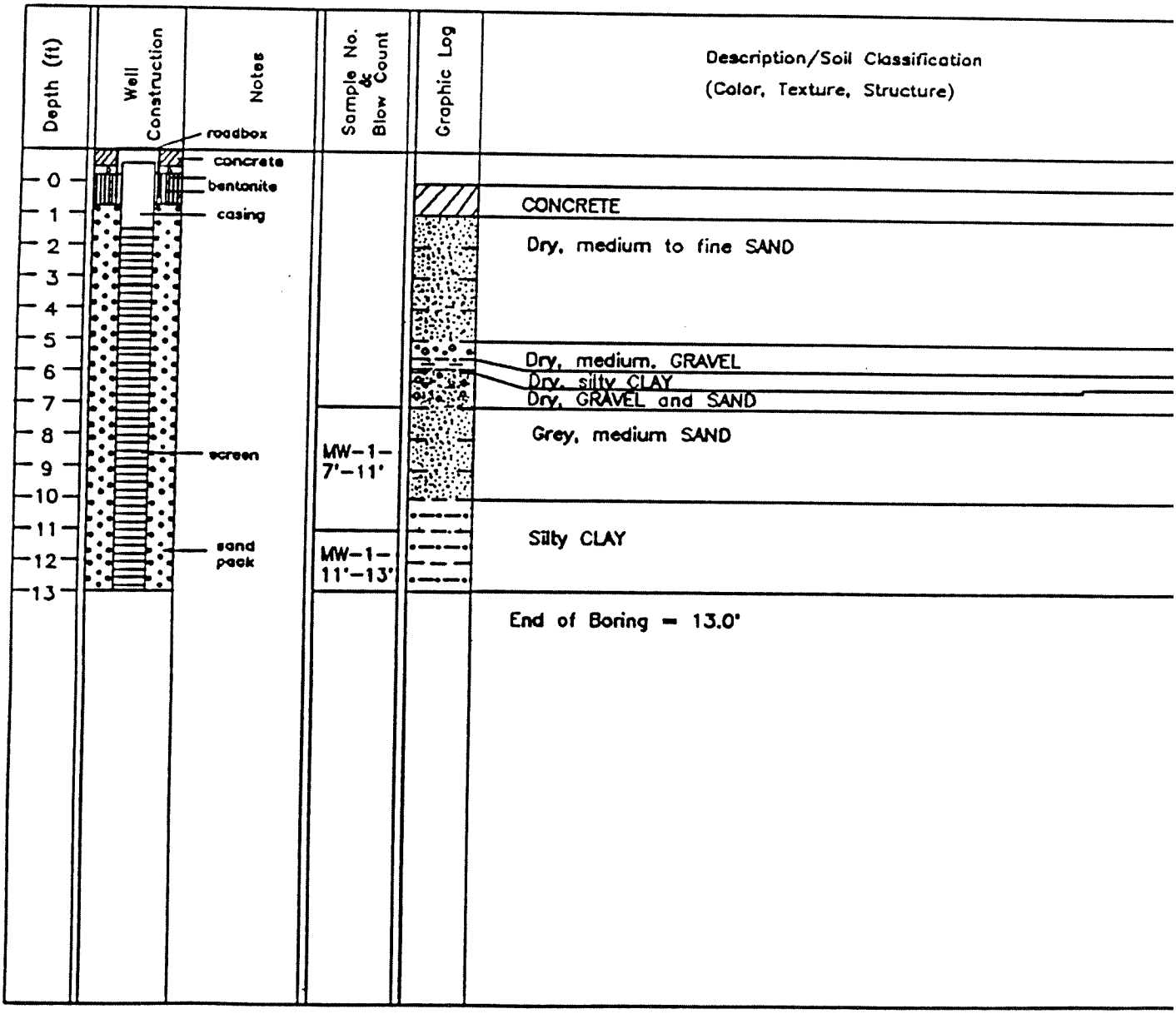
Casing: Dia. 2" Length 2.5' Type PVC

Drilling Company PSI Drilling Method HOLLOW STEM AUGER

Driller P. LIBBY Log by GERDENICH Samping Method SPLIT SPOON

Sketch Map

Notes
SEE SITE MAP FOR LOCATION



GROUNDWATER TECHNOLOGY, INC.

Well No. MW-2

DRILLING L

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 9/9/89 Total Depth 13.0' Diameter 10"

Surface Elevation 99.70' Water depth (Wtl.) 8.5' 24-hrs. N/A

Screen: Dia. 2" Length 10.0' Slot Size 0.010"

Casing: Dia. 2" Length 2.5' Type PVC

Drilling Company PSI Drilling Method HOLLOW STEM AUGER

Driller P. LIBBY Log by GERDENICH Sampling Method SPLIT SPOON

Sketch Map

Notes

SEE SITE MAP FOR LOCATIO

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0		roadbox			
1		concrete			CONCRETE
2		bentonite			
3		casing			Damp, coarse to medium SAND with little fine gravel
4					
5					
6					Damp, silty, CLAY
7					
8					Grey, medium to coarse, silty CLAY
9			MW-2- 7'-11'		
10		screen			Grey, fine SAND
11		sand pack			
12			MW-2- 11'-13'		Grey, silty CLAY
13					End of Boring = 13'

GROUNDWATER TECHNOLOGY, INC.

Well No. MW-3

DRILLING L

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 9/11/89 Total Depth 13.0' Diameter 10"

Surface Elevation 99.66' Water depth (Init.) 11.7' 24-hrs. N/A

Screen: Dia. 2" Length 10' Slot Size 0.010"

Casing: Dia. 2" Length 2.5' Type PVC

Drilling Company PSI Drilling Method HOLLOW STEM AUGER

Driller P. LIBBY Log by GERDENICH Sampling Method SPLIT SPOON

Sketch Map

Notes
SEE SITE MAP FOR LOCATIC

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0		roadbox, concrete, bentonite, casing			CONCRETE
1–5					Dry, coarse to medium SAND and GRAVEL
5–6					Tan,dry silty CLAY
6–7					Dry, medium SAND
7–11		screen	MW-3 7'-11'		Coarse to medium SAND; Discolored
11–12		sand pack	MW-3 11'-13'		Grey, silty CLAY
13					End of Boring = 13.0'

GROUNDWATER TECHNOLOGY, INC.

Well No. SB-1

DRILLING L

Project: GM HYDRA-MATIC BAY E-28 | Owner: SAME

Location: YPSILANTI, MICHIGAN | Project Number: 400-312-9401

Date Drilled: 7/27/89 | Total Depth: N/A | Diameter: N/A

Surface Elevation: N/A | Water depth (Init.): N/A | 24-hrs.: N/A

Screen: Dia.: N/A | Length: N/A | Slot Size: N/A

Casing: Dia.: N/A | Length: N/A | Type: N/A

Drilling Company: N/A | Drilling Method: HAND AUGER

Driller: HATHCOCK | Log by: GERDENICH | Sampling Method: HAND AUGER

Sketch Map

Notes
SEE SITE MAP FOR LOCATION

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					
1					CONCRETE
2					Dry, medium to fine SAND
3			SB-1-3		
4					
5					
6					Dry, medium, GRAVEL
7			SB-1-7		Dry, silty CLAY Dry, GRAVEL and SAND End of Boring = 7'

GROUNDWATER TECHNOLOGY, IN

Well No. SB-2

DRILLING I

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 7/27/89 Total Depth N/A Diameter 4"

Surface Elevation N/A Water depth (Init.) N/A 24-hrs. N/A

Screen: Dia. N/A Length N/A Slot Size N/A

Casing: Dia. N/A Length N/A Type N/A

Drilling Company GTI Drilling Method HAND AUGER

Driller HATHCOCK Log by GERDENICH Sampling Method HAND AUGER

Sketch Map

Notes

SEE SITE MAP FOR LOCAT

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					
1					CONCRETE
2					
3					Damp, coarse to medium SAND with little fine gravel
4			SB-2-3		
5					Damp, silty, CLAY
6			SB-2-6		End of Boring = 6.0'

GROUNDWATER TECHNOLOGY, INC

Well No. SB-3

DRILLING L(

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 7/27/89 Total Depth N/A Diameter 4"

Surface Elevation N/A Water depth (Init.) N/A 24-hrs. N/A

Screen: Dia. N/A Length N/A Slot Size N/A

Casing: Dia. N/A Length N/A Type N/A

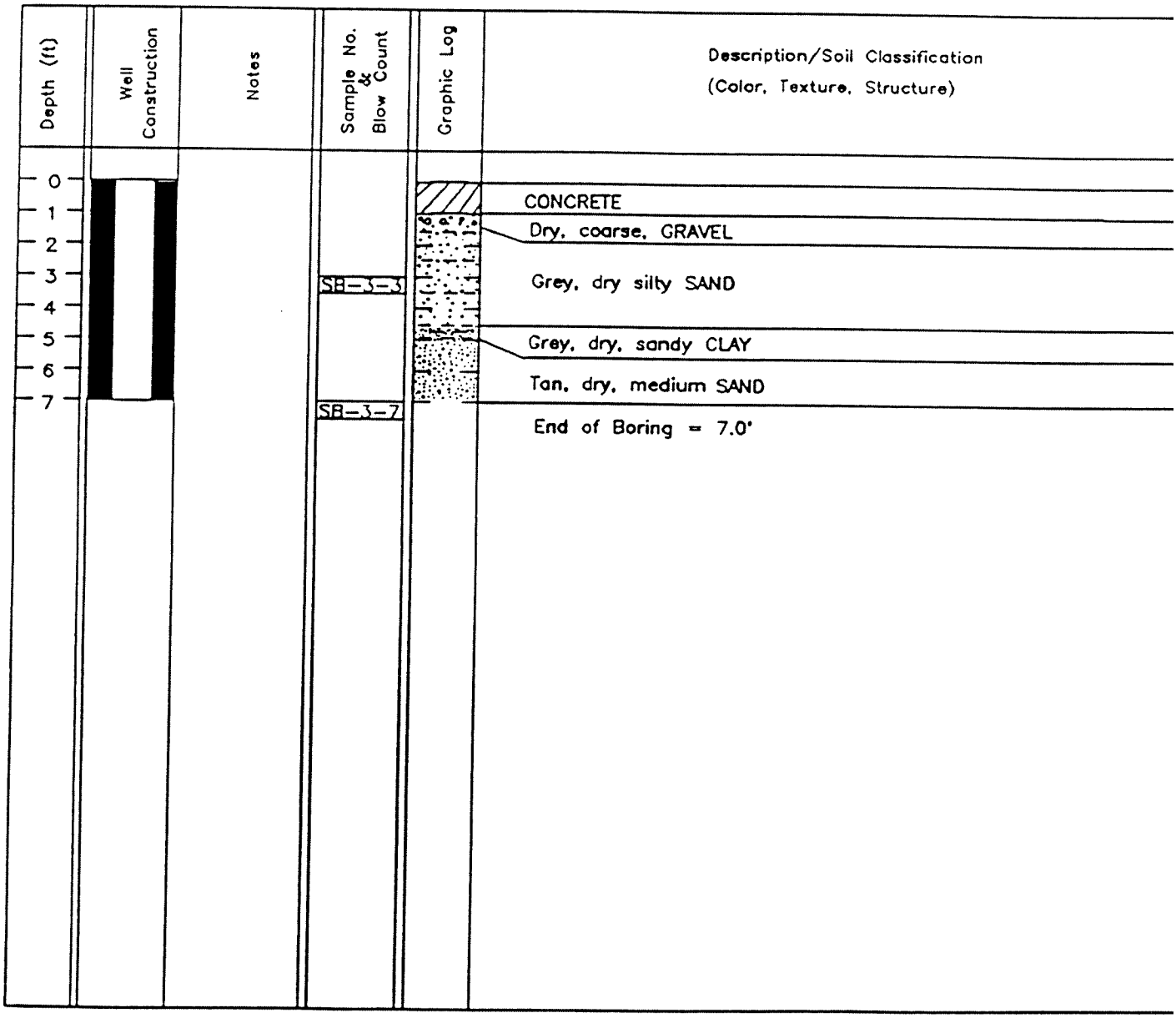
Drilling Company GTI Drilling Method HAND AUGER

Driller HATHCOCK Log by GERDENICH Sampling Method HAND AUGER

Sketch Map

Notes

SEE SITE MAP FOR LOCATIOI



GROUNDWATER TECHNOLOGY, INC.

Well No. SB-4

DRILLING L

Project: GM HYDRA-MATIC BAY E-28 Owner: SAME

Location: YPSILANTI, MICHIGAN Project Number: 400-312-9401

Date Drilled: 7/27/89 Total Depth: N/A Diameter: 4"

Surface Elevation: N/A Water depth (init.): N/A 24-hrs.: N/A

Screen: Dia.: N/A Length: N/A Slot Size: N/A

Casing: Dia.: N/A Length: N/A Type: N/A

Drilling Company: GTI Drilling Method: HAND AUGER

Driller: HATHCOCK Log by: GERDENICH Sampling Method: HAND AUGER

Sketch Map

Notes: SEE SITE MAP FOR LOCATIO

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					
1					CONCRETE
2					Brown, coarse to medium SAND
3			SB-4-3		
4					Tan, dry, fine GRAVEL and medium SAND
5					
6					
7			SB-4-7		Damp, coarse to medium SAND
					End of Boring = 7.0'

GROUNDWATER TECHNOLOGY, INC.

Well No. SB-5

DRILLING L

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 7/27/89 Total Depth N/A Diameter N/A

Surface Elevation N/A Water depth (init.) N/A 24-hrs. N/A

Screen: Dia. N/A Length N/A Slot Size N/A

Casing: Dia. N/A Length N/A Type N/A

Drilling Company N/A Drilling Method HAND AUGER

Driller HATHCOCK Log by GERDENICH Samping Method HAND AUGER

Sketch Map

Notes
SEE SITE MAP FOR LOCATION

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					
1					CONCRETE
2					Grey, medium to fine SAND
3			SB 5-3		
4					Dry GRAVEL and medium SAND
5					
6					Dry, silty CLAY
7			SB 5-7		Dry, medium SAND
					End of Boring = 7'

GROUNDWATER TECHNOLOGY, INC

Well No. SB-6

DRILLING L

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 7/27/89 Total Depth N/A Diameter 4"

Surface Elevation N/A Water depth (init.) N/A 24-hrs. N/A

Screen: Dia. N/A Length N/A Slot Size N/A

Casing: Dia. N/A Length N/A Type N/A

Drilling Company GTI Drilling Method HAND AUGER

Driller HATHCOCK Log by GERDENICH Samping Method HAND AUGER

Sketch Map

Notes

SEE SITE MAP FOR LOCATIC

Depth (ft)	Well Construction	Notes	Sample No. & Blow Count	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					
1					CONCRETE
2					Dry, coarse to medium SAND and GRAVEL
3			SB-6-3		
4					
5					
6					Tan, dry, silty CLAY
7			SB-3-7		Dry, medium SAND
					End of Boring = 7.0'

GROUNDWATER TECHNOLOGY, INC.

Well No. SB-7

DRILLING L

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 7/27/89 Total Depth N/A Diameter 4"

Surface Elevation N/A Water depth (init.) N/A 24-hrs. N/A

Screen: Dia. N/A Length N/A Slot Size N/A

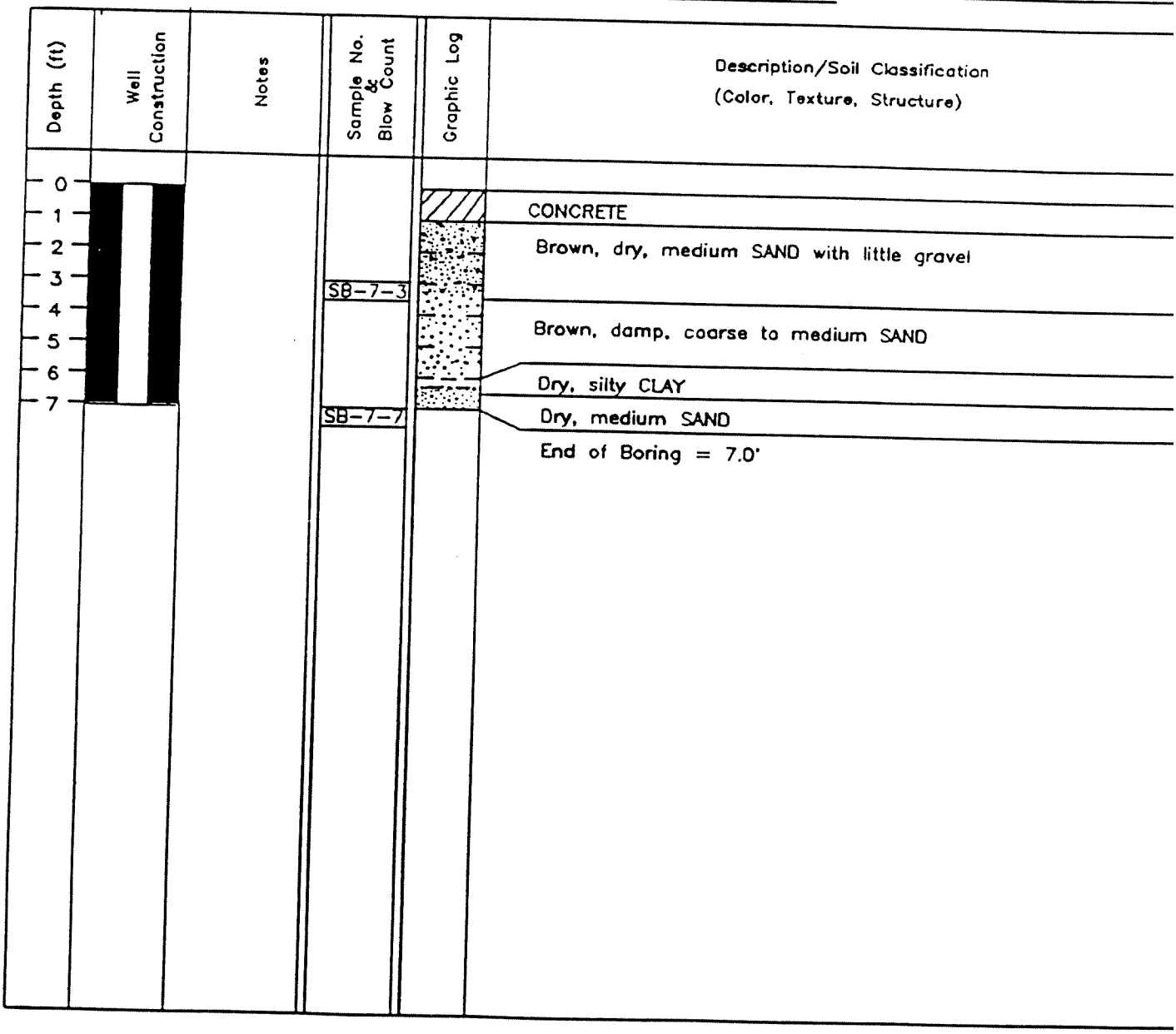
Casing: Dia. N/A Length N/A Type N/A

Drilling Company GTI Drilling Method HAND AUGER

Driller HATHCOCK Log by GERDENICH Samping Method HAND AUGER

Sketch Map

Notes
SEE SITE MAP FOR LOCATIO



GROUNDWATER TECHNOLOGY, INC.

Well No. SB-8

DRILLING I

Project GM HYDRA-MATIC BAY E-28 Owner SAME

Location YPSILANTI, MICHIGAN Project Number 400-312-9401

Date Drilled 7/27/89 Total Depth N/A Diameter 4"

Surface Elevation N/A Water depth (Init.) N/A 24-hrs. N/A

Screen: Dia. N/A Length N/A Slot Size N/A

Casing: Dia. N/A Length N/A Type N/A

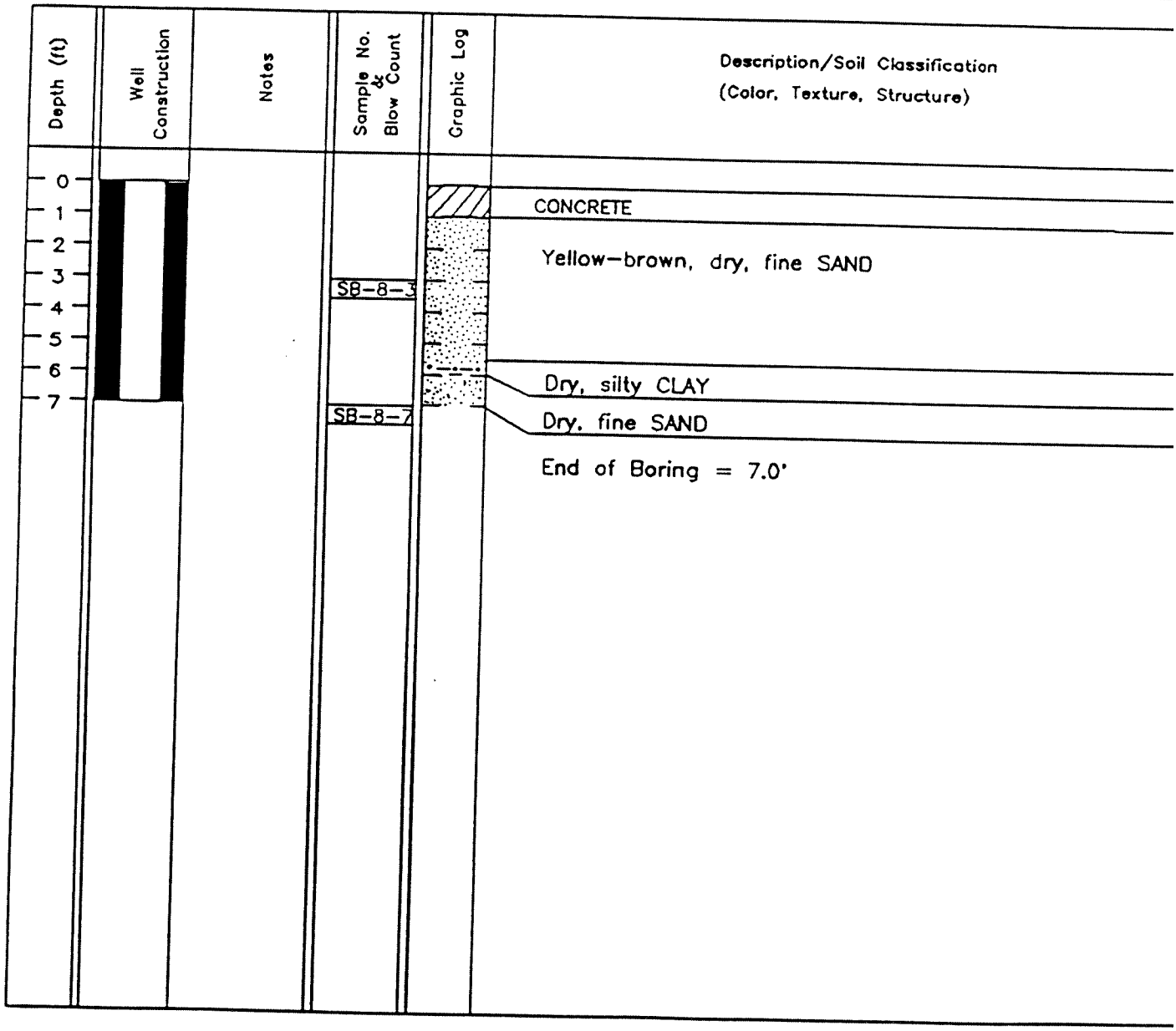
Drilling Company GTI Drilling Method HAND AUGER

Driller HATHCOCK Log by GERDENICH Samping Method HAND AUGER

Sketch Map

Notes

SEE SITE MAP FOR LOCATIC



GROUNDWATER TECHNOLOGY, INC

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

Report of Boring No. MW-4
Sheet 1 of 1

Project Location: Hydra-Matic Ypsilanti Bay E-28
Client: GM Hydra-Matic

SAMPLER
Type: Split-spoon
Hammer: 140 lbs. Fall: 30 in.

Ground Water Depth Date
Depth Date
File No.: 4585.007

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: Bay C-35
Ground Elevation:
Dates: Started: 7/10/90 Ended: 7/1

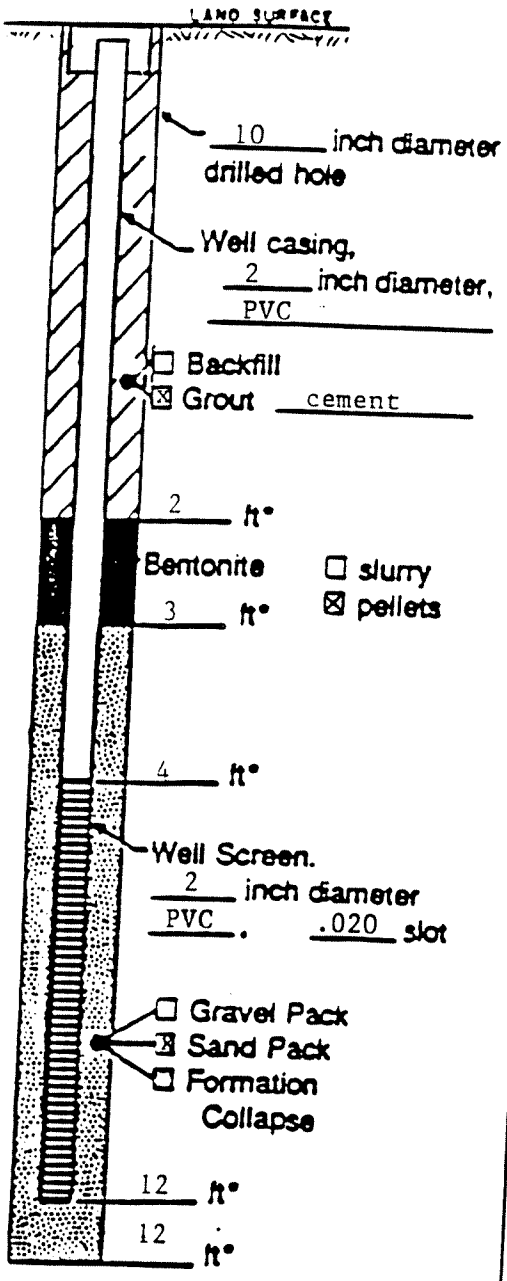
Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Sp Cond	HNU
0						CONCRETE	10"				
	1	1-3				brown (black at 1-1.5'), damp, medium to fine SAND, some silt, little clay	3'				
	2	3-5				brown, damp, sandy, silty CLAY	3.5'				
5						light brown, dry, medium SAND	4.5'				
	3	5-7				light brown, dry, fine SAND	5'				
	4	7-9				light brown, damp, fine SAND, little thin zones of moist silt	7.5'				
						light brown, moist, fine SAND, some silt	8'				
10	5	9-11				brown, wet, fine silty SAND	10.5'				
						gray, moist CLAY, little silt	12'				
						EOB at 12'					
15											

'-4' 2" dia PVC, 20 slot screen
'-3' sand pack
'-2' granular bentonite clay
2'-0 cement with steel roadbox

Locked, water tight cap on TOC

O'BRIEN & GERE

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Bav E-28 Well MW-4

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. N/A

TOC Elevation and Datum 99.24 feet ☒ surveyed ☐ estimated

Assumed 100.00 Benchmark

Installation Dates(s) 7-10-90

Drilling Method Hollow Stem Auger

Drilling Contractor P.S.I.

Drilling Fluid N/A

Development Techniques(s) and Date(s)

Bailing, 7-11-90

Fluid Loss During Drilling N/A gall

Water Removed During Development 5 gall

Static Depth to Water 8.06/8-6-90 feet below M

Pumping Depth to Water feet below M

Pumping Duration hours

Yield gpm Date

Specific Capacity gpm/ft

Well Purpose Monitoring

Remarks

Prepared by O'Brien & Gere Engineers, Inc.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-5 Sheet 1 of 1
Project Location: Hydra-Matic Ypsilanti Client: GM Hydra-Matic	SAMPLER Type: Split-spoon Hammer: 140 lbs. Fall: 30 in.	Ground Water Depth Date Depth Date File No.: 4585.007

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: South of scrap yard
Ground Elevation:
Dates: Started: 7/9/90 Ended: 7/9/

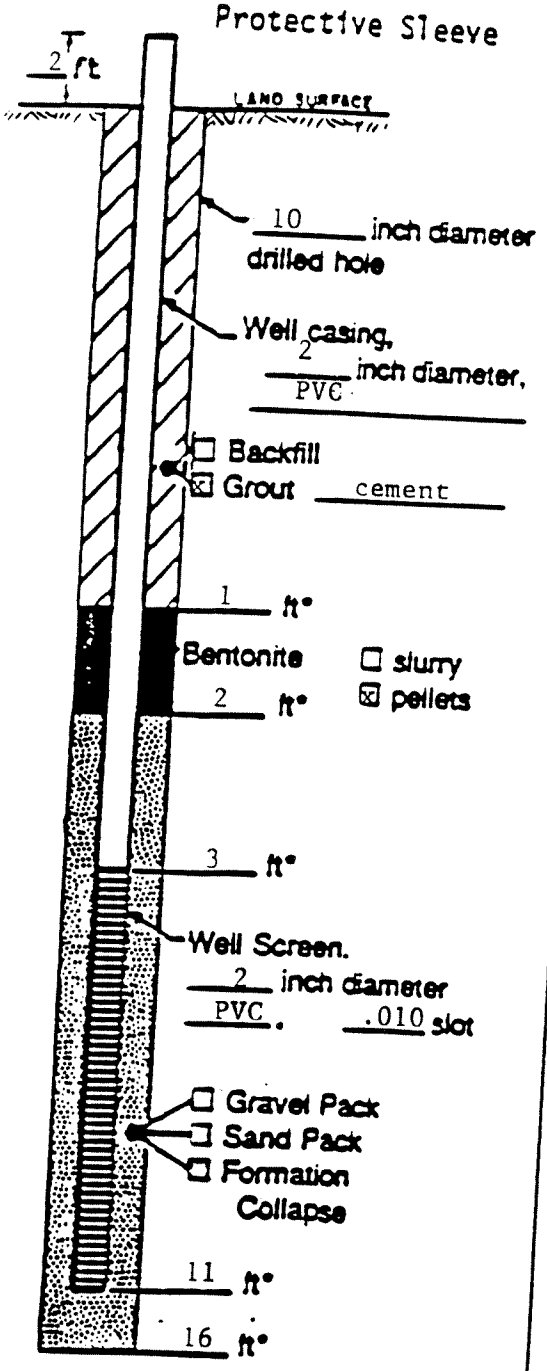
Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Sp Cond	HNU
0						black-brown, damp, fine silty SAND	1.5'				
	1	1-3				gray-black-brown, damp, very coarse GRAVEL some sand and silt	4'				
	2	3-5				brown, damp, silty CLAY, some sand and fine gravel	4.5'				
5						light brown, damp, coarse to fine SAND	5.5'				
	3	5-7				brown, damp, silty CLAY, some sand and fine gravel	6'				
	4	7-9				light to medium brown, moist fine SAND, becomming silty at 7.5'. Wet at 8'.	8'				
10	5	9-11				gray to brown, wet, fine silty SAND, some dark banding in bedding	11'				
	6	11-13				gray, wet, silty, plastic CLAY	12'				
	7	13-15				same, moist	14'				
15						gray, wet, SILT and fine SAND	16'				
						EOB at 16'					

'-11' granular bentonite
'-3' 2" dia PVC, 10 slot screen
'-2'above grade 2" dia PVC riser
11'-2' sandpack

cemented in a locking stand up and three guard posts

§ - 1" clay seam, brown, damp, silty CLAY, some sand and fine gravel at 5.5'.

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Bay E-28 Well MW-5

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. N/A

TOC Elevation and Datum 101.52 feet ☒ surveyed ☐ estimated

Assumed 100.00 Benchmark

Installation Dates(s) 7-9-90

Drilling Method Hollow Stem Auger

Drilling Contractor P.S.I.

Drilling Fluid N/A

Development Techniques(s) and Date(s)
Bailing, 7-11-90

Fluid Loss During Drilling N/A gall

Water Removed During Development 5 gall

Static Depth to Water 10.26/8-6-90 feet below M

Pumping Depth to Water feet below M

Pumping Duration hours

Yield gpm Date

Specific Capacity gpm/ft

Well Purpose Monitoring

Remarks Apparent second saturated zone observed from 14 fbg to 16 fbg. Borehole backfilled with granular bentonite to 11 fbg where well was set.

Prepared by O'Brien & Gere Engineers, Inc.

O'BRIEN & GERE
ENGINEERS, INC.

TEST BORING LOG

Report of Boring No. MW-6
Sheet 1 of 1

Project Location: Hydra-Matic Ypsilanti
Bay E-28
Client: GM Hydra-Matic

SAMPLER
Type: Split-spoon
Hammer: 140 lbs. Fall: 30 in.

Ground Water Depth Date
Depth Date
File No.: 4585.007

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: Bay B-28
Ground Elevation:
Dates: Started: 7/10/90 Ended: 7/1

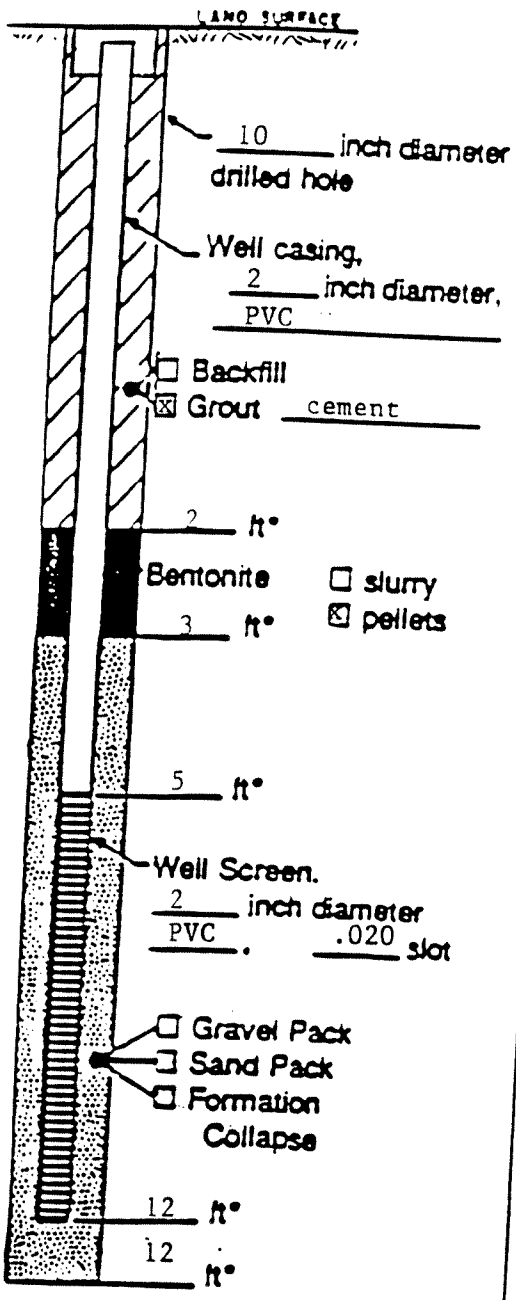
Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Sp Cond	HNU
0						CONCRETE	10"				
	1	1-3				brown, damp, SAND, some silt and clay, little fine gravel	3'				
	2	3-5				light brown, dry, fine SAND					
5	3	5-7				same, damp	6'				
						same, moist	7'				
	4	7-9				same, wet	8'				
							9'				
10	5	9-11				gray, wet, SILT					
						EOB at 12'	12'				
15											

0'-5' 2" dia PVC, 20 slot screen
5'-4' sand pack
3'-2' granular bentonite clay
2'-0 cement with steel roadbox

Locked, water tight cap on TOC

O'BRIEN & GERE

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Bav E-28 Well MW-6

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. N/A

TOC Elevation and Datum 99.78 feet

Assumed 100.00 Benchmark

☒ surveyed ☐ estimated

Installation Dates(s) 7-10-90

Drilling Method Hollow Stem Auger

Drilling Contractor P.S.I.

Drilling Fluid N/A

Development Techniques(s) and Date(s)
Bailing, 7-11-90

Fluid Loss During Drilling N/A ga

Water Removed During Development 5 gal

Static Depth to Water 8.60/8-6-90 feet below l

Pumping Depth to Water feet below l

Pumping Duration hours

Yield gpm Date

Specific Capacity gpm/ft

Well Purpose Monitoring

Remarks

Prepared by O'Brien & Gere Engineers, Inc.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	Report of Boring No. MW-7 Sheet 1 of 1
Project Location: Hydra-Matic Ypsilanti Bay E-28 Client: GM Hydra-Matic	SAMPLER Type: Split-spoon Hammer: 140 lbs. Fall: 30 in.	Ground Water Depth Date Depth Date File No.: 4585.007

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: Bay C-23
Ground Elevation:
Dates: Started: 7/10/90 Ended: 7/

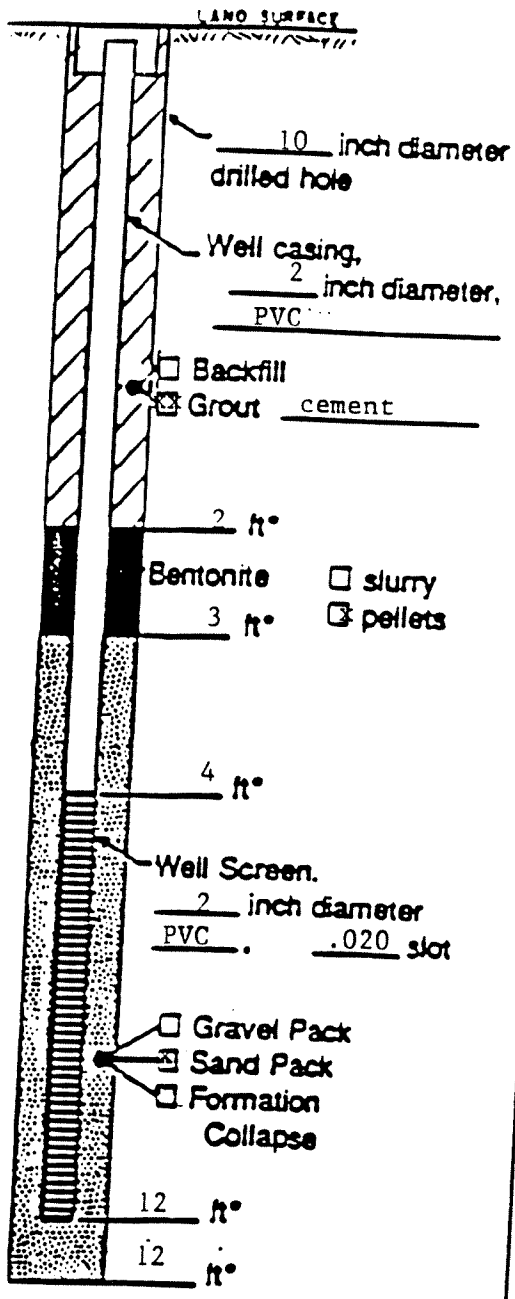
Depth	Sample No.	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testin pH	Sp Cond	HNU
0						CONCRETE	10"				
						brown, damp, medium to fine SAND, little silt and clay, trace fine gravel	2'				
	1	1-3				light brown, dry, medium to fine SAND	3'				
	2	3-5				light brown, damp, medium to fine SAND, little silt and clay.	4.5'				
5						light brown, damp, coarse to fine SAND	7'				
	3	5-7				light brown, moist, fine SAND	8.5'				
	4	7-9				same dark gray, wet	9'				
10	5	9-11				same, brown	10'				
						gray, moist, CLAY, little silt	12'				
						EOB at 12'					
15											

12'-4' 2" dia PVC, 20 slot screen
2'-3' sand pack
3'-2' granular bentonite clay
2'-0 cement with steel roadbox

Locked, water tight cap on TOC

O'BRIEN & GERE

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Bav E-28 Well MW-7

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. N/A

TOC Elevation and Datum 100.21 feet

Assumed 100.00 Benchmark

☒ surveyed ☐ estimated

Installation Dates(s) 7-10-90

Drilling Method Hollow Stem Auger

Drilling Contractor P.S.I.

Drilling Fluid N/A

Development Techniques(s) and Date(s)

Bailing, 7-11-90

Fluid Loss During Drilling N/A ga

Water Removed During Development 5 ga

Static Depth to Water 8.15/8-6-90 feet below

Pumping Depth to Water feet below

Pumping Duration hours

Yield gpm Date

Specific Capacity gpm/ft

Well Purpose Monitoring

Remarks

Prepared by O'Brien & Gere Engineers, Inc.

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

Report of Boring No. MW-8
Sheet 1 of 1

Project Location: Hydra-Matic Ypsilanti Bay E-28
Client: GM Hydra-Matic

SAMPLER
Type: Split-spoon
Hammer: 140 lbs. Fall: 30 in.

Ground Water Depth Date
Depth Date
File No.: 4585.007

Boring Co.: PSI
Foreman: Paul Libby
OBG Geologist: James A. O'Meara

Boring Location: Bay J-27
Ground Elevation:
Dates: Started: 7/11/90 Ended: 7/11

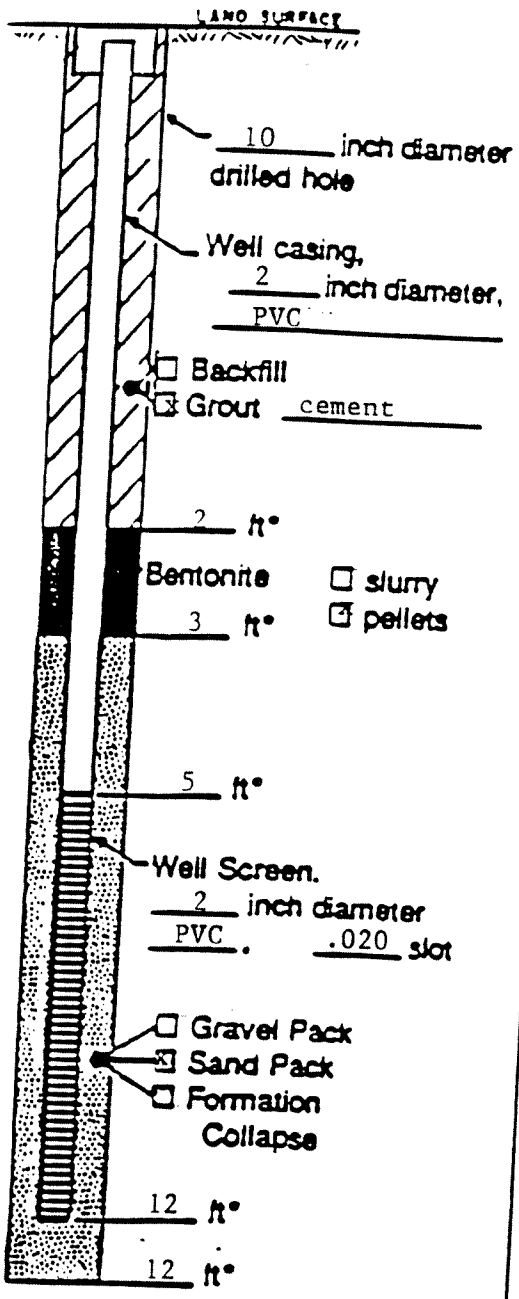
Depth	Sample No	Sample Depth	Blows /6"	Penetr/ Recovry	"N" Valve	Sample Description	Stratum Change General Descript	Equipment Installed	Field Testing pH	Sp Cond	HNU
0						CONCRETE	10"				
	1	1-3				brown, damp, medium to fine SAND, little silt	3'				
	2	3-5				light brown, dry, medium to fine SAND	4.5'				
5	3	5-7				light brown, coarse to fine SAND, trace fine gravel	5'				
	4	7-9				same, brown, some fine gravel	7'				
						same, moist	8'				
10	5	9-11				same, wet, odor	10'				
						gray, moist, CLAY, trace silt	12'				
						EOB at 12'					
15											

12'-5' 2" dia PVC, 20 slot screen
-4' sand pack
2' granular bentonite clay
2'-0 cement with steel roadbox

Locked, water tight cap on TOC

O'BRIEN & GERE

WELL CONSTRUCTION LOG



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project GM Hydra-Matic, Bay E-28 Well MW-8

Town/City Ypsilanti

County Washtenaw State Michigan

Permit No. N/A

TOC Elevation and Datum 99.65 feet Assumed 100.00 Benchmark

☒ surveyed ☐ estimated

Installation Dates(s) 7-11-90

Drilling Method Hollow Stem Auger

Drilling Contractor P.S.I.

Drilling Fluid N/A

Development Techniques(s) and Date(s)
Bailing, 7-11-90

Fluid Loss During Drilling N/A ga

Water Removed During Development 5 ga

Static Depth to Water 7.29/8-6-90 feet below

Pumping Depth to Water feet below

Pumping Duration hours

Yield gpm Date

Specific Capacity gpm/ft

Well Purpose Monitoring

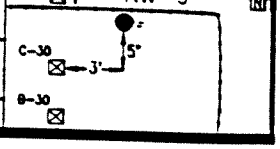
Remarks

Prepared by O'Brien & Gere Engineers, Inc.

BORING LOG / MONITORING WELL DIAGRAM

A&B ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-14	PROJECT NAME: GM POWERTRAIN - E-28		BORING/WELL DESIGNATION: RW-9	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PROFESSIONAL SERVICE INDUSTRIES		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 14 IN.	BOREHOLE DEPTH: 15 FT.
DATE STARTED: 05/18/92	DATE COMPLETED: 05/18/92	GROUND ELEV.: 99.9 FT.	MEASURING POINT ELEV: 99.57 FT.	WELL DEPTH: 15 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. BOND, A. BABB	LOGGED BY: S. MURRAY	



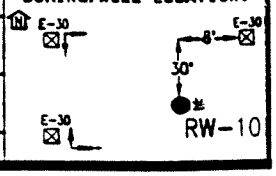
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED AT GRADE WITH A FLUSH-MOUNT STEEL WATER BOX	
	SAND - brown, fine-coarse grained, trace fine gravel, very loose, damp, no apparent odor, wood debris in cuttings					CHUNK BENTONITE	
2.5							
5							
	SAND - brown, fine-coarse grained, trace fine gravel, very loose, slight odor present	6-8'	SS	1-0-1-1	BG	SAND FILTER PACK	
7.5	(groundwater encountered at 7.2 feet)						
10						6-INCH, 20-SLOT, CONTINUOUS-WOUND, PVC WELL SCREEN	
	(Driller reports change at 11.5 feet)						
12.5							
	SILTY CLAY - gray, slightly plastic, stiff, dry, no apparent odor	13-15'	SS	3-4-6-6	BG	BENTONITE	
15	END OF BORING AT 15 FEET						

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND.

BORING LOG / MONITORING WELL DIAGRAM

A&B ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-14	PROJECT NAME: GM POWERTRAIN - E-28		BORING/WELL DESIGNATION: RW-10	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PROFESSIONAL SERVICE INDUSTRIES		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 14 IN.	BOREHOLE DEPTH: 14.5 FT.
DATE STARTED: 05/13/92	DATE COMPLETED: 05/13/92	GROUND ELEV.: 100.1 FT.	MEASURING POINT ELEV: 99.73 FT.	WELL DEPTH: 14.5 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. BOND, A. BABB	LOGGED BY: S. MURRAY	



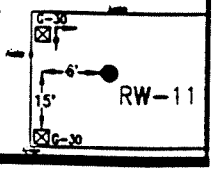
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED AT GRADE WITH A FLUSH-MOUNT STEEL WATER BOX	
	SAND - dark brown, fine-coarse grained, trace silt and fine gravel, dry-damp, no odor					CHUNK BENTONITE	
2.5							
5							
	SAND - brown, fine-coarse grained, trace fine gravel, loose saturated at 7 feet, slight odor, product present	6-8'	SS	1-2-3-7	BG	SAND FILTER PACK	
7.5							
	SAND - gray/brown, fine grained, trace silt, wet, slight odor					6-INCH, 20-SLOT, CONTINUOUS-WOUND, PVC WELL SCREEN	
10							
12.5	SILTY CLAY - gray, plastic, medium stiff, moist, no odor	12-14'	SS	1-3-5-7	BG	CHUNK BENTONITE	
	END OF BORING AT 14.5 FEET						
15							
17.5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-14	PROJECT NAME: GM POWERTRAIN - E-28		BORING/WELL DESIGNATION: RW-11	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PROFESSIONAL SERVICE INDUSTRIES		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 14 IN.	BOREHOLE DEPTH: 19 FT.
DATE STARTED: 05/12/92	DATE COMPLETED: 05/12/92	GROUND ELEV.: 100.1 FT.	MEASURING POINT ELEV: 99.75 FT.	WELL DEPTH: 17.7 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. BOND, A. BABB	LOGGED BY: S. MURRAY	



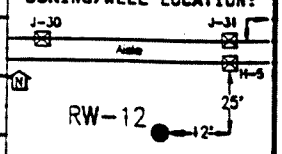
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETED AT GRADE WITH A FLUSH-MOUNT STEEL WATER BOX
	SAND - dark gray, fine-medium grained, trace silt and fine gravel, damp, faint odor					CONCRETE
2.5						CHUNK BENTONITE
						6-INCH ID, SCHEDULE-40, PVC RISER PIPE
5	SAND - brown, fine-coarse grained, trace fine gravel, medium dense, dry-damp, no odor	5-7'	SS	5-8-11-14	1	
7.5	SAND - brown, fine grained, medium dense, saturated at 7 feet, slight odor, product present	7-9'	SS	3-6-9-11	BG	SAND FILTER PACK
10						6-INCH, 20-SLOT, CONTINUOUS-WOUND, PVC WELL SCREEN
12.5	SILT - gray, some fine sand, very stiff, wet, no odor	13-15'	SS	8-15-10-20	BG	
	SILTY SAND - gray, fine grained, dense, wet, slight odor, two thin black streaks					
15		15-17'	SS	0-1-3-11	BG	
17.5	SILTY CLAY - gray, slightly plastic, stiff, damp, no odor					CHUNK BENTONITE

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-14	PROJECT NAME: GM POWERTRAIN - E-28		BORING/WELL DESIGNATION: RW-12	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PROFESSIONAL SERVICE INDUSTRIES	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 14 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 05/14/92	DATE COMPLETED: 05/14/92	GROUND ELEV.: 99.8 FT.	MEASURING POINT ELEV: 99.23 FT.	WELL DEPTH: 13 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. BOND, A. BABB	LOGGED BY: S. MURRAY	



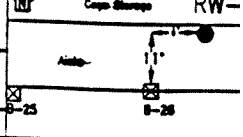
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED AT GRADE WITH A FLUSH-MOUNT STEEL WATER BOX	
	SAND - brown, fine-coarse grained, trace silt and gravel, dry-damp, slight odor					CONCRETE	
2.5						CHUNK BENTONITE	
5						6-INCH, 20-SLOT, CONTINUOUS-WOUND, PVC WELL SCREEN	
	SAND - brown, medium grained, trace fine gravel and silt, very loose, saturated at 7 feet, slight odor, product present	6-8'	SS	1-0-1-0	BG		
7.5						SAND FILTER PACK	
10						DRILLER REPORTS CHANGE AT 10 FEET	
	SILTY CLAY - gray, plastic, firm, moist-damp, no odor one thin dry silt seam at 12.5 feet	11-13'	SS	2-2-4-6	BG	BENTONITE	
12.5							
	END OF BORING AT 13 FEET						
15							
17.5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-14	PROJECT NAME: GM POWERTRAIN - E-28		BORING/WELL DESIGNATION: RW-15	BORING/WELL LOCATIC
DRILLING CONTRACTOR: ABB ENVIRONMENTAL	DRILLING METHOD: HAND AUGER	BOREHOLE SIZE: 4 IN.	BOREHOLE DEPTH: 10 FT.	
DATE STARTED: 08/19/92	DATE COMPLETED: 08/19/92	GROUND ELEV.: 100.0 FT.	MEASURING POINT ELEV: 99.65 FT.	WELL DEPTH: 10 FT.
RIG: N/A	DRILLER: C. KIELTY	HELPER:	LOGGED BY: C. KIELTY	



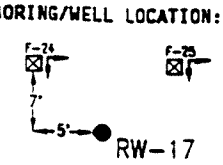
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER	
	SAND - brown, medium grained, trace fine gravel, dry-wet at 7.5 feet, no odor					CONCRETE	
2.5						STEEL COUPLING	
						CHUNK BENTONITE	
5						2-INCH, SCHEDULE-40, GALVANIZED STEEL, RISER PIPE	
						SAND FILTER PACK	
7.5	SILTY SAND - brown, fine grained, trace fine gravel, wet, no odor					2-INCH, 80 GAUZE, STAINLESS STEEL, DRIVE POINT WELL SCREEN	
10	END OF BORING AT 10 FEET						

NOTES:

BORING LOG / MONITORING WELL DIAGRAM

A&B ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-14	PROJECT NAME: GM POWERTRAIN - E-28		BORING/WELL DESIGNATION: RW-17	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PROFESSIONAL SERVICE INDUSTRIES		DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 14 IN.	BOREHOLE DEPTH: 20 FT.
DATE STARTED: 05/19/92	DATE COMPLETED: 05/19/92	GROUND ELEV.: 100.1 FT.	MEASURING POINT ELEV: 99.73 FT.	WELL DEPTH: 19.9 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. BOND, A. A&B	LOGGED BY: S. MURRAY	



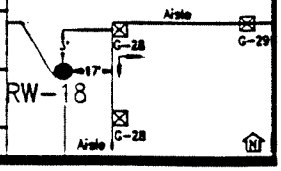
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS
0	CONCRETE					WELL COMPLETED AT GRADE WITH A FLUSH-MOUNT STEEL WATER BOX
	SAND - brown, fine-medium grained, trace silt and fine gravel, damp, no apparent odor					CONCRETE
2.5						CHUNK BENTONITE
						8-INCH ID, SCHEDULE-40, PVC RISER PIPE
5						
	CLAYEY SAND - brown, fine grained, loose, dry, no apparent odor	6-8'	SS	5-5-2-1	BG	8-INCH ID, 20-SLOT, PVC WELL SCREEN
7.5	SAND - brown, fine-coarse grained, very loose, damp, no apparent odor (groundwater, product encountered at 8 feet)					SAND FILTER PACK
	SANDY SILT - brown/gray, fine grained, medium dense, wet, slight odor present	8-10'	SS	3-9-10-15	BG	
10	SILTY SAND - gray, fine grained, dense, wet, no apparent odor, 2" clay seam at base	10-12'	SS	9-18-14-7	BG	2-INCH ID, SCHEDULE-40, PVC RISER PIPE
12.5	SILTY SAND - brown, fine grained, dense, wet, no apparent odor	12-14'	SS	6-17-26-30	BG	COUPLING
						2-INCH, 20-SLOT, CONTINUOUS WOUND, WELL SCREEN
15		14-16'	SS	17-10-9-10	BG	
	CLAY - gray, some silt, plastic, very stiff, damp, no apparent odor					
		16-18'	SS	5-7-22-27	BG	BENTONITE
17.5	SILTY SAND - gray, fine grained, dense, wet, no apparent odor					

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, INC.

PROJECT NO.: 5883-14	PROJECT NAME: GM POWERTRAIN - E-28	BORING/WELL DESIGNATION: RW-18	BORING/WELL LOCATION:
DRILLING CONTRACTOR: PROFESSIONAL SERVICE INDUSTRIES	DRILLING METHOD: HOLLOW-STEM AUGERS	BOREHOLE SIZE: 14 IN.	BOREHOLE DEPTH: 20 FT.
DATE STARTED: 08/06/92	DATE COMPLETED: 08/06/92	GROUND ELEV.: 100.2 FT.	MEASURING POINT ELEV: 99.77 FT.
WELL DEPTH: 16 FT.			
RIG: CME-45	DRILLER: K. DANTAS	HELPER: C. MCDONNELL	LOGGED BY: S. MURRAY



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE					WELL COMPLETED AT GRADE WITH A FLUSH-MOUNT STEEL WATER BOX. SET IN CONCRETE	
	SAND - yellow/brown, medium-coarse grained, some gravel, no odor						
2.5	CLAYEY SAND - brown, medium grained, trace gravel, dry, no odor					CHUNK BENTONITE	
	SAND - yellow/brown, medium-coarse grained, trace gravel, dry, no odor					8-INCH ID, SCHEDULE-40, PVC RISER PIPE	
5							
	SAND - brown, fine-medium grained, medium dense, wet at 7.5 feet, odor present	6-8'	SS	6-10-13-16	.5	8-INCH ID, 20-SLOT, PVC WELL SCREEN	
7.5						SAND FILTER PACK	
		8-10'	SS	7-11-8-6	BG	2-INCH, 20-SLOT, CONTINUOUS WOUND, WELL SCREEN	
10	SILTY CLAY - gray, plastic, trace fine sand, stiff, moist	10-12'	SS	2-4-4-6	BG	2-INCH ID, SCHEDULE-40, PVC RISER PIPE	
12.5						CHUNK BENTONITE	
		12-14'	SS	3-5-16-20	BG		
	SANDY SILT - gray, very fine grained, wet, no odor						
15		14-16'	SS	6-9-11-5	BG		
	SILTY CLAY - gray, plastic, stiff, moist						
		16-18'	SS	3-6-8-13	BG		
17.5							

NOTES: 1. SS - SPLIT-SPOON SAMPLE.
2. BG - BACKGROUND.

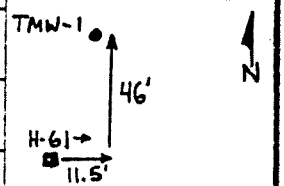
AREA 22

SUBTEST AREA

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: TMW-1	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 14 FT.	
DATE STARTED: 2/20/89	DATE COMPLETED: 2/20/89	GROUND ELEV.: 100.20 FT.	MEASURING POINT ELEV: 99.94 FT.	WELL DEPTH: 14 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



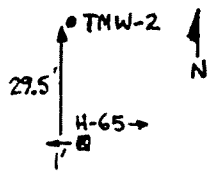
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	WOOD BLOCK FLOOR (2.5 INCHES)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	CONCRETE (1-FOOT)					CEMENT	XX XXX
	SAND (FILL)- brown, moist.						/// ///
2.5						BENTONITE SEAL	// ///
	SILTY SAND - gray/brown, moist, slight oily odor.						... ...
	SAND - brown, medium grained, moist.					TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	... == ...
5.0						SAND FILTER PACK	... == ...
	(water encountered @ approx. 6.5 ft.)						... == ...
	SAND - brown, fine grained, wet.						... == ...
7.5						TWO-INCH 10-SLOT PVC WELL SCREEN	... == ...
10.0							... == ...
12.5							... == ...
	CLAY - gray, some silt.						... == ...
	END OF BORING AT 14 FEET						... == ...
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: TMW-2	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 14 FT.
DATE STARTED: 2/20/89	DATE COMPLETED: 2/20/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.48 FT.	WELL DEPTH: 14 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



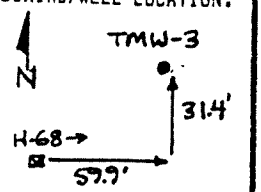
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	WOOD BLOCK FLOOR (2.5-INCHES)	N/A	N/A	N/A	(ppm) BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	CONCRETE (1-FOOT)					CEMENT	
	SAND (FILL)- dark brown					BENTONITE SEAL	
2.5							
	SAND - brown, fine to medium, trace fine silt and fine gravel.					TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING.	
5.0						SAND FILTER PACK	
	SAND AND FINE GRAVEL - moist, slight oily odor.						
	(water encountered @ aporox. 7-ft.)						
7.5						TWO-INCH 10-SLOT PVC WELL SCREEN	
10.0							
12.5	CLAY - gray, some silt.						
	END OF BORING AT 14 FEET.						
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: TMW-3	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 2/21/89	DATE COMPLETED: 2/21/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.44 FT.
WELL DEPTH: 13 FT.			
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



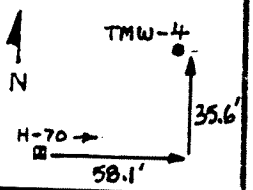
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	WOOD BLOCK FLOOR (2.5-INCHES)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	CONCRETE (1-FOOT)					CEMENT	
	SAND (FILL)- black, some fine gravel.						
2.5	SAND - brown, moist, trace silt, faint oily odor.					BENTONITE SEAL	
						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
5.0							
	SILTY SAND - gray-brown, moist, oily odor.					SAND FILTER PACK	
7.5	(water encountered @ approx. 7-ft.)						
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	
	CLAY - gray, some silt.						
12.5	END OF BORING AT 13-FEET						
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: TMW-4	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 2/21/89	DATE COMPLETED: 2/21/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.08 FT.	WELL DEPTH: 13 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



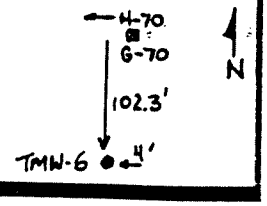
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	WOOD BLOCK FLOOR (2.5-INCHES)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	CONCRETE (1-FOOT)					CEMENT	XXX XX XXX
	SAND (FILL)- black						
2.5						BENTONITE SEAL	///
	SAND - brown, moist, trace silt						
	Oily odor present @ 4 ft.					TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
5.0							
	(water encountered @ approx. 7-ft.)						
7.5						SAND FILTER PACK	
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	
	CLAY - gray, some silt.						
12.5							
	END OF BORING AT 13-FEET						
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: TMW-6	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 12.5 FT.	
DATE STARTED: 2/24/89	DATE COMPLETED: 2/24/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.28 FT.	WELL DEPTH: 12.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



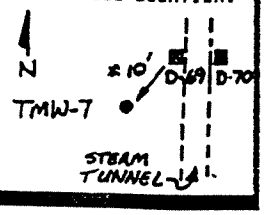
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE (1-FOOT)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	SAND (FILL)- brown.					CEMENT	
2.5	SAND - brown, medium grained, moist, trace fine gravel.					BENTONITE SEAL	
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
7.5	(water encountered @ 8 ft.)					SAND FILTER PACK	
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	
	CLAY - gray, some silt.						
12.5	END OF BORING AT 12.5 FEET						
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: TMW-7	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 12.5 FT.
DATE STARTED: 2/24/89	DATE COMPLETED: 2/24/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.10 FT.	WELL DEPTH: 12.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



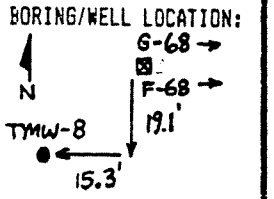
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE (1-FOOT)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	SAND (FILL)- some gravel.					CEMENT	XXX XX XXX
	SAND - brown, medium grained, moist.					BENTONITE SEAL	/// // ///
2.5							
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
	(water encountered @ approx. 7-ft.)						
7.5						SAND FILTER PACK	
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	
	CLAY - gray, some silt.						
12.5	END OF BORING AT 12.5 FEET						
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-00	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: TMW-8	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 8 IN.	BOREHOLE DEPTH: 12.5 FT.	
DATE STARTED: 2/23/89	DATE COMPLETED: 2/23/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.50 FT.	WELL DEPTH: 12.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



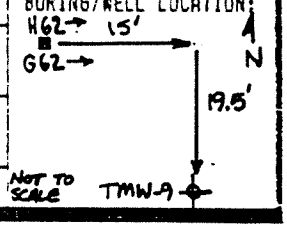
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	CONCRETE - (1-FOOT)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	SAND (FILL)- brown.					CEMENT	
2.5	SAND - brown, medium grained, moist, trace fine gravel.					BENTONITE SEAL	
5.0	GRAVEL - fine.					TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
	SAND - brown, medium grained, moist, trace fine gravel. Oily odor present @ 7-ft.						
7.5	(water encountered @ approx. 8-ft.)					SAND FILTER PACK	
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	
12.5	END OF BORING AT 12.5 FEET						
15.0							

NOTES: BG - BACKGROUND
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: TMW-9	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 12.5 FT.
DATE STARTED: 8/29/89	DATE COMPLETED: 8/29/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.49 FT.
WELL DEPTH: 12.5 FT.			
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



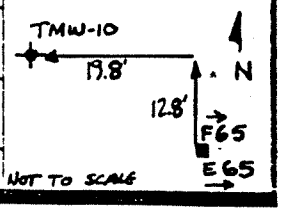
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	WOOD BLOCK FLOOR (2.5-INCHES)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	CONCRETE (1-FOOT)						
	SAND (FILL) - dark brown, medium grained, moist, trace fine gravel, faint odor present.					CEMENT	
2.5						BENTONITE SEAL	
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
	SAND - gray-brown, fine to medium, moist, trace silt, odor present.						
7.5						SAND FILTER PACK	
	(groundwater encountered @ approx. 8 feet)						
10.0						TWO-INCH TEN SLOT PVC WELL SCREEN	
	CLAY - gray, some silt.						
12.5	END OF BORING AT 12.5 FEET						
15.0							

NOTES: BG - BACKGROUND (BREATHING ZONE)
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS
ELEVATIONS ARE APPROXIMATE

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: TMW-10	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 12.5 FT.
DATE STARTED: 8/29/89	DATE COMPLETED: 8/29/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.41 FT.
			WELL DEPTH: 12.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



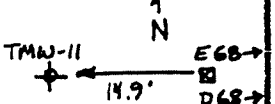
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	WOOD BLOCK FLOOR (2.5-INCHES)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	CONCRETE (1-FOOT)						
	SAND (FILL) - dark brown.					CEMENT	
	CONCRETE						
2.5						BENTONITE SEAL	
	SAND - brown, fine to medium grained, moist.						
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
7.5	(groundwater encountered @ approx. 8 feet)					SAND FILTER PACK	
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	
	CLAY - gray, some silt.						
12.5	END OF BORING AT 12.5 FEET						
5.0							

NOTES: BG - BACKGROUND (BREATHING ZONE)
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS
ELEVATIONS ARE APPROXIMATE

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: TMW-11	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 12 FT.
DATE STARTED: 8/29/89	DATE COMPLETED: 8/29/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.61 FT.
			WELL DEPTH: 12 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



NOT TO SCALE

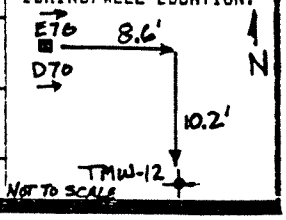
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	CONCRETE (1-FOOT)	N/A	N/A	N/A	(ppm) BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	SAND (FILL) - brown, medium grained, moist, concrete fill.					CEMENT	XX XXX
2.5						BENTONITE SEAL	
						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	
5.0	SAND - brown, medium grained, moist.						
7.5	(groundwater encountered @ approx. 8 feet)					SAND FILTER PACK	
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	
	CLAY						
	END OF BORING AT 12 FEET						
12.5							
15.0							

NOTES: BG - BACKGROUND (BREATHING ZONE)
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS
ELEVATIONS ARE APPROXIMATE

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: TMW-12	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER	BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 12.5 FT.
DATE STARTED: 8/30/89	DATE COMPLETED: 8/30/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.47 FT.
WELL DEPTH: 12.5 FT.			
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



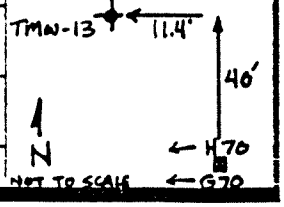
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	WOOD BLOCK FLOOR (2.5-INCHES)	N/A	N/A	N/A	(ppm) BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	CONCRETE (1-FOOT)					CEMENT	xx xxx
	SAND (FILL) - dark brown, medium grained, moist.						/// ///
2.5						BENTONITE SEAL	// ///
	SAND - light brown, medium grained, moist.						... ...
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	... == ...
7.5	GRAVEL?					SAND FILTER PACK	.. == ...
	SAND - light brown, medium grained, moist. (groundwater encountered @ approx. 8 feet)						... == ...
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	... == ...
	CLAY						... == ...
12.5	END OF BORING AT 12.5 FEET						
15.0							

NOTES: BG - BACKGROUND (BREATHING ZONE)
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS
ELEVATIONS ARE APPROXIMATE

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN		BORING/WELL DESIGNATION: TMW-13	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HOLLOW STEM AUGER		BOREHOLE SIZE: 10 IN.	BOREHOLE DEPTH: 12.5 FT.
DATE STARTED: 8/30/89	DATE COMPLETED: 8/30/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.29 FT.	WELL DEPTH: 12.5 FT.
RIG: CME-55	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY	



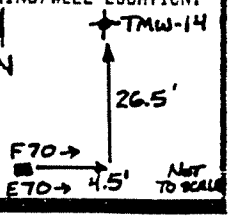
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER (ppm)	COMMENTS	WELL DATA
0	WOOD BLOCK FLOOR (2.5-INCHES)	N/A	N/A	N/A	BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
	CONCRETE (1-FOOT)						
	SAND (FILL) - brown, medium grained, moist, some clay content.					CEMENT	XXX XX
2.5						BENTONITE SEAL	/// ///
	SAND - brown, medium grained, moist, trace fine gravel.						...
5.0						TWO-INCH SCHEDULE 40 FLUSH-THREADED PVC WELL CASING	... ==
7.5	(groundwater encountered * approx. 8 feet)					SAND FILTER PACK	.. ==
10.0						TWO-INCH 10-SLOT PVC WELL SCREEN	==
	CLAY						
12.5	END OF BORING @ 12.5 FEET						
15.0							

NOTES: BG - BACKGROUND (BREATHING ZONE)
N/A - NOT APPLICABLE
SAMPLES LOGGED FROM CUTTINGS
ELEVATIONS ARE APPROXIMATE

BORING LOG / MONITORING WELL DIAGRAM

C-E ENVIRONMENTAL, INC.

PROJECT NO.: 5883-01	PROJECT NAME: HYDRA-MATIC WILLOW RUN	BORING/WELL DESIGNATION: TMW-14	BORING/WELL LOCATION:
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: HAND AUGER/ DRIVEN	BOREHOLE SIZE: 3 IN.	BOREHOLE DEPTH: 9 FT.
DATE STARTED: 8/29/89	DATE COMPLETED: 8/29/89	GROUND ELEV.: 100 FT.	MEASURING POINT ELEV: 99.68 FT.
			WELL DEPTH: 13.5 FT.
RIG: N/A	DRILLER: P. LIBBY	HELPER: M. BOND	LOGGED BY: C KIELTY



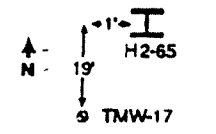
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	P.I. METER	COMMENTS	WELL DATA
0	CONCRETE	N/A	N/A	N/A	(ppm) BG	WELL FINISHED BELOW GRADE W/A PVC CAP	
						CEMENT	
	SAND - brown, medium grained, moist.						
						BENTONITE SEAL	
2.5							
5.0						TWO-INCH GALVANIZED WELL CASING	
7.5						SAND FILTER PACK	
	(soil oily @ approx. 8 feet)						
10.0						TWO-INCH 10-SLOT WIRE-WRAPPED STAINLESS STEEL WELL SCREEN	
12.5	CLAY					SCREEN DRIVEN INTO NATURAL SOIL FROM APPROX. 8 FEET	
	END OF BORING AT 13.5 FEET						
15.0							

NOTES: N/A - NOT APPLICABLE
ELEVATIONS ARE APPROXIMATE

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, I

PROJECT NO.: 5883-02	PROJECT NAME: GM POWERTRAIN		BORING/WELL DESIGNATION: TMW-17	BORING/WELL LOCATIO
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 12 IN.	BOREHOLE DEPTH: 13 FT.	
DATE STARTED: 01/28/92	DATE COMPLETED: 01/28/92	GROUND ELEV.: ------ FT.	MEASURING POINT ELEV: -------- FT.	WELL DEPTH: 13 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONALD	LOGGED BY: S. MURRAY	



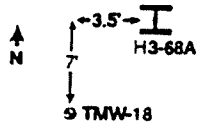
DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	FIELD CHEM.	COMMENTS
0	CONCRETE					WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	SAND - brown, fine to medium grained, trace fine gravel and clay					CONCRETE
2.5						BENTONITE CHIPS
	SAND - brown, medium to coarse grained, trace to some fine gravel, trace silt					6-INCH, SCHEDULE 40, FLUSH-THREADED, PVC WELL CASING
5						FILTER PACK
7.5						6-INCH, 40 SLOT, SCHEDULE 40, FLUSH-THREADED, PVC CONTINUOUS SLOT WELL SCREEN
	SAND - grey brown, fine to medium grained, trace to some silt, moist to wet at 8.5 feet					
10		9-11'	SS	1-4-10-12	20	
		11-13'	SS	0-1-3-6	4	
12.5	SILTY CLAY - gray, medium stiff, moist					
	END OF BORING AT 13 FEET					

NOTES: 1. BORING WAS LOGGED FROM CUTTINGS TO 9 FEET.
2. "FIELD CHEM" - SAMPLE SCREENED WITH A PHOTOIONIZATION METER FOR TOTAL VOLATILE ORGANIC COMPOUNDS (in parts per million).
3. SS - SPLIT-SPOON SAMPLE.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-02	PROJECT NAME: GM POWERTRAIN		BORING/WELL DESIGNATION: TMW-18	BORING/WELL LOCATI
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: Hollow Stem Auger		BOREHOLE SIZE: 14 IN.	BOREHOLE DEPTH: 13 FT.
DATE STARTED: 01/21/92	DATE COMPLETED: 01/21/92	GROUND ELEV.: ------ FT.	MEASURING POINT ELEV: -------- FT.	WELL DEPTH: 13 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONALD	LOGGED BY: K. MISH	



DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	FIELD CHEM.	COMMENTS
0	CONCRETE					WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	SAND - brown, fine to medium grained, trace to some gravel and silt/clay, moist					CONCRETE
2.5	SAND - green/gray, fine to medium grained, loose, well-sorted, odor present					BENTONITE CHIPS; 6-INCH, SCHEDULE 40, FLUSH-THREADED, PVC WELL CASING
5						FILTER PACK
7.5	SAND - gray, fine-grained, loose, well-sorted, trace to some silt, moist to wet, odor present, oil noted in cuttings					6-INCH, 40 SLOT, SCHEDULE 40, FLUSH-THREADED, PVC CONTINUOUS SLOT WELL SCREEN
10		9-11'	SS	2-5-11-16	10	
12.5	SILTY CLAY - gray, medium stiff, moist	11-13'	SS	5-11-5-7	6	
	END OF BORING AT 13 FEET					

NOTES: 1. BORING WAS LOGGED FROM CUTTINGS TO 9 FEET.
2. "FIELD CHEM" - SAMPLE SCREENED WITH A PHOTOIONIZATION METER FOR TOTAL VOLATILE ORGANIC COMPOUNDS (in parts per million).
3. SS - SPLIT-SPOON SAMPLE.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES, IN

PROJECT NO.: 5883-02	PROJECT NAME: GM POWERTRAIN		BORING/WELL DESIGNATION: TMW-19	BORING/WELL LOCATION
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 12 IN.	BOREHOLE DEPTH: 13.5 FT.	TMW-19, 22' N, 7.5' E, H3-708
DATE STARTED: 01/22/92	DATE COMPLETED: 01/22/92	GROUND ELEV.: ------ FT.	MEASURING POINT ELEV: -------- FT.	WELL DEPTH: 13 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONALD	LOGGED BY: K. MISH	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	FIELD CHEM.	COMMENTS
0	CONCRETE					WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	SAND FILL - brown with black staining, fine to medium grained, trace fine gravel, dry to moist					CONCRETE
2.5						BENTONITE CHIPS
	SAND - green/brown, fine to medium grained, some silt or clay, trace fine gravel, moist					6-INCH, SCHEDULE 40, FLUSH-THREADED, PVC WELL CASING
5	SAND - brown to light brown, fine-grained, loose, well-sorted, moist, petroleum odor noted at 6.5 feet					FILTER PACK
7.5						6-INCH, 40 SLOT, SCHEDULE 40, FLUSH-THREADED, PVC CONTINUOUS SLOT WELL SCREEN
	SAND - grey, fine-grained, well-sorted, trace to some silt, wet, strong hydrocarbon odor, sheen noted on saturated sample	9-11'	SS	2-5-11-14	18	
10		11-13'	SS	0-4-6-20	13	
	SILTY CLAY - gray, stiff, moist					
12.5	END OF BORING AT 13.5 FEET					

NOTES: 1. BORING WAS LOGGED FROM CUTTINGS TO 9 FEET.
2. "FIELD CHEM" - SAMPLE SCREENED WITH A PHOTOIONIZATION METER FOR TOTAL VOLATILE ORGANIC COMPOUNDS (in parts per million).
3. SS - SPLIT-SPOON SAMPLE.

BORING LOG / MONITORING WELL DIAGRAM

ABB ENVIRONMENTAL SERVICES,

PROJECT NO.: 5883-02	PROJECT NAME: GM POWERTRAIN		BORING/WELL DESIGNATION: TMW-20	BORING/WELL LOCATI
DRILLING CONTRACTOR: P.S.I.	DRILLING METHOD: Hollow Stem Auger	BOREHOLE SIZE: 12 IN.	BOREHOLE DEPTH: 14 FT.	N, G-68, TMW-20, 38.5'
DATE STARTED: 01/27/92	DATE COMPLETED: 01/27/92	GROUND ELEV.: ------ FT.	MEASURING POINT ELEV: -------- FT.	WELL DEPTH: 13 FT.
RIG: CME-45	DRILLER: M. BOND	HELPER: C. McDONALD	LOGGED BY: K. MISH	

DEPTH (FT.)	DESCRIPTION	SAMPLE NO.	SAMPLE TYPE	BLOW COUNTS(N)	FIELD CHEM.	COMMENTS
0	CONCRETE					WELL FINISHED BELOW GRADE WITH A LOCKABLE CAP AND MANHOLE COVER
	SAND - yellow brown, fine-grained, loose, well-sorted, trace fine gravel, damp to wet at 7 feet					CONCRETE
2.5						BENTONITE CHIPS
						6-INCH, SCHEDULE 40, FLUSH-THREADED, PVC WELL CASING
5						FILTER PACK
7.5						6-INCH, 40 SLOT, SCHEDULE 40, FLUSH-THREADED, PVC CONTINUOUS SLOT WELL SCREEN
	SAND - grey, fine to medium grained, wet, trace to some silt, petroleum odor present	8-10'	SS	3-4-8-12	10	
10		10-12'	SS	1-2-2-3	10	
12.5	SILTY CLAY - gray, medium stiff, moist					
	END OF BORING AT 14 FEET					
15						

NOTES: 1. BORING WAS LOGGED FROM CUTTINGS FROM 1 TO 8 FEET AND 12 TO 14 FEET.
2. "FIELD CHEM" - SAMPLE SCREENED WITH A PHOTOIONIZATION METER FOR TOTAL VOLATILE ORGANIC COMPOUNDS (in parts per million).
3. SS - SPLIT-SPOON SAMPLE.

SECTION C

AQUIFER TEST DATA
GROUNDWATER FLOW DATA
AND
GROUNDWATER FLOW MAPS (TYPICAL)

TABLE C-1
SHALLOW AQUIFER TEST DATA
WILLOW RUN PLANT - YPSILANTI, MICHIGAN

Area	Area of Concern	Date	Well No.	Geologic Unit	Approximate Saturated Thickness (ft)	Test Type	Avg. Hydraulic Conductivity (ft/day)	Other Parameters	Source
1	Chip House Tank Farm Area	4/20/92	MW-605	Sand	7	Slug Test	85.90	---	9803-003
		4/20/96	MW-611	Sand	7	Slug Test	83.20	---	9803.003
		4/20/96	MW-612	Sand	7	Slug Test	70.90	---	9803.003
		3/3/93	PW-1	Sand	7	Pump Test	5.67	T=297 gpd/ft	9803-005
		3/3/93	PW-1	Sand	7	Pump Test	---	S=0.2	9803-005
2	Bay K-35 Area	1994	MW-403	Silty Sand	1.5 to 5	Slug Test	0.71	---	9803-009
10	ATF Area	1991	---	Sand	5 to 7	Pump Test	7.32	---	9803-028-035
11	Dynamometer & Bay EE-10 Area	1990	MW-18	Silty Sand	1.5 to 6	Slug Test	2.32	---	9803-041
		1990	MW-20	Silty Sand	1.5 to 6	Slug Test	1.57	---	9803-041
		1990	RW-1	Silty Sand	1.5 to 6	Pump Test	---	T=28 gpd/ft	9803-042
		11/9/89	MW-11	Silty Sand	1.5 to 6	Slug Test	2.32	---	9803-037
		11/9/89	MW-14	Silty Sand	1.5 to 6	Slug Test	0.10	---	9803-037
		11/9/89	R-3	Silty Sand	1.5 to 6	Slug Test	0.05	---	9803-037
14	Product Engineering Tank Farm	32771	MW-03	Silty Sand	NA	Slug Test	0.43	---	9803.056
17	Building 19 Tank Farm Area	1/7/92	MW-01	Silty Sand	NA	Slug Test	11.74	S=1.0E-3	9803-064
		1/7/92	MW-02	Silty Sand	NA	Slug Test	3.66	S=9.9E-2	9803-064
21	Bay E-28 & Scrap Yard Area	1990/1991	---	Silty Sand	5	---	---	---	9803-078/081
22	Subtest Area	9/20/89	MW-41	Silty Sand	5	Slug Test	7.65	---	9803-089-091
		9/20/89	MW-43	Silty Sand	5	Slug Test	14.74	---	9803-089-091
		9/20/89	MW-44	Silty Sand	5	Slug Test	13.61	---	9803-089-091
		9/20/89	TMW-1	Silty Sand	5	Slug Test	20.98	---	9803-089-091
		9/20/89	TMW-10	Silty Sand	5	Slug Test	42.53	---	9803-089-091
		9/20/89	TMW-13	Silty Sand	5	Slug Test	28.07	---	9803-089-091

T = Transmissivity of shallow aquifer
S = Storativity of shallow aquifer

TABLE C-2
GROUNDWATER FLOW DATA
WILLOW RUN PLANT - Ypsilanti, Michigan

Area	Area of Concern	Date	Geologic Unit	Direction	Gradient (ft/foot)	Ave. Velocity (ft/year)	Source
1	Chip House Tank Farm Area	3/3/93	Sand	South Southwest	9.00E-03	93	9803-005
2	Bay K-35 Area	1994	Silty Sand		4.00E-03	9.52	
3	Bay K-42	3/5/92	Silty Fine Sand	Southeast	3.00E-03	7.14	9803-010
4	Drum Handling Area	6/24/93	Silty Sand	South Southeast	4.30E-03	---	9803-011
		8/25/93	Silty Sand	South	---	---	9803-014
		12/1/93	Silty Sand	South	---	---	9803-012
		2/5/94	Silty Sand	South Southeast	---	---	9803-013
		9/13/94	Silty Sand	South Southeast	---	---	9803-015
		12/6/94	Silty Sand	South Southeast	---	---	9803-016
6	Bay E-49	6/24/93	Silty Fine Sand	East Southeast	4.80E-04	1.14	9803-021
		2/6/92	Silty Fine Sand	East Northeast	3.60E-03	8.57	9803-022
8	Dynamometer & Bay EE-10 Area	1/12/93	Silty Sand	South Southeast	4.00E-03	6.19	9803-042
10	ATF Area	1987	Sand	South Southwest	2.50E-03	17	9803-036
12	North Yard	3/21/89	Silty Sand	South Southwest	1.90E-03	---	9803-048
		6/1/89	Silty Sand	Southeast	---	---	9803-053
		9/1/89	Silty Sand	East Southeast	---	---	9803-053
		12/1/89	Silty Sand	East Southeast	---	---	9803-053
		3/1/90	Silty Sand	South Southeast	---	---	9803-053
		7/1/90	Silty Sand	Southeast	---	---	9803-053
		9/1/90	Silty Sand	Southwest	---	---	9803-053
		12/1/90	Silty Sand	South Southeast	---	---	9803-053
14	Product Engineering Tank Farm	12/21/89	Sand	South Southeast	6.80E-03	---	9803-056
		8/6/90	Sand	South Southeast	6.80E-03	---	9803-057
		8/6/92	Sand	South Southeast	1.50E-02	---	9803-059
15	Bay L/E-5	8/15/92	Silty Fine Sand	Southeast	8.40E-03	---	9803-063
17	Building 19 Tank Farm Area	3/21/89	Silty Sand	South Southwest	8.60E-04	---	9803-065/068
19	Bay C-40	1/7/92	Silty Sand	East Southeast	2.70E-04	0.64	9803-075
20	Bay Q-24 Area	3/21/89	Silty Sand	South	9.90E-04	---	9803-076
		9/11/89	Silty Sand	South	1.60E-03	---	9803-077
21	Bay E-28 & Scrap Yard Area	8/7/90	Silty Fine Sand	Southeast	3.40E-03	---	9803-081
22	Subtest Area	1989	Sand	South Southwest	4.00E-03	103	9803-089/090

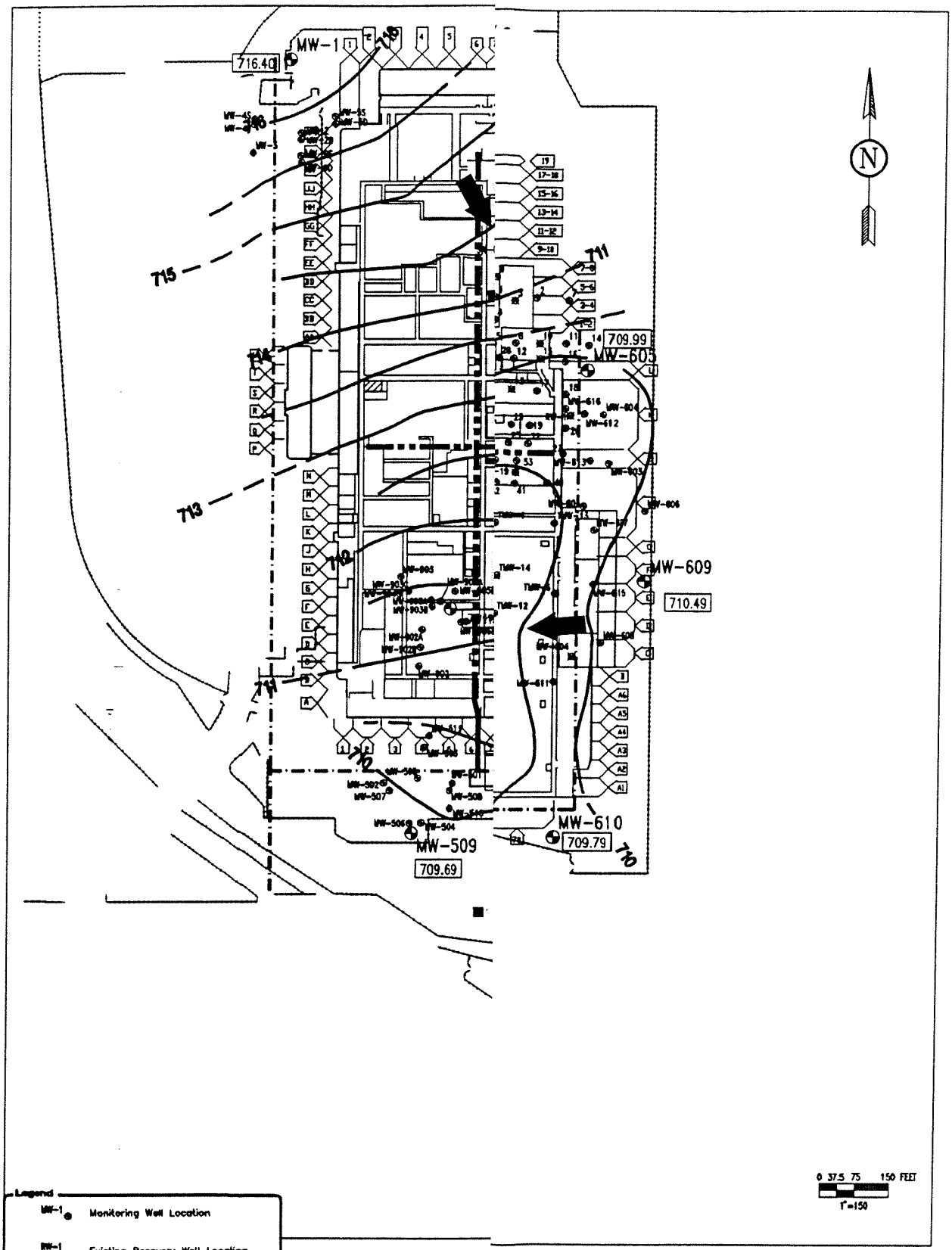


FIGURE C-1
GROUNDWATER FLOW MAP
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

ABB Environmental Services, Inc.

AREA 1

CHIP HOUSE TANK FARM

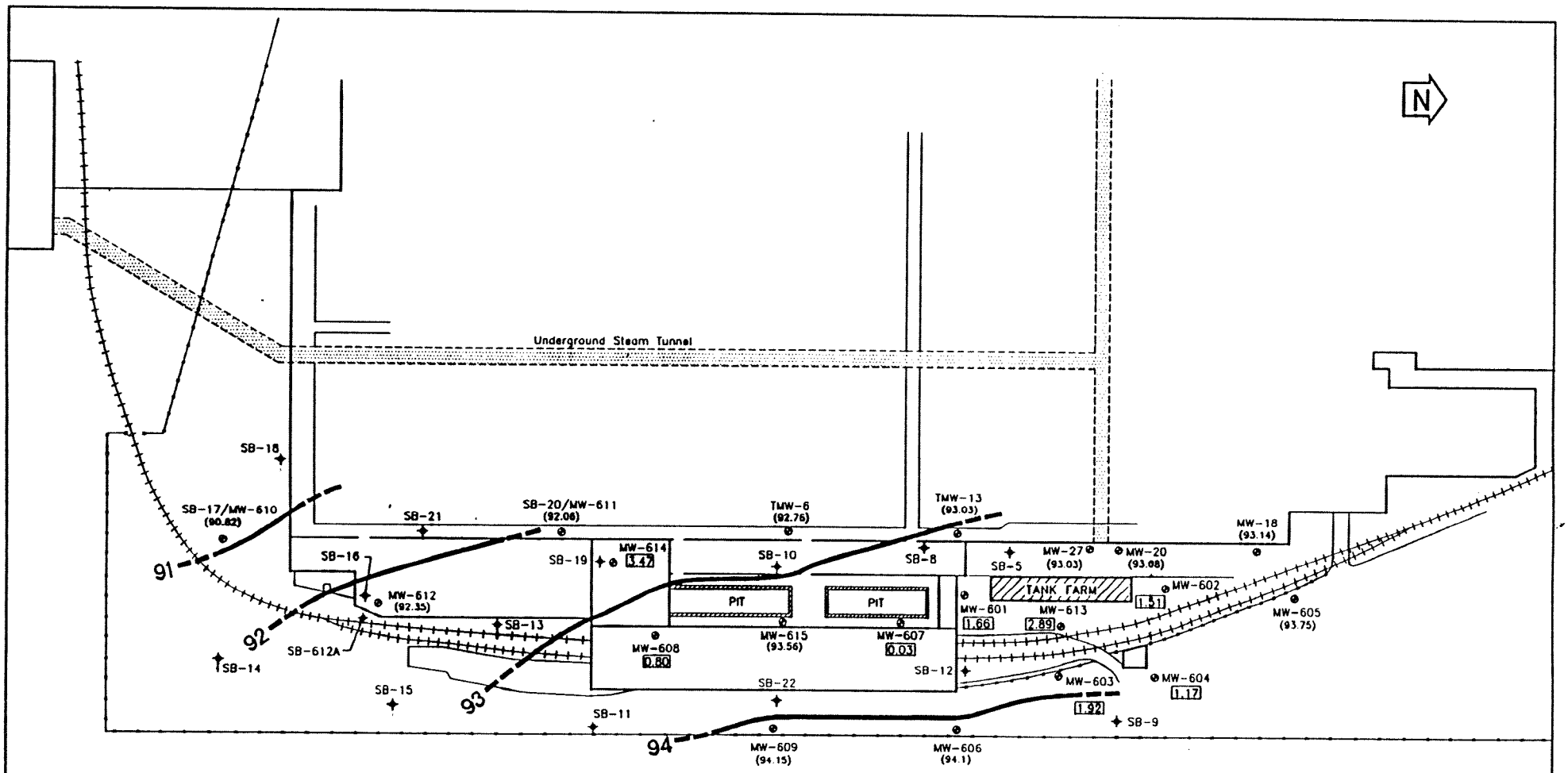
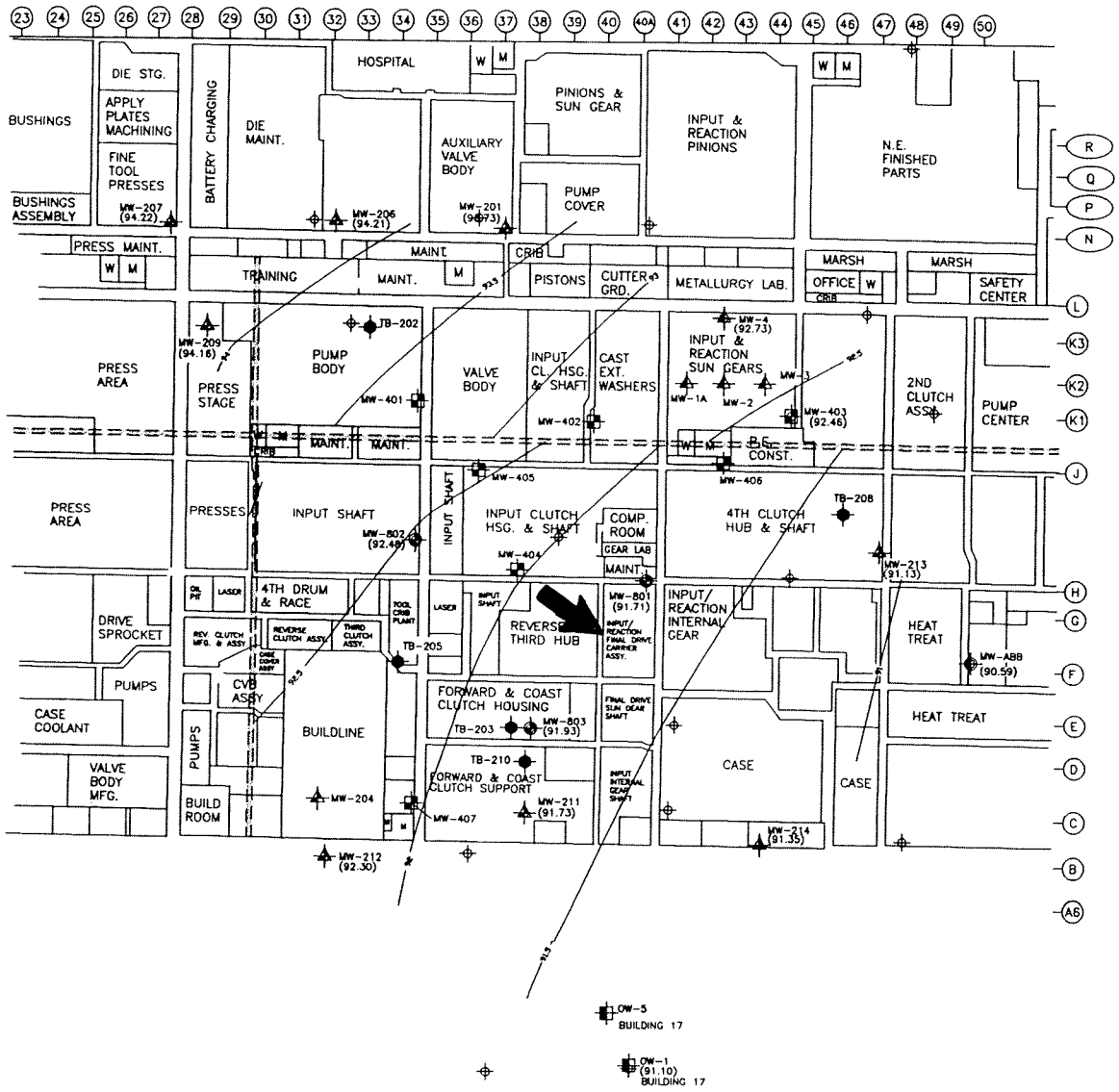


FIGURE 4-1
GROUNDWATER CONTOUR MAP/APPARENT PRODUCT THICKNESS
CHIP HOUSE AREA
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

AREA 2

BAY K-35



LEGEND:

- APPROXIMATE LOCATION OF TEST BORING WITH 2-INCH GROUNDWATER MONITORING WELL BY GEO-TEK, INC. UNDER THE SUPERVISION OF NTH CONSULTANTS, LTD. FROM 8-1-92 THROUGH 9-14-92 AND 3-18-93 TO 3-17-93.
- APPROXIMATE LOCATION OF TEST BORING WITH 4-INCH GROUNDWATER MONITORING WELL BY GEO-TEK, INC. UNDER THE SUPERVISION OF NTH CONSULTANTS, LTD. FROM 9-1-92 THROUGH 9-18-92.
- APPROXIMATE LOCATION OF TEST BORING WITH COMBINATION 2-INCH AND 8-INCH MONITORING WELL BY GEO-TEK, INC. UNDER THE SUPERVISION OF NTH CONSULTANTS, LTD. FROM 9-15-92 THROUGH 9-17-92.
- APPROXIMATE LOCATION OF TEST BORING BY GEO-TEK, INC. UNDER THE SUPERVISION OF NTH CONSULTANTS, LTD. FROM 9-1-92 THROUGH 9-18-92.
- (N) PLANT COLUMN BLOCK COORDINATES
- APPROXIMATE LOCATION OF UNDERGROUND STEAM TUNNEL
- APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL BY ABB ENVIRONMENTAL SERVICES, INC.
- APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY GEO-TEK, INC. UNDER THE SUPERVISION OF NTH ON 9-27-92 & 2-9-93 FOR BUILDING 17 "PHASE I HYDROGEOLOGIC STUDY" BY NTH CONSULTANTS, LTD.
- APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY MATECO DRILLING CO. UNDER THE SUPERVISION OF NTH ON 2-4-94 THRU 2-16-94 FOR "HYDROGEOLOGIC STUDY AND CONTAMINATION ASSESSMENT" BY NTH CONSULTANTS, LTD.
- 91.5 CONTOUR LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION CONTOUR INTERVAL = 0.50 FEET
- (90.59) WATER LEVEL ELEVATION OR EQUIVALENT POTENTIOMETRIC SURFACE ELEVATION BASED ON FLUID LEVELS MEASURED IN MONITORING WELL ON 3-18-93 BY NTH CONSULTANTS, LTD.

NOTES:

1) SITE PLAN TAKEN FROM DRAWING PROVIDED BY GM/HYDRA-MATIC WILLOW RUN, YPSILANTI, MICHIGAN.
2) THE WATER LEVEL CONTOURS PRESENTED ON THIS PLATE ARE GENERALIZED AND SHOULD NOT BE USED TO DETERMINE SPECIFIC WATER LEVEL ELEVATIONS EXCEPT AT INDIVIDUAL MONITORING WELLS.

GROUNDWATER FLOW DIRECTION

NORTH

0 60 120
SCALE FEET

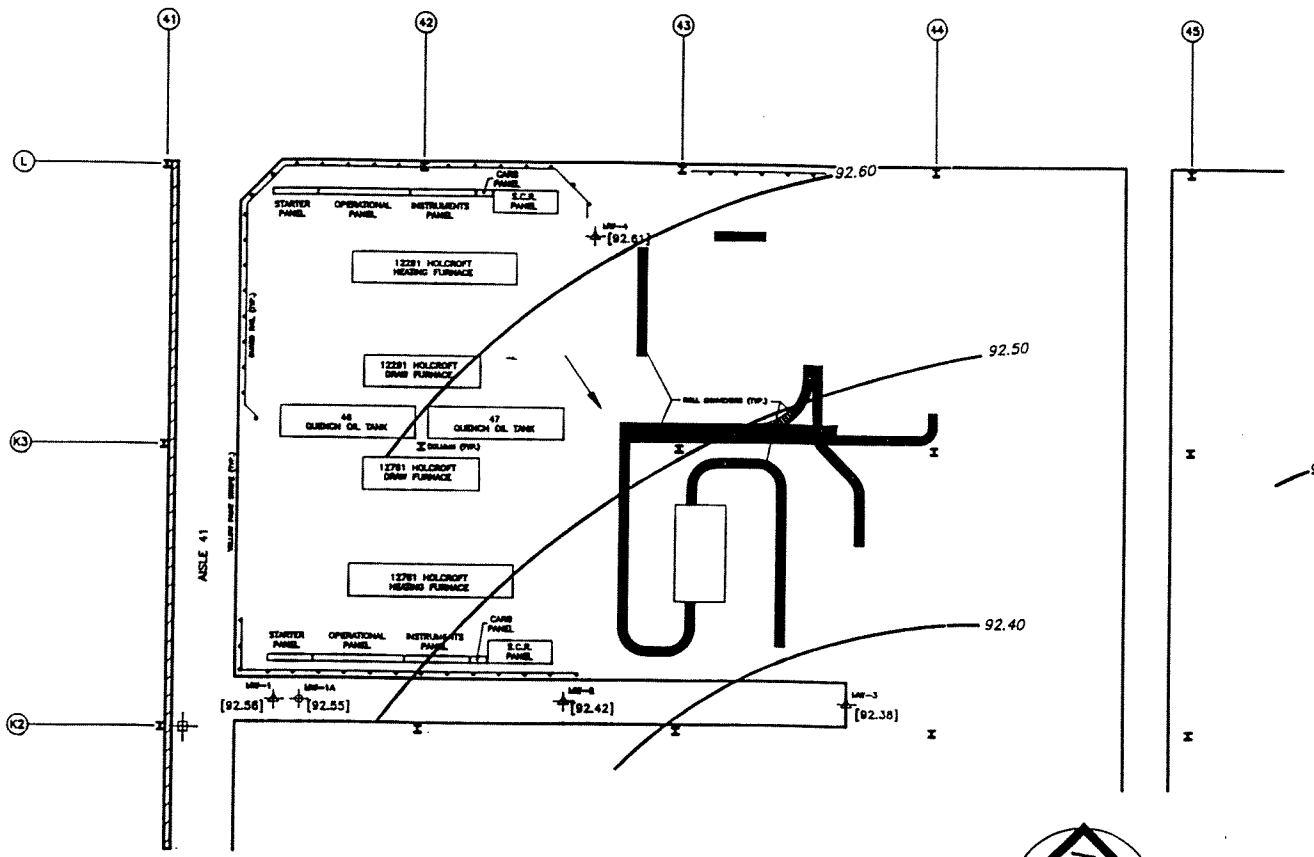
WATER TABLE SURFACE ELEVATION CONTOUR MAP
3-18-93
GM POWERTRAIN - WILLOW RUN
BAY K-35 (PE#2492)
YPSILANTI, MICHIGAN

NTH CONSULTANTS, LTD.
Professional Engineering & Environmental Services
Farmington Hills, Michigan

PROJECT NO.	DRAWN BY	DATE	PLATE NO.
13-2377-03	STD	04-02-93	4
SCALE: AS SHOWN	CHECKED BY	SHEET 1 of 1	

BAY 3

BAY K-42



LEGEND:

- APPROXIMATE LOCATION OF TEST BORING WITH GROUNDWATER MONITORING WELL BY MATECO DRILLING COMPANY UNDER THE SUPERVISION OF NTH CONSULTANTS, LTD. ON 2-4-92 THROUGH 2-10-92.
- APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL BY MATECO DRILLING COMPANY UNDER THE SUPERVISION OF NTH CONSULTANTS, LTD. ON 2-7-92.
- ARBITRARY DATUM LOCATION
- [92.38] EQUIVALENT POTENTIOMETRIC HEAD ELEVATION MEASURED IN WELLS ON 2-17-92.
- 92.50 CONTOUR LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION
- APPARENT GROUNDWATER FLOW DIRECTION

NOTE:

- SITE PLAN TAKEN FROM DRAWING PROVIDED BY GM/HYDRA-MATIC WILLOW RUN, YPSILANTI, MICHIGAN.
- THE POTENTIOMETRIC SURFACE CONTOURS SHOWN ON THIS MAP ARE GENERALIZED, BASED ON ELEVATIONS MEASURED AND CALCULATED AT INDIVIDUAL MONITORING WELLS. AS SUCH, THE CONTOURS MAY NOT REFLECT THE ACTUAL HEAD ELEVATIONS AWAY FROM THE WELLS.
- REFER TO TABLE 3 FOR FLUID MEASUREMENTS AND FREE PRODUCT ADJUSTMENTS.

POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP

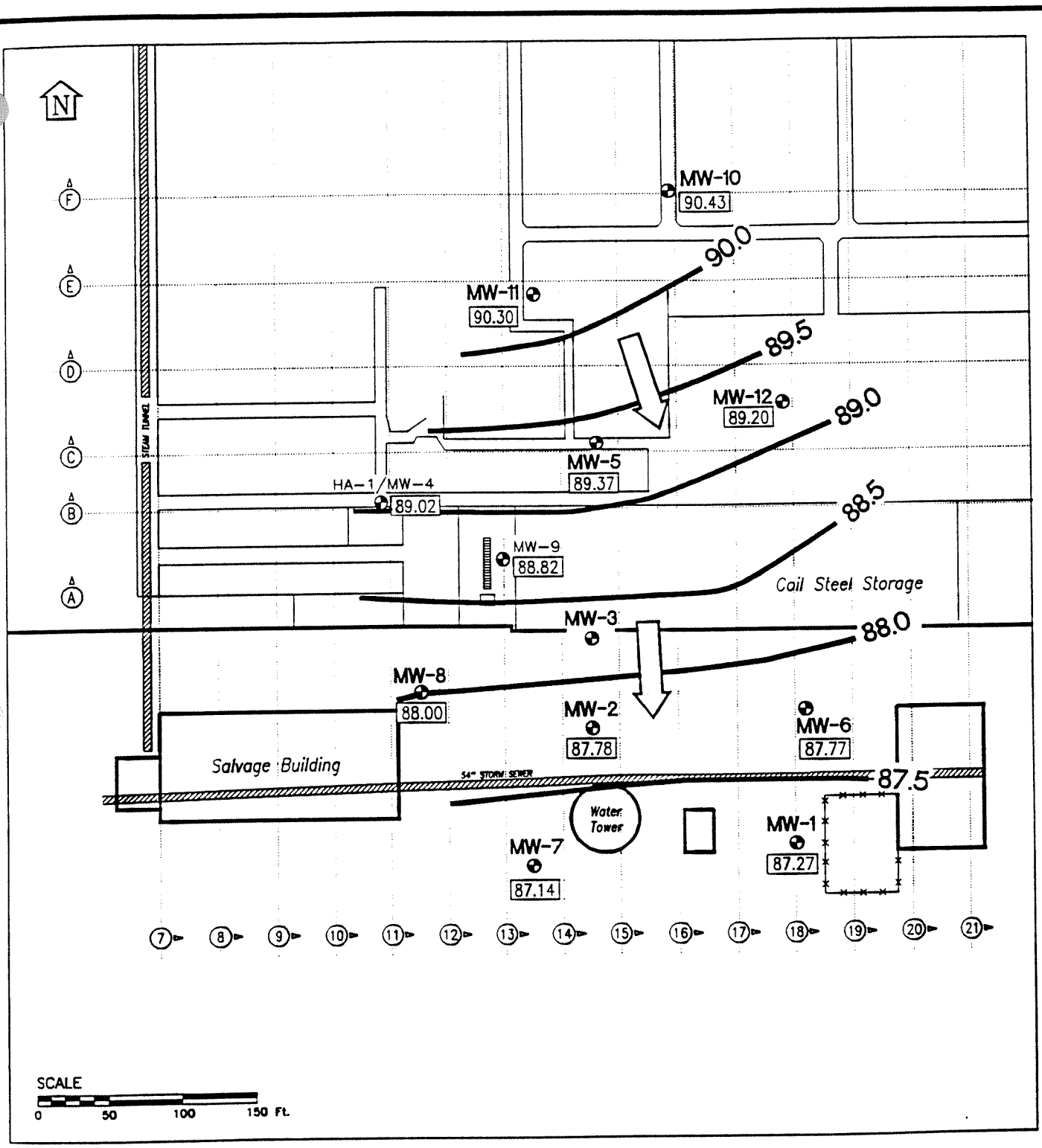
GM/HYDRA-MATIC WILLOW RUN (K-42 PE#5891)
YPSILANTI, MICHIGAN

NTH CONSULTANTS, LTD.
Professional Engineering & Environmental Services
Farmington Hills, Michigan

PROJECT NO.	DRAWN BY:	DATE:	PLATE NO:
13-2016-02	RK	3-6-92	4
SCALE: AS SHOWN	CHECKED BY: MSD	SHEET 1 OF 1	

AREA 4

FORMER DRUM HANDLING AREA



Legend

- Monitoring well
- 89.43 Groundwater elevation (feet)
- Groundwater flow direction

NOTE: Bold well designation denotes monitoring well sampled during the fourth quarter.

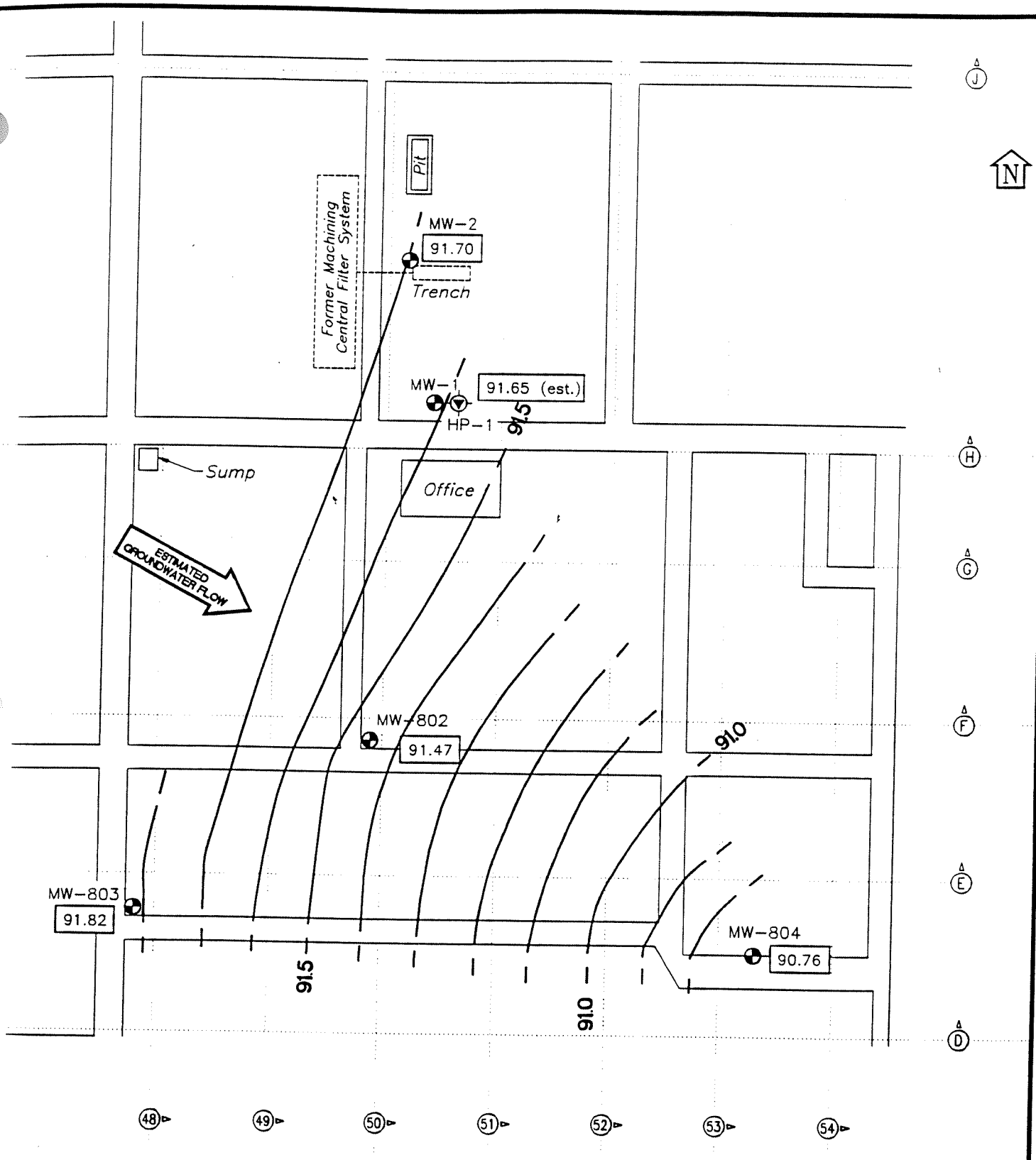
FIGURE 4
GROUNDWATER ELEVATION AND FLOW DIRECTION MAP JANUARY 31, 1994 DRUM HANDLING AREA GM POWERTRAIN PLANT YPSILANTI, MICHIGAN

ABB Environmental Services, Inc.

A9302020/5883-15/AC208 | Drawn: DGH | Rev: 02/15/94 By: DGH Chkd: TW

AREA 5

DEPARTMENT #263



0.1 Foot Contour Interval

LEGEND

- MW-1 — Monitoring well location
- 91.82 — Groundwater elevation
- HP-1 — Hydropunch location
- 91.5 — Groundwater contour

SCALE

0 40 80 Ft.

Revised

FIGURE 4-1
GROUNDWATER ELEVATION AND CONTOURS AND E-49 MONITORING WELL LOCATIONS DEPARTMENT 263 GM POWERTRAIN PLANT YPSILANTI, MICHIGAN

AREA 6

BAY E-49

LEGEND

HAND AUGERED LOCATION

MONITORING WELL LOCATION

ABB MONITORING WELL LOCATION

PROPOSED MONITORING WELL LOCATION

Proposed Monitoring Well

rce: Bay E-49 Phase II Hydrogeologic Investigation (O'B&G, 1994)

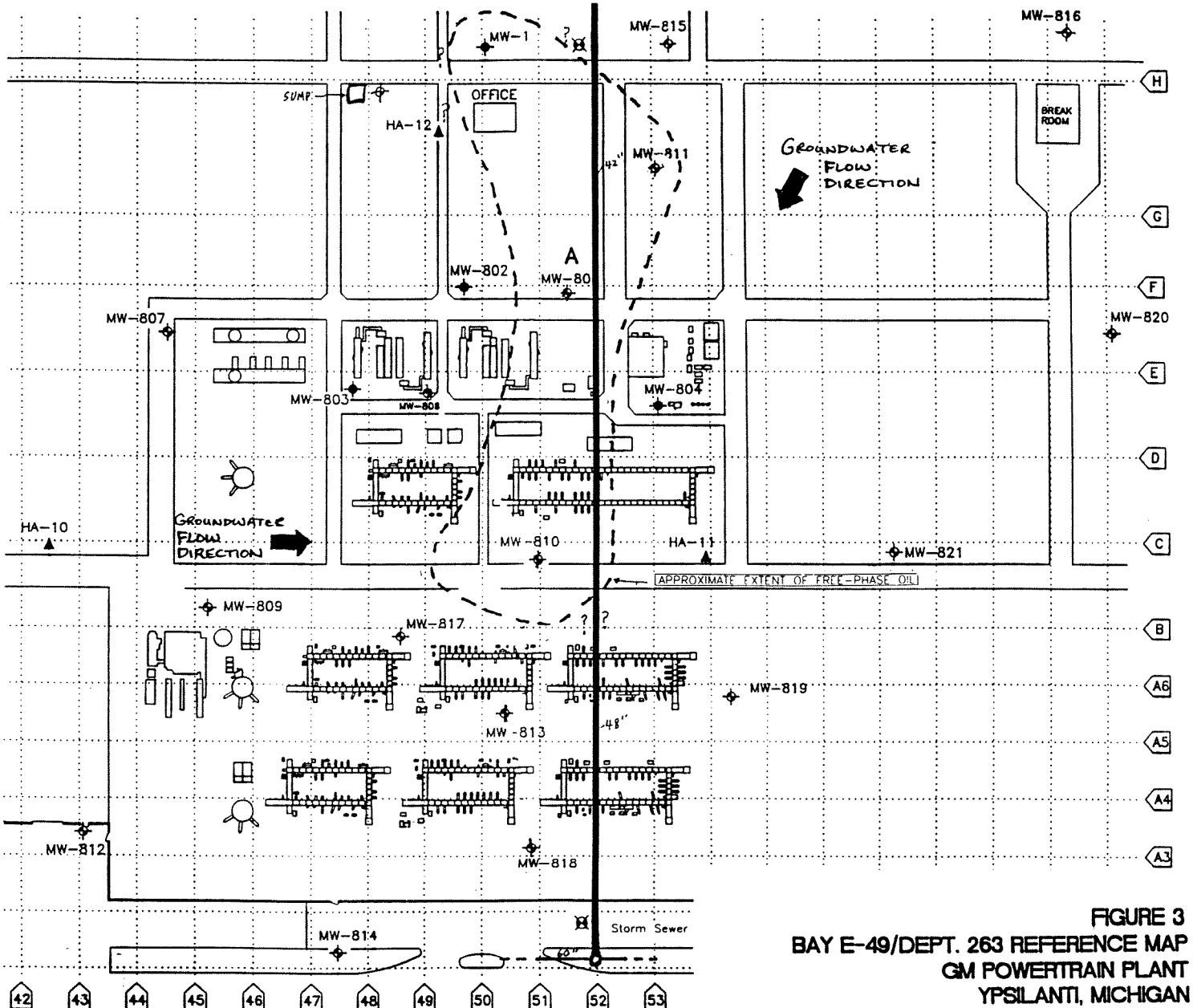


FIGURE 3
BAY E-49/DEPT. 263 REFERENCE MAP
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN
ABB Environmental Services, Inc.

...\9803-01\9803F001.DWG 3-6-96 (PLOT AT 7000 SCALE)

AREA 7

HYDRAULIC LIFT

AREA 8

BAY EE-10

AREA 9

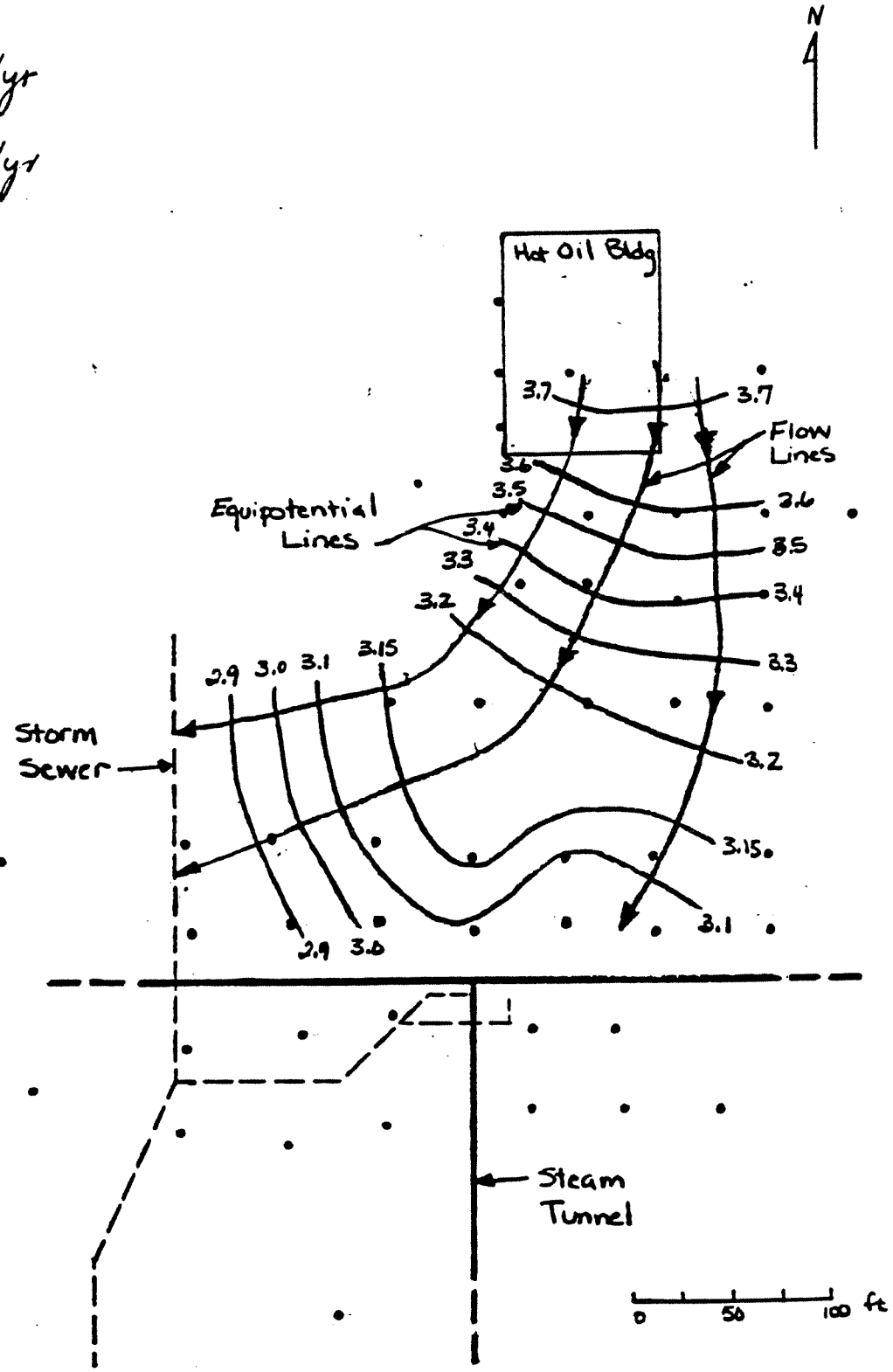
SCRAP YARD

AREA 10

ATF AREA

$\bar{V}_w = 35$ ft/yr

$\bar{V}_o = 14$ ft/yr

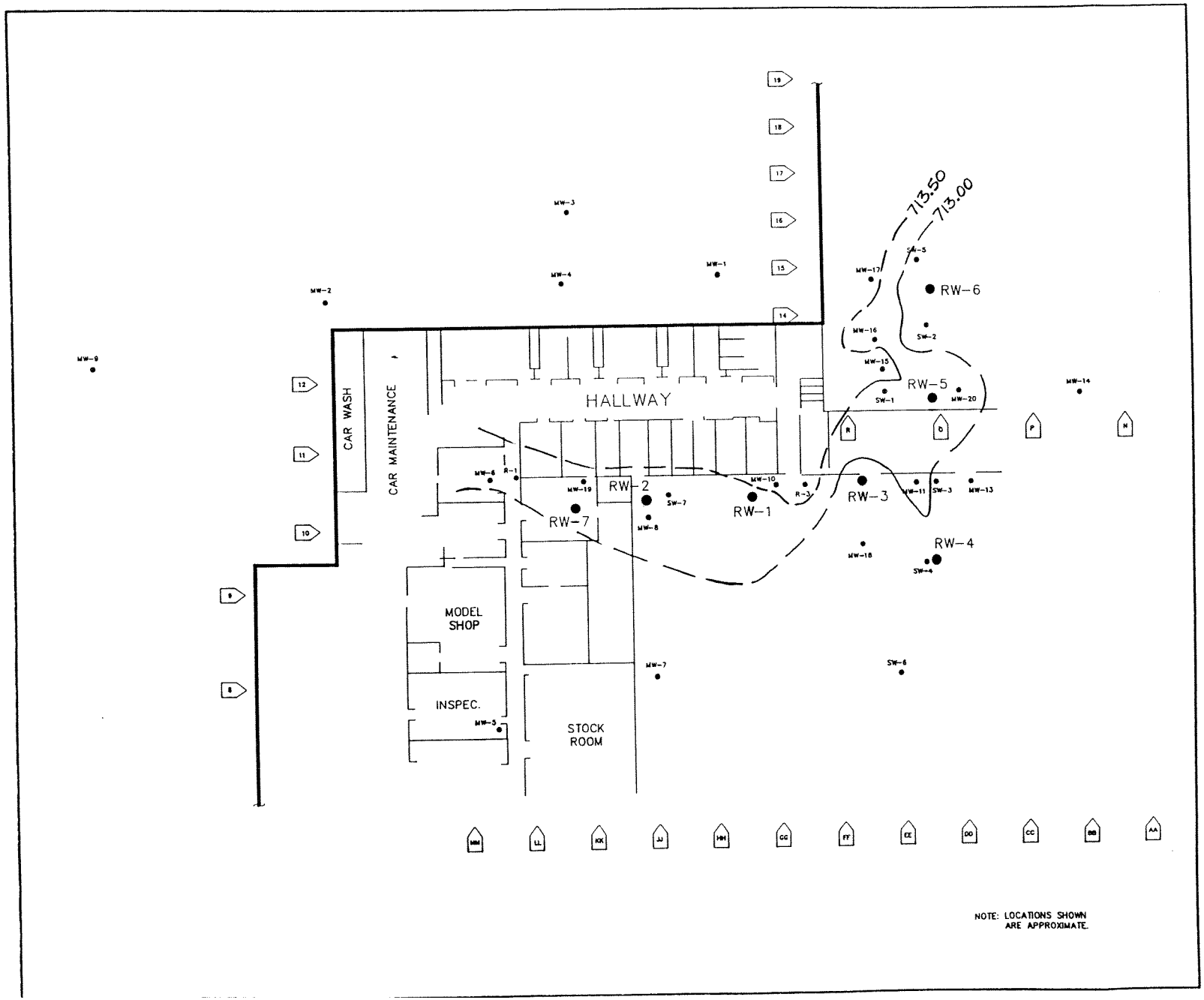


ATF AREA

AREA 11

DYNAMOMETER AREA

FIGURE 3



LEGEND

- COLUMN LINES
- MONITORING WELLS
- RECOVERY WELLS (RW) FOR THIS PROJECT
- 713.00 CONTOUR ELEVATION

GENERAL MOTORS CORPORATION GM POWERTRAIN DIVISION YPSILANTI, MICHIGAN

BASELINE GROUND WATER CONTOUR MAP 1-12-93

60 0 60

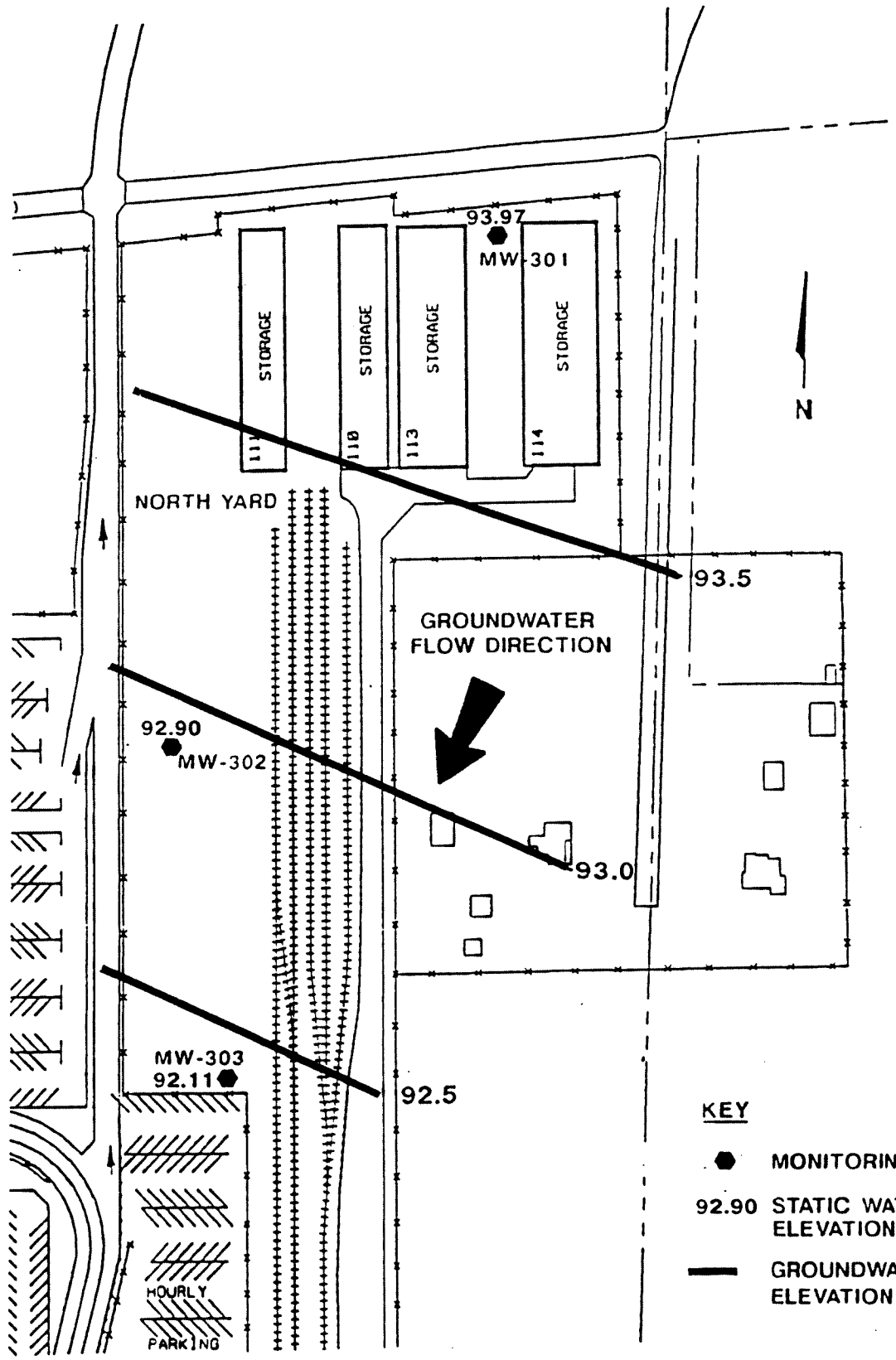
SCALE IN FEET

FILE NO. 2488-225-017

O'BRIEN & GERE ENGINEERS INC.

AREA 12

NORTH YARD



SCALE

0 100 200 400 FEET

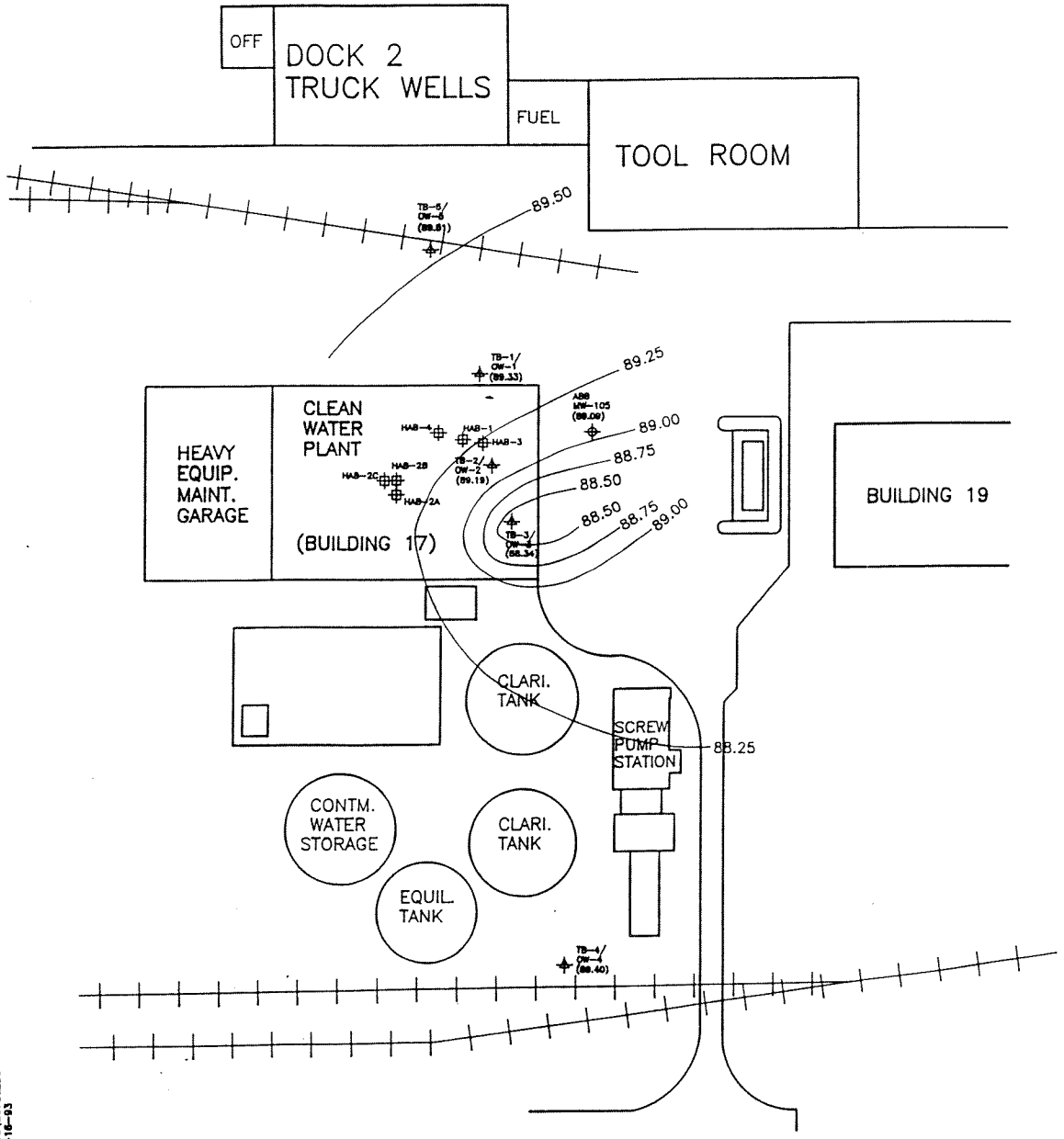
FIGURE 4-1
GROUNDWATER ELEVATION AND FLOW DIRECTION MAP
NORTH YARD
GM HYDRA-MATIC PLANT
YPSILANTI, MICHIGAN

GM DRAWING # HWR-NY-1

EC JORDAN CO

AREA 13

BUILDING #17



LEGEND:

- APPROXIMATE LOCATION OF HAND AUGER BORINGS DRILLED BY NTH CONSULTANTS, LTD. DURING AUGUST 25 AND 26, 1992.
- APPROXIMATE LOCATION OF TEST BORING WITH GROUNDWATER OBSERVATION WELL DRILLED BY GEO-TEK DRILLING CO. UNDER THE SUPERVISION OF NTH CONSULTANTS, LTD. ON AUGUST 27, 1992.
- APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL BY ABB ENVIRONMENTAL SERVICES, INC.
- (89.51) GROUNDWATER LEVEL ELEVATION MEASURED AT INDIVIDUAL OBSERVATION WELL ON 3-10-93.
- 88.25 CONTOUR LINE OF EQUAL WATER LEVEL ELEVATION. CONTOUR INTERVAL = 0.25 FEET

NOTES:
1.) SITE PLAN TAKEN FROM DRAWING PROVIDED BY GM/HYDRA-MATIC WILLOW RUN, YPSILANTI, MICHIGAN

2.) THE WATER LEVEL CONTOURS PRESENTED ON THIS PLATE ARE GENERALIZED AND SHOULD NOT BE USED TO DETERMINE SPECIFIC WATER LEVEL ELEVATIONS EXCEPT AT INDIVIDUAL OBSERVATION WELLS.

NORTH

0 60 120

SCALE FEET

WATER TABLE SURFACE ELEVATION CONTOUR MAP

GM POWER TRAIN-WILLOW RUN
BUILDING 17 (PE #2392)
YPSILANTI, MICHIGAN

DRAFT

NTH CONSULTANTS, LTD.
Professional Engineering & Environmental Services
Farmington Hills, Michigan

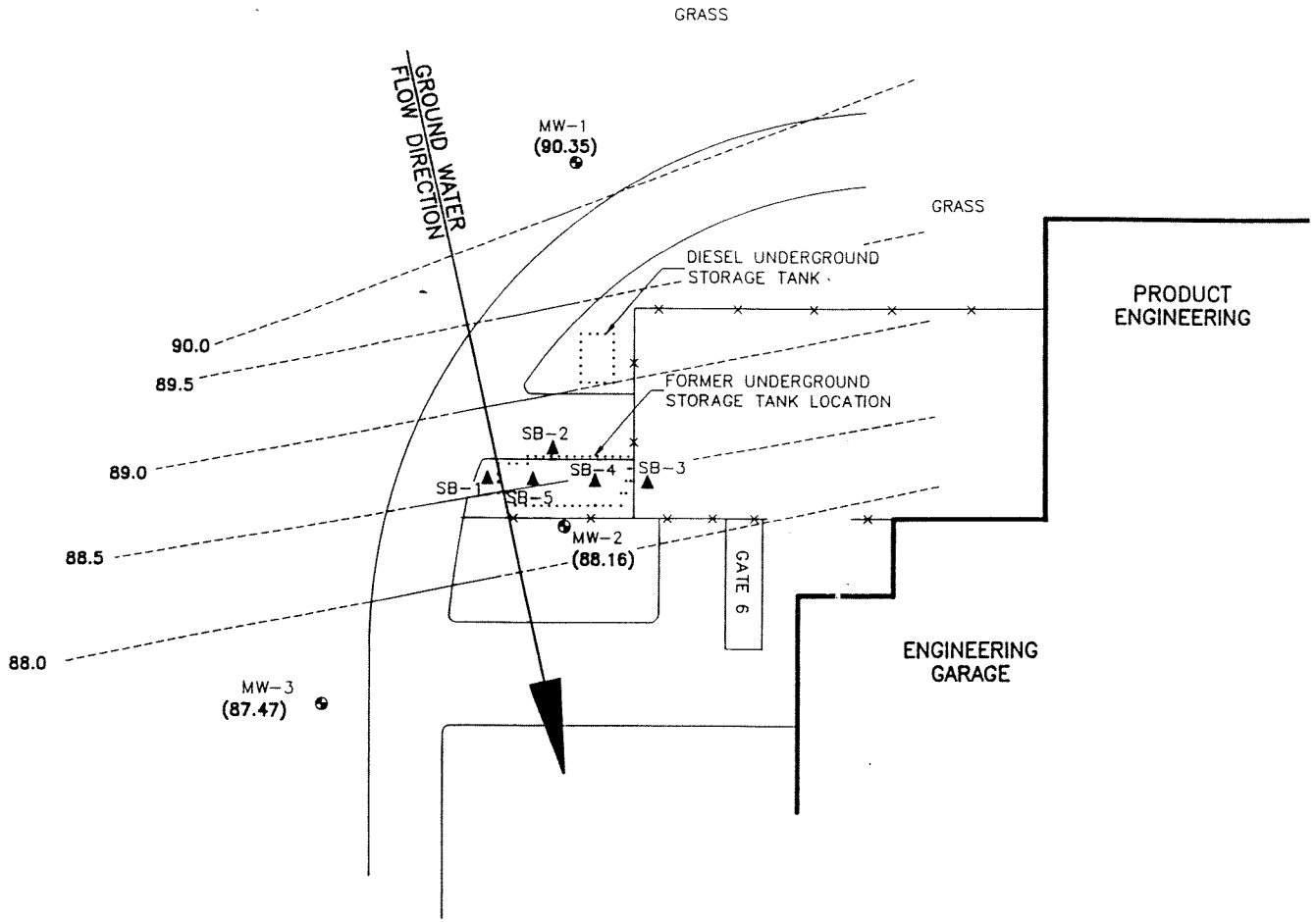
PROJECT NO. 13-2370-02	DRAWN BY: JD	DATE: 02-10-93	PLATE NO. 5
SCALE: AS SHOWN	CHECKED BY: MD	SHEET 1 OF 1	

C:\TV\2370250
03-16-93

AREA 14

PRODUCT ENGINEERING TANK FARM

FIGURE 5



LEGEND

⊕	MONITORING WELL
▲	SOIL BORING
(87.47)	GROUND WATER ELEVATION

GENERAL MOTORS CORPORATION HYDRA-MATIC DIVISION PETF

GROUND WATER ELEVATION MAP (8-6-92)

50 0 50

SCALE: 1"=50'-0"

FILE NO. 4585-008-002

O'BRIEN & GERE

AREA 15

BAY L-5 AND E-5

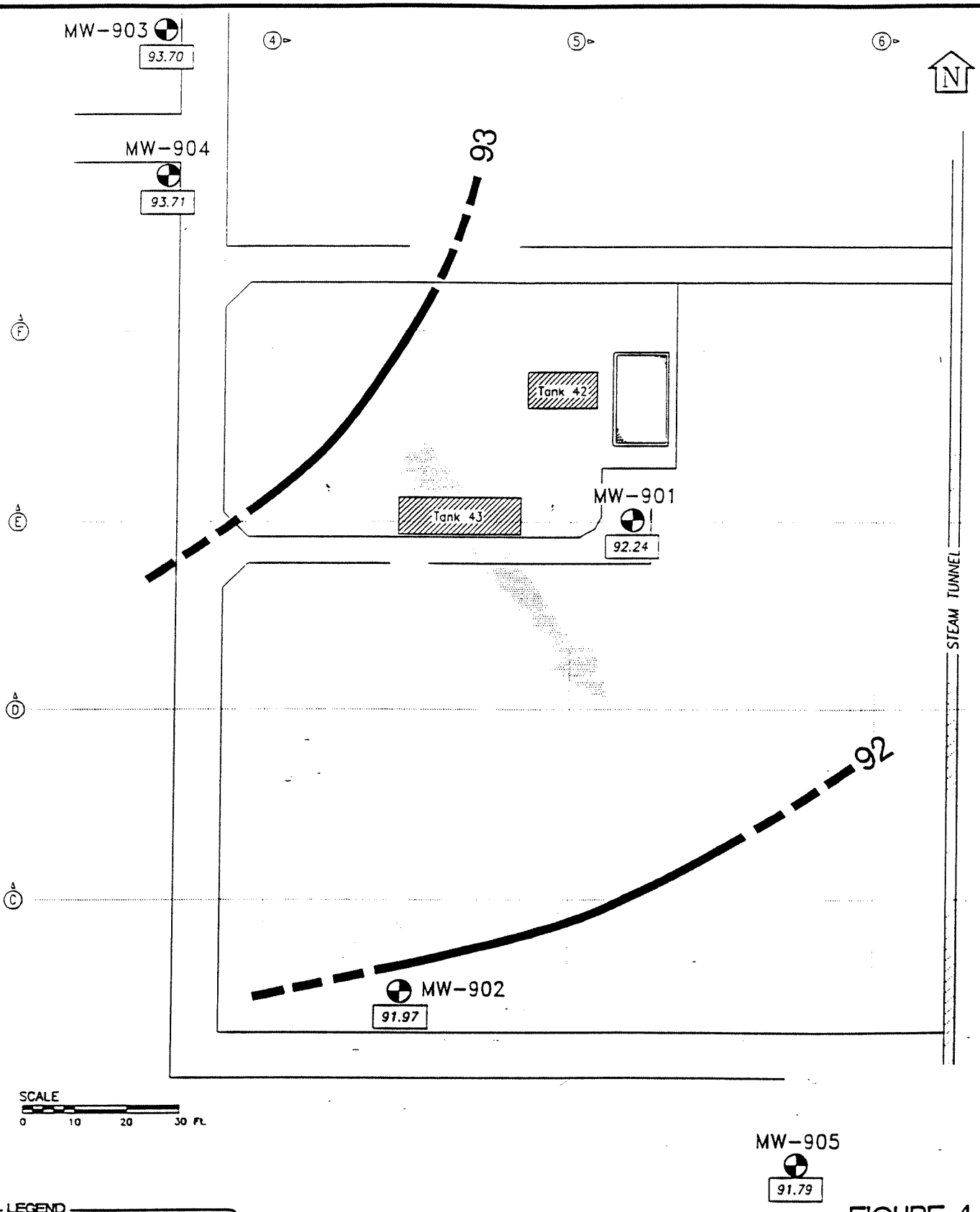


FIGURE 4-3
GROUNDWATER ELEVATIONS AND FLOW DIRECTION
OCTOBER 1992
BAY E-5
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

ABB ENVIRONMENTAL SERVICES, INC.

A9212020/5883-12/AC112

AREA 16

TANK #84

AREA 17

BUILDING #19 TANK FARM

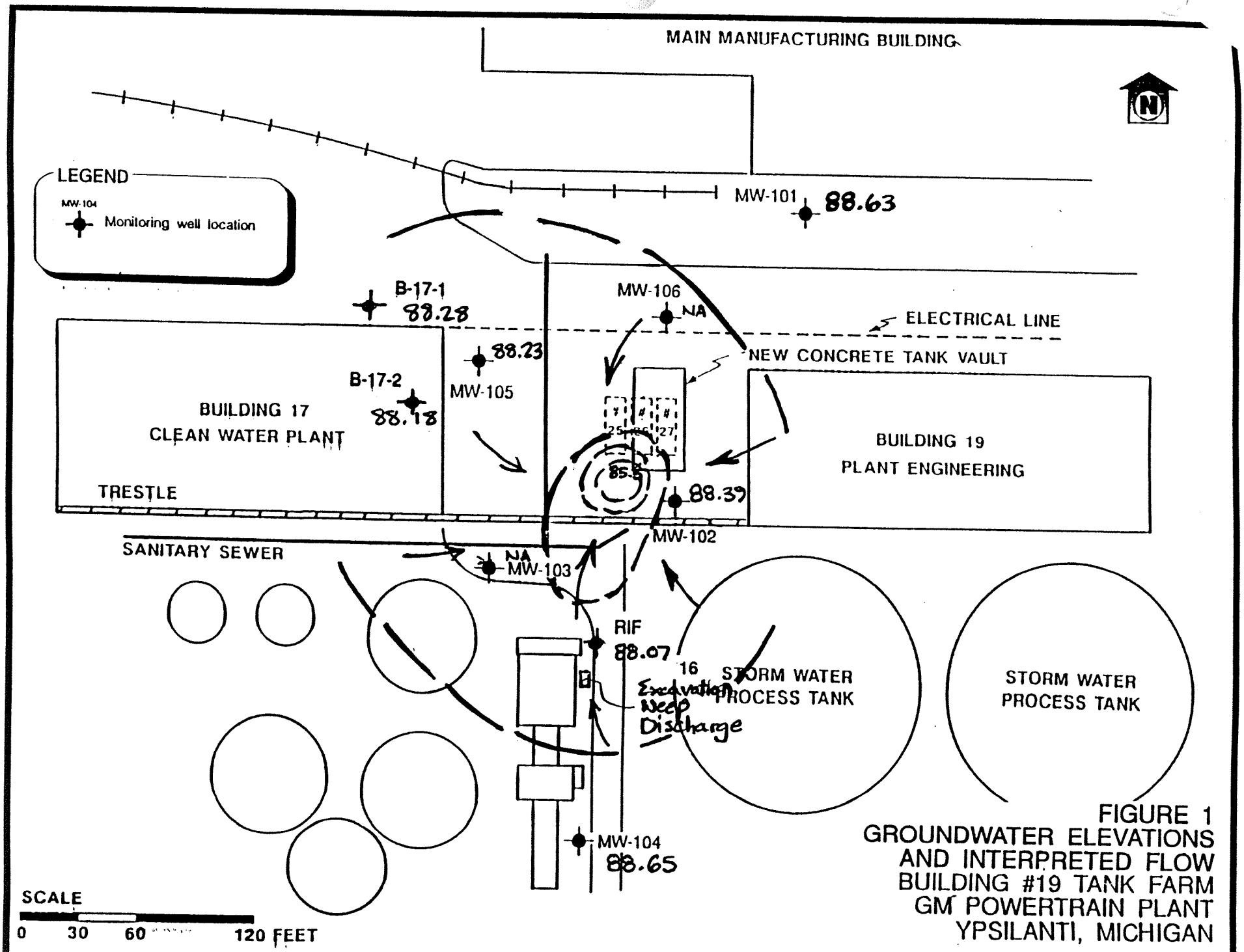


FIGURE 1
GROUNDWATER ELEVATIONS
AND INTERPRETED FLOW
BUILDING #19 TANK FARM
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

ABB ENVIRONMENTAL SERVICES, INC.

AREA 18

SALVAGE BUILDING TANK FARM

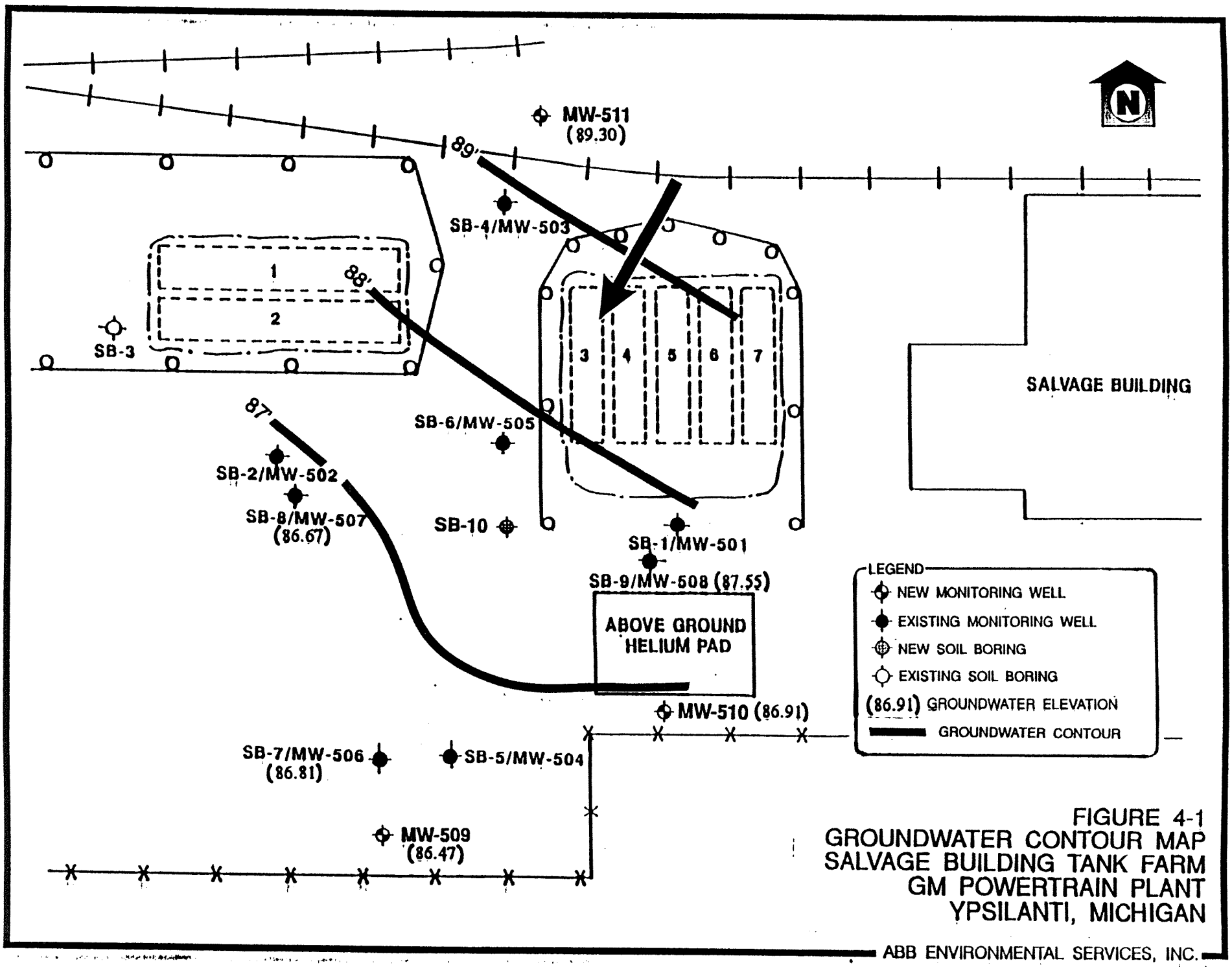


FIGURE 4-1
GROUNDWATER CONTOUR MAP
SALVAGE BUILDING TANK FARM
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

ABB ENVIRONMENTAL SERVICES, INC.

AREA 19

BAY C-40

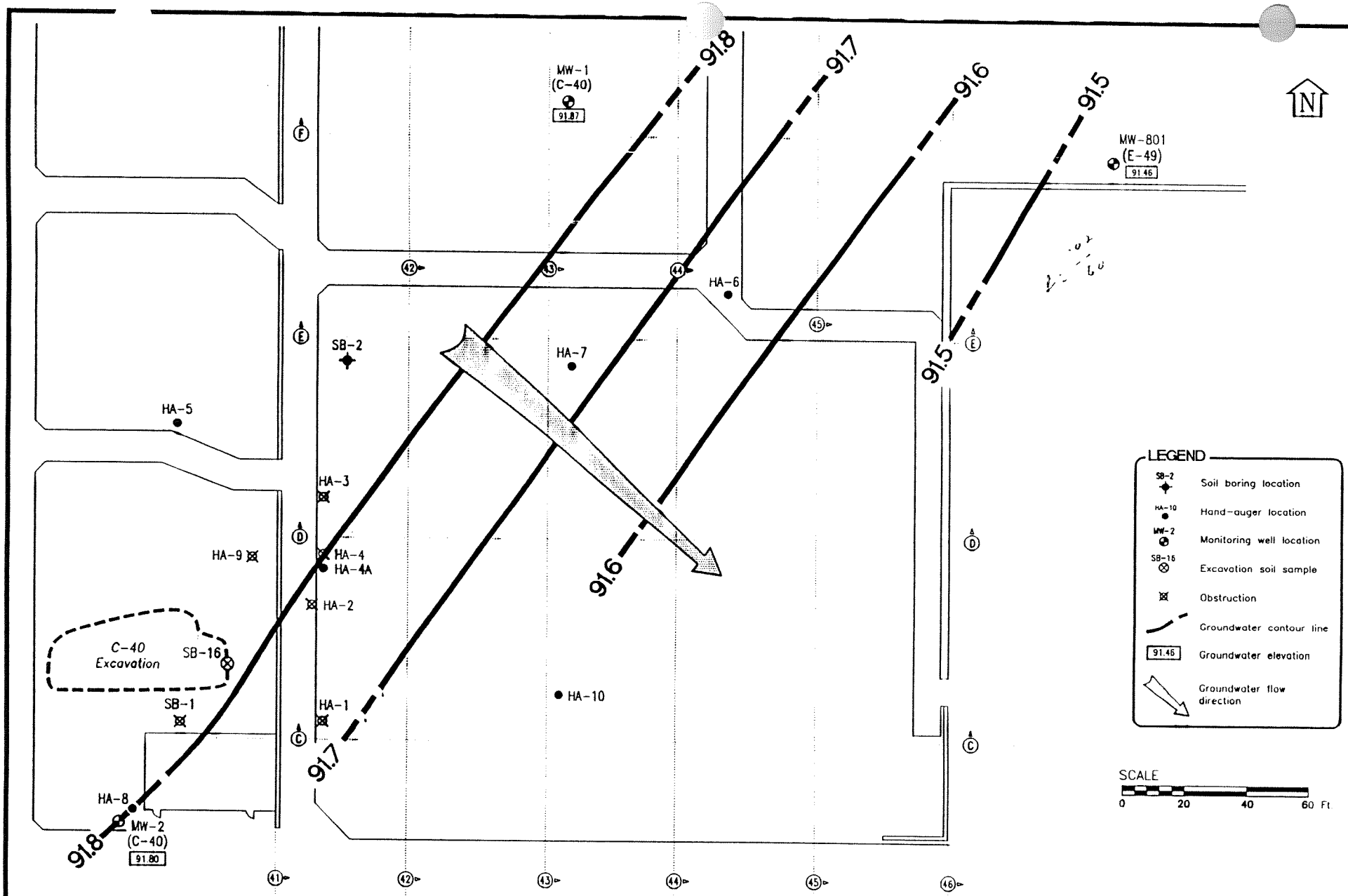


FIGURE 4-1
GROUNDWATER CONTOUR MAP
BAY C-40 AREA
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

ABB ENVIRONMENTAL SERVICES, INC.

A9211002/5683-11/AC130 | Drawn: DGH | Rev: 04/29/93 By: RLA

AREA 20

BAY Q-24

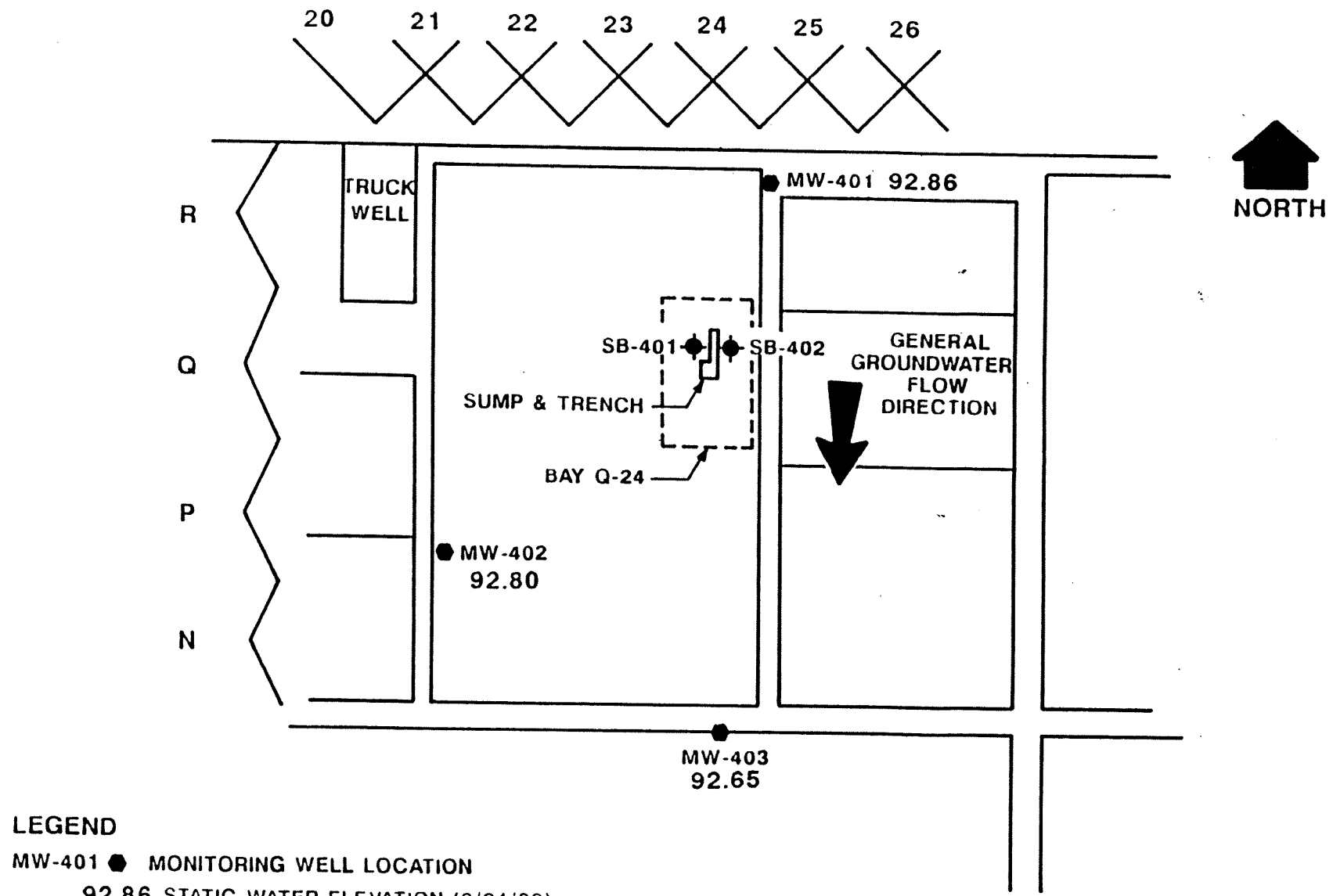
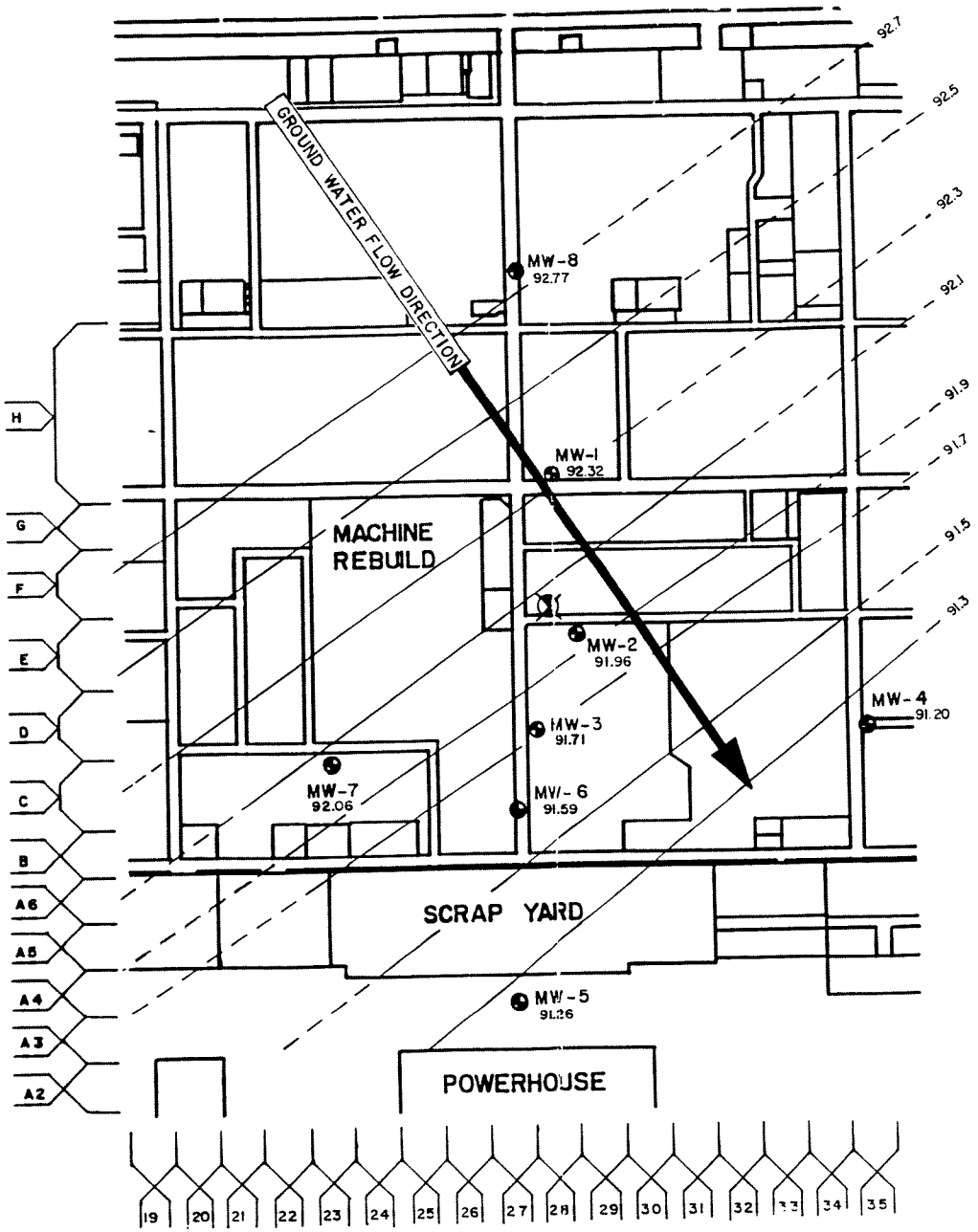


FIGURE 4-1
GROUNDWATER ELEVATON AND FLOW DIRECTION MAP
BAY Q-24
GM HYDRA-MATIC PLANT
YPSILANTI, MICHIGAN

AREA 21

BAY E-28

FIGURE 6



N

LEGEND

— MONITORING WELL

92.32 — GROUND WATER ELEVATION

— REPORTED SOURCE OF PETROLEUM CONTAMINATION

GENERAL MOTORS CORPORATION
HYDRA-MATIC DIVISION

8/7/90
GROUND WATER ELEVATION MAP
E-28

NOT TO SCALE

O'BRIEN & GERE

AREA 22

SUBTEST AREA

SECTION D

LOCATIONS OF SOIL BORINGS
AND
MONITORING WELLS

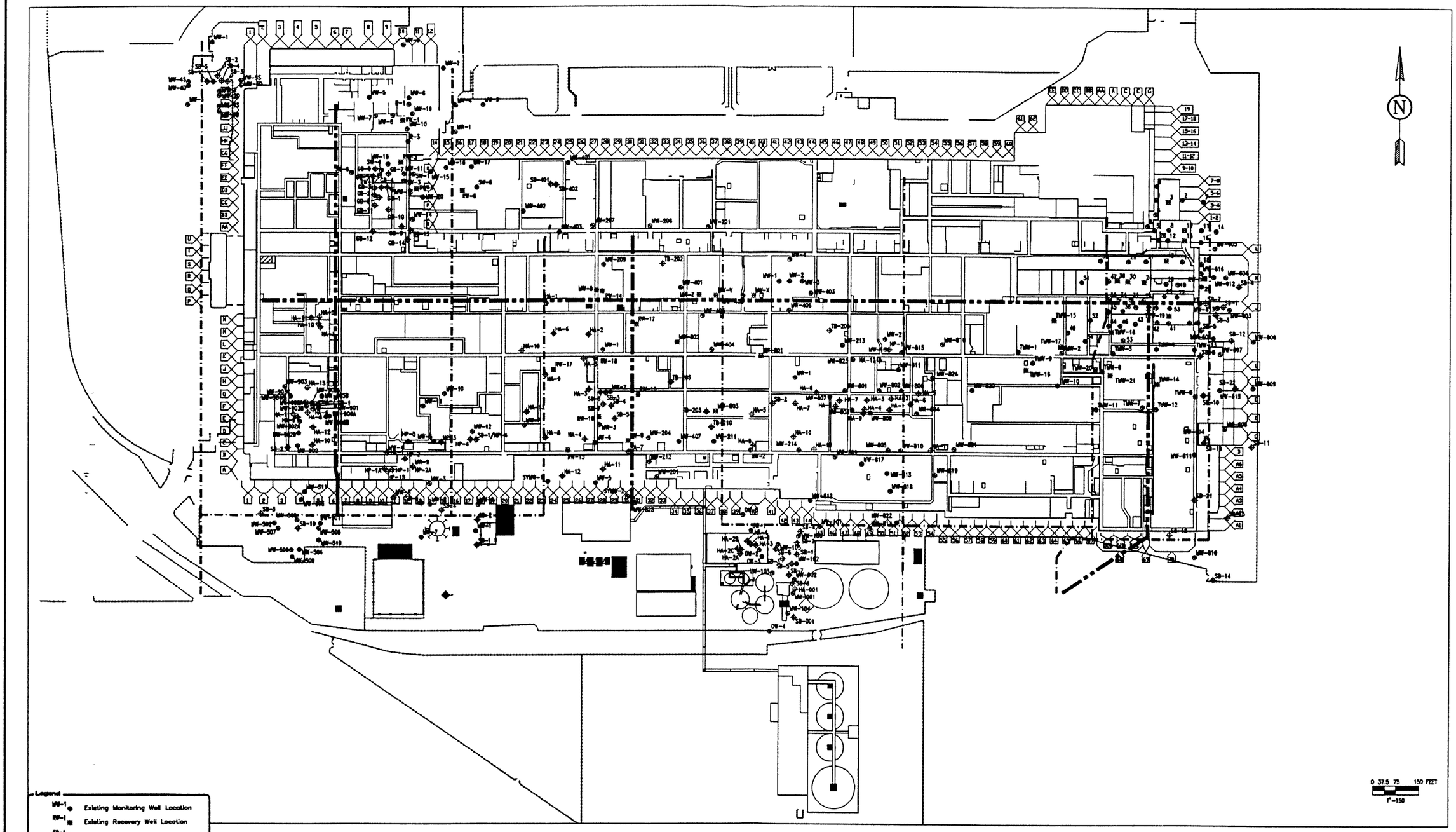


FIGURE D-1
LOCATIONS OF SOIL BORINGS AND WELLS
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

ABB Environmental Services, Inc.

SECTION E

GEOLOGIC CROSS SECTIONS

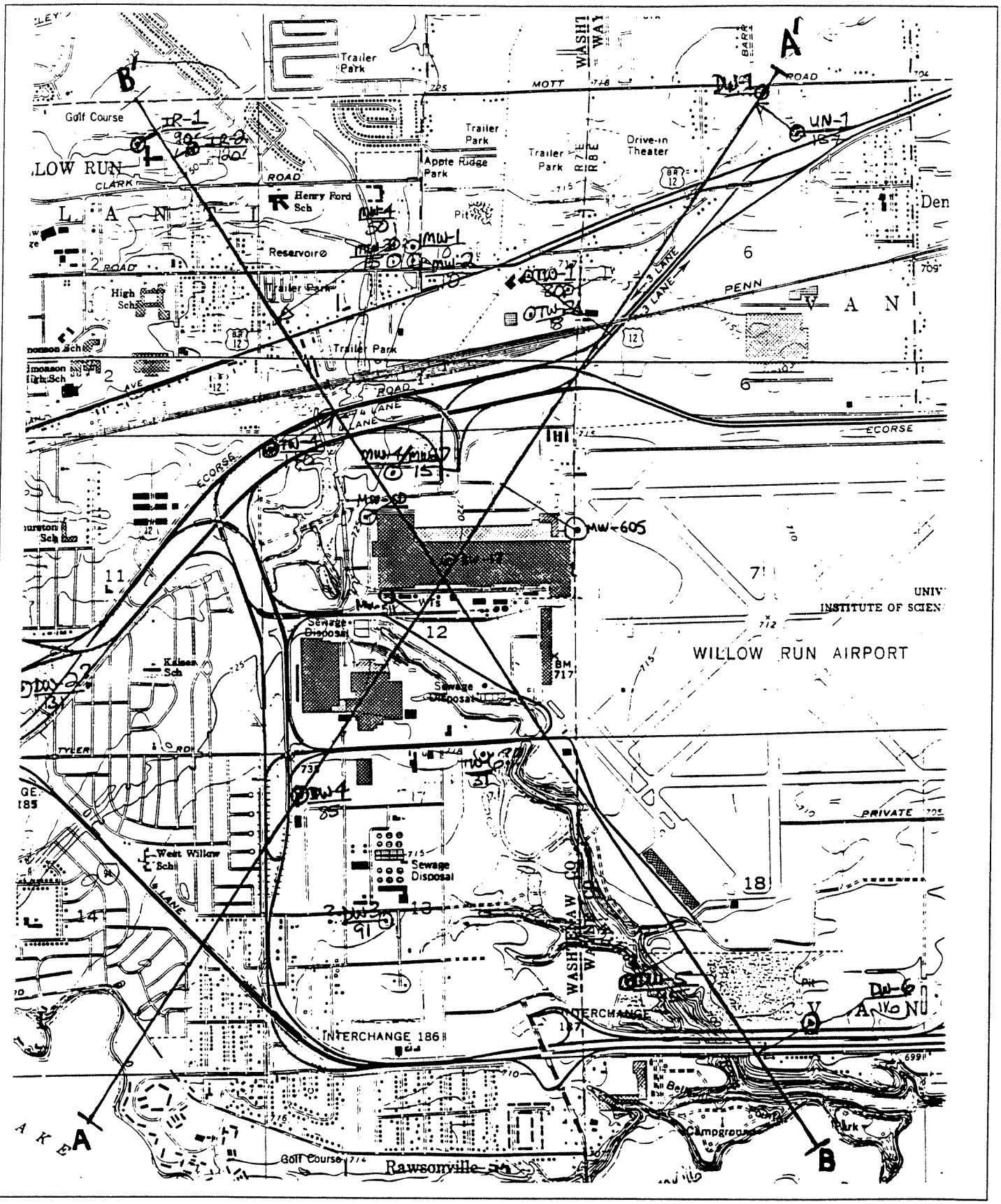
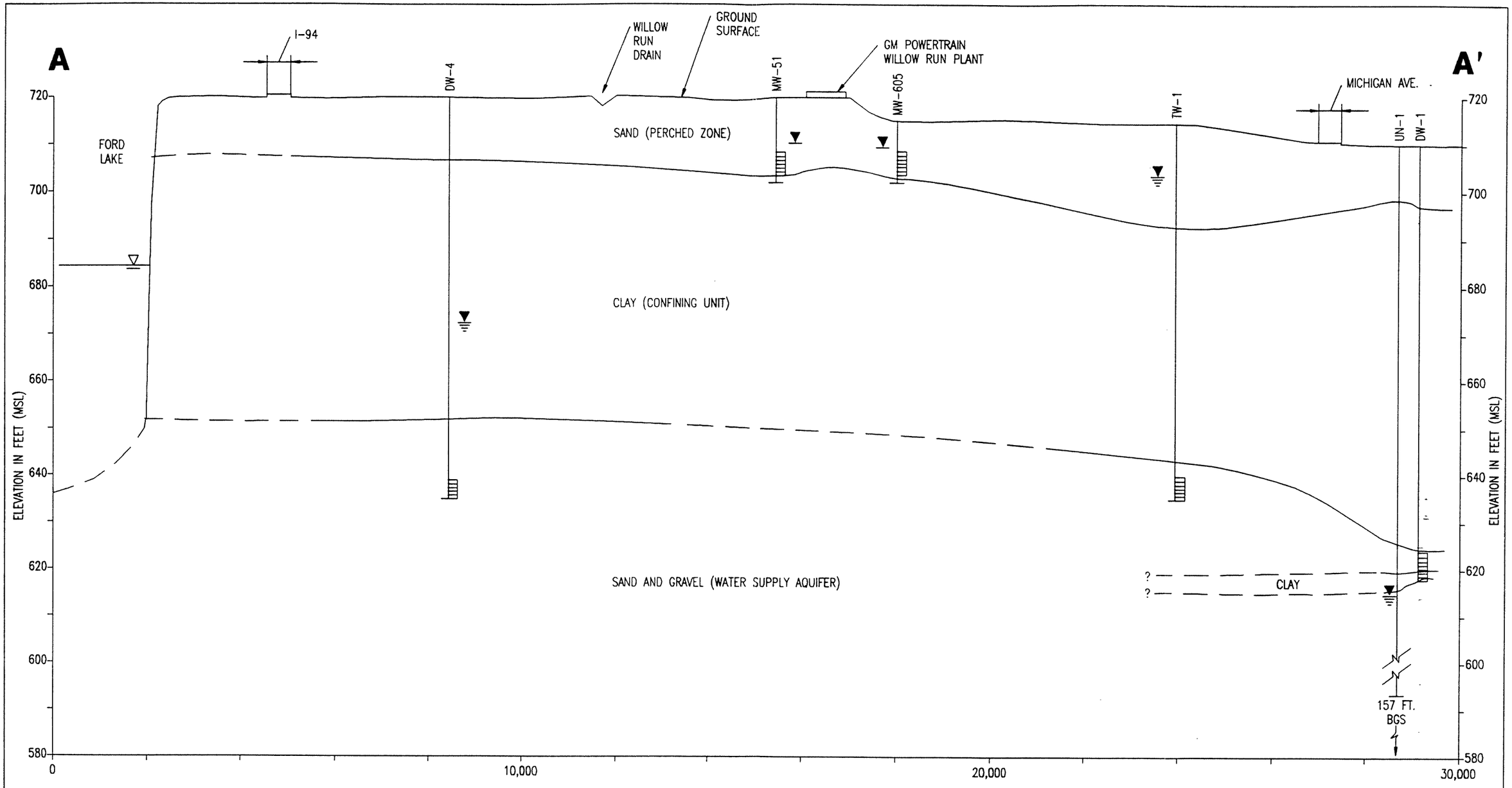


FIGURE E-1
GEOLOGIC CROSS SECTION LOCATIONS
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

ABB Environmental Services, Inc.



LEGEND

DW-4 — WELL SCREEN INTERVAL

SURFACE WATER LEVEL TAKEN FROM USGS 7.5 MINUTE TOPOGRAPHY MAP OF YPSILANTI EAST AND DENTON MI

GROUNDWATER LEVEL-PERCHED ZONE WATER LEVEL TAKEN FROM MONITORING WELL

GROUNDWATER LEVEL-SAND AND GRAVEL AQUIFER, WATER LEVEL TAKEN FROM WATER WELL RECORD

STRATIGRAPHIC CONTACT (DASHED WHERE INFERRED)

GROUNDSURFACE ELEVATIONS TAKEN FROM USGS 7.5 MINUTE TOPOGRAPHIC MAP OF YPSILANTI EAST AND DENTON MI

IR-IRRIGATION WELL
MW-MONITORING WELL
RW-RECOVERY WELL
DW-DOMESTIC WELL
TW-TEST WELL
UN-UNKNOWN WELL
MSL-MEAN SEA LEVEL

0 500 1000 2000 FEET

1"=2000 HORIZ.
1"=20' VERT.

9803J7002.DWG\AC433 5-14-96

FIGURE E-2
REGIONAL GEOLOGIC CROSS SECTION A-A'
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN
ABB Environmental Services, Inc.

B

B'

ELEVATION IN FEET (MSL)

760
740
720
700
680
660
640
620
600
580

0
10,000
20,000

DW-6
I-94
DW-5
GROUND SURFACE
WILLOW RUN DRAIN
GM POWERTRAIN WILLOW RUN PLANT
RW-17
MW-6D
TW-4
MW-4
MICHIGAN AVE.
IR-2 *
IR-1

BELLEVILLE LAKE

SAND (PERCHED ZONE)

CLAY (CONFINING UNIT)

SAND AND GRAVEL (WATER SUPPLY AQUIFER)

SAND AND GRAVEL (WATER SUPPLY AQUIFER)

SHALE

LEGEND

DW-4 — WELL SCREEN INTERVAL

SURFACE WATER LEVEL TAKEN FROM USGS 7.5 MINUTE TOPOGRAPHY MAP OF YPSILANTI EAST AND DENTON MI

GROUNDWATER LEVEL-PERCHED ZONE WATER LEVEL TAKEN FROM MONITORING WELL

GROUNDWATER LEVEL-SAND AND GRAVEL AQUIFER, WATER LEVEL TAKEN FROM WATER WELL RECORD

STRATIGRAPHIC CONTACT (DASHED WHERE INFERRED)

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IR-IRRIGATION WELL
MW-MONITORING WELL
RW-RECOVERY WELL
DW-DOMESTIC WELL
TW-TEST WELL
UN-UNKNOWN WELL
MSL-MEAN SEA LEVEL

* THE FORMATION DESCRIPTION FOR WELL IR-2 IS NOT REPRESENTATIVE OF THE GEOLOGY PRESENTED IN OTHER BORINGS AND WAS THEREFORE EXCLUDED IN THE INTERPRETATION OF REGIONAL STRATIGRAPHY.

0 500 1000 2000 FEET

1"=2000 HORIZ.
1"=20' VERT.

9603F004.DWG\AC433 5-14-96

FIGURE E-3
REGIONAL GEOLOGIC CROSS SECTION B-B'
GM POWERTRAIN PLANT
YPSILANTI, MICHIGAN

ABB Environmental Services, Inc.

SECTION F

WATER WELL RECORDS

ABB TECHNICAL MEMORANDUM

SUBJECT:	GM Powertrain Willow Run Plant, Ypsilanti, Michigan
PROJECT:	Water Well Records for Surrounding Area
PREPARED BY:	Kim Kesler-Arnold, ABB Environmental Services, Inc.
DATE:	January 29,. 1996

ABB contacted the Michigan Department of Natural Resources, Geological Survey Division (Ms. Lisa Farhat, 517-334-6936) on January 22, 1996 to inquire about water well records in the area surrounding the Willow Run Plant. Records were requested for the following sections (see Figure 1).

- Wayne County - T3S, R&E, Sections 6, 7, and 18
- Washtenaw County - T3S, R7E, Sections 1, 2, 11, 12, 13, and 14

Fifty-four (54) documents were received. No records were available for Section 7. Table 1 summarizes the well locations, types and depths. In summary, documents were received for the following:

- 31 monitoring wells
- 9 test wells
- 6 domestic wells
- 3 dewatering wells
- 2 irrigation wells
- 1 processing well
- 1 dry well
- 1 water well pump record

Fourteen (14) of the documents provide geologic data ranging from 80 to 157 feet deep. This information will be used to construct geologic cross-sections. Significant clay units exist in this area. Based on the logs, thicknesses range from 30 to 108 feet.

The six (6) domestic wells are located in Sections 6, 11, 13, 14, and 18. Approximate locations are shown on Figure 2. The well for Record No. 15 could not be located. Depths range from 85 to 138 feet, and the wells are installed in sand, sand and gravel, or gravel layers below significant clay units. The clay thicknesses range from 55 to 108 feet.

ABB Environmental Services, Inc.
39255 Country Club Drive B-25 • Farmington Hills, Michigan 48331-3490
Phone (810) 489-8040 • FAX (810) 489-8048

TABLE 1
SUMMARY OF WELL LOCATIONS, TYPES AND DEPTHS
GM POWERTRAIN - WILLOW RUN PLANT
Ypsilanti, Michigan

Record No.	Section No.	Well Type	Depth (feet)	Clay Thickness
1	1	monitoring	10	
2	1	monitoring	10	
3	1	dewatering	18	
4	1	monitoring	15	
5	1	dewatering	20	
6	1	monitoring	50	
7	1	test	80	50
8	2	irrigation	90	39
9	2	irrigation	120	30
10	2	pump record	not applicable	
11	6	dry hole	157	82
12	6	domestic (1983)	92	72
13	11	test	140	not readable
14	11	test (?)	102	78
15	11	domestic (1978)	138	80
16	11	domestic/irrigation (1977)	131	108
17	12	test	140	105
18	12	monitoring	15	
19	12	monitoring	15	
20	12	monitoring	15	
21	12	monitoring	15	
22	12	monitoring	15	
23	12	dewatering	25	
24	12	monitoring	15	
25	12	monitoring	15	
26	12	monitoring	15	
27	12	monitoring	15	
28	12	monitoring	15	
29	12	monitoring	15	
30	12	monitoring	15	
31	12	monitoring	15	
32	12	monitoring	11	
33	12	monitoring	11.8	
34	12	monitoring	11	
35	12	monitoring	13	
36	12	monitoring	15	
37	12	monitoring	15	
38	12	monitoring	15	
39	12	monitoring	15	
40	12	monitoring	15	
41	12	monitoring	15	
42	12	monitoring	15	
43	12	monitoring	15	
44	12	monitoring	15	
45	12	monitoring	15	
46	12	test	31	
47	12	test	17	
48	12	test	24	
49	12	test	18	
50	12	domestic (1971)	91	63
51	12	test	21	
52	14	domestic (1972)	85	55
53	18	domestic (1967)	95	68
54	18	processing	116	55

TECHNICAL MEMORANDUM

SUBJECT:	Water Well Records for Surrounding Area
PROJECT:	GM Powertrain Willow Run Plant, Ypsilanti, Michigan
PREPARED BY:	Kim Kesler-Arnold, ABB Environmental Services, Inc.
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39255 Country Club Drive B-25 • Farmington Hills, Michigan 48331-3490
Phone (810) 489-8040 • FAX (810) 489-8048

Record No.	Section No.	Type Well	Depth (feet)	Clay Thickness
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2	1	monitoring	10	
3	1	dewatering	18	
4	1	monitoring	15	
5	1	dewatering	20	
6	1	monitoring	50	
7	1	test	80	50
8	2	irrigation	90	39
9	2	irrigation	120	30
10	2	pump record	not applicable	
11	6	dry hole	157	82
12	6	domestic (1983)	92	72
13	11	test	140	not readable
14	11	test (?)	102	78
15	11	domestic (1978)	138	80
16	11	domestic/irrigation (1977)	131	108
17	12	test	140	105
18	12	monitoring	15	
19	12	monitoring	15	
20	12	monitoring	15	
21	12	monitoring	15	
22	12	monitoring	15	
23	12	dewatering	25	
24	12	monitoring	15	
25	12	monitoring	15	
26	12	monitoring	15	
27	12	monitoring	15	
28	12	monitoring	15	
29	12	monitoring	15	
30	12	monitoring	15	
31	12	monitoring	15	
32	12	monitoring	11	
33	12	monitoring	11.8	
34	12	monitoring	11	
35	12	monitoring	13	
36	12	monitoring	15	
37	12	monitoring	15	
38	12	monitoring	15	
39	12	monitoring	15	
40	12	monitoring	15	
41	12	monitoring	15	
42	12	monitoring	15	
43	12	monitoring	15	
42	12	monitoring	15	
43	12	monitoring	15	
46	13	test	31	
47	13	test	17	
48	13	test	24	
49	13	test	18	
50	13	domestic (1971)	91	63
51	13	test	21	
52	14	domestic (1972)	85	55
53	18	domestic (1967)	95	68
54	18	processing	116	55

GEOLOGICAL SURVEY SAMPLE No. (1) MW-1

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

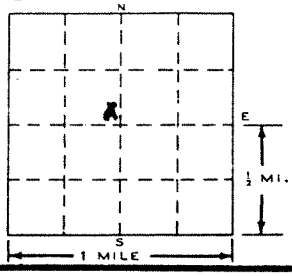
81-DEC 16 1981

1 LOCATION OF WELL

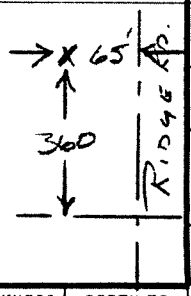
County	Township Name	Fraction	Section Number	Town Number	Range Number
Wasntenaw	Ypsilanti	¼ SE ¼ NW ¼	1	3xxxS.	7 E/W

Distance And Direction from Road Intersections
360' N. of C/L Holmes Rd.
65' W. of C/L Ridge Road
Street address & City of Well Location

Locate with "X" in section below



Sketch Map:



3 OWNER OF WELL:
Ypsilanti Community Utility Authority
Address 2770 Clark Road
Ypsilanti, Mich. 48197

4 WELL DEPTH: (completed) 10 ft. Date of Completion 23 Oct. 81

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

6 USE: ☐ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☒ W.L. Monitoring

7 CASING: Threaded ☒ Welded ☐ Diam. ____ in. to ____ ft. Depth; ____ in. to ____ ft. Depth
Height: Above/Below Surface 11.0" ft.
Weight ____ lbs./ft.
Drive Shoe? Yes ☐ No ☒

8 SCREEN:
Type: Johnson Dia.: 1½"
Slot/Gauge #7 Length 36"
Set between 8 ft. and 10 ft.
Fittings: threaded

9 STATIC WATER LEVEL
3½ ft. below land surface

10 PUMPING LEVEL below land surface
____ ft. after ____ hrs. pumping ____ g.p.m.
Slug test 7½ GPM does not fill to top of 2" Pipe
____ after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ____ Chlorides (Cl) ____
Hardness ____ Other ____

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

13 Well Grouted? ☐ Yes ☒ No
☐ Neat Cement ☐ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
____ feet ____ Direction ____ Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: N/A ☐ Not installed
Manufacturer's Name ____
Model Number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
Type: ☐ Submersible ☐ Jet ☐ Reciprocating

2 FORMATION

FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Brown Silty, Sandy, Clay Topsoil	6"	6"
Yellowish Tan trace of Gravel Silty, Sandy, Clay	2'	2½'
Variegated Lt. Gray & Yellow Gravelly, Sandy, Silty, Clay	1'	3½'
Tannish Gray Clayey, Very Fine & Fine - Med. Sand	1½'	5'
Gray trace of Clay Very Fine & Fine Sand	1'	6'
Gray Sandy, Silty, Clay	3'	9'
Gray Clayey, Very Fine Sand	1'	10'+

ADDED INFO. BY DRILLER, ITEM NO.
CORRECTED BY
ADDITION BY
USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.
Glenn Miller, Consulting Geologist

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Sterling Drilling Co. 0666
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 6236 W. Grand River, Brighton, MI 48116
Signed ____ Date 30 Oct. 81
AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. DEC 16 1981 (2) MW 2

WATER WELL RECORD
ACT 294 PA 1965

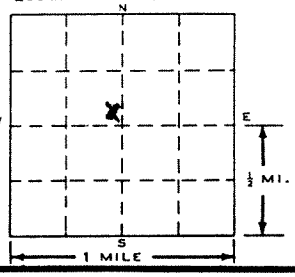
MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL 81-2

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	¼ SE ¼ NW ¼	1	3 N/S.	7 E/W

Distance And Direction from Road Intersections
80' N. of C/L Holmes Rd.
65' W. of C/L Ridge Rd.
Street address & City of Well Location

Locate with "X" in section below



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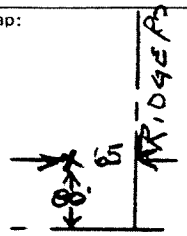


3 OWNER OF WELL:
Ypsilanti Community Utility Authority
Address 2770 Clark Road
Ypsilanti, Mich. 48197

4 WELL DEPTH: (completed) Date of Completion
16 ft.

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

6 USE: ☐ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☒ W.L. Monitoring

7 CASING: Threaded ☒ Welded ☐ Height: Above Surface 9" ft.
Diam. ____ in. to ____ ft. Depth
____ in. to ____ ft. Depth
Weight ____ lbs./ft.
Drive Shoe? Yes ☐ No ☒

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Dark Brown Silty, Sand, Clay topsoil	6"	6"
Variegated Gray & Yellow Lt. Tan Silty, Sandy, Clay	1½'	2'
Variegated gray & Lt. Tan Silty, Sandy, Clay	1/2'	2½'
Gray Sandy, Silty, Clay	1'	3½'
ay Silty, Sandy, Clay	1½'	5'
Gray Sand & Gravel - Clean	3½'	8'
Gray Sandy, Silty, Clay	1½'	10'

8 SCREEN:
Type: Johnson Dia.: 1½"
Slot/Gauge #7 Length 36"
Set between 4 ft. and 7 ft.
Fittings: threaded

9 STATIC WATER LEVEL
3.5 ft. below land surface

10 PUMPING LEVEL below land surface
____ ft. after ____ hrs. pumping ____ g.p.m.
Slug test 1 pint/min. fills to top of
____ ft. after ____ hrs. pumping 2" Pipe g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ____ Chlorides (Cl) ____
Hardness ____ Other ____

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

13 Well Grouted? ☐ Yes ☒ No
☐ Neat Cement ☐ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
____ feet ____ Direction ____ Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: N/A ☐ Not installed
Manufacturer's Name ____
Model Number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
Type: ☐ Submersible ☐ Jet ☐ Reciprocating

ADDED INFO. BY DRILLER, ITEM NO.
*CORRECTED BY
USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.
Glenn Miller, Consulting Geologist

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Sterling Drilling Co. 0666
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 6236 W. Grand River, Brighton, MI 48116
Signed ____ AUTHORIZED REPRESENTATIVE Date 30 Oct. 81

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

DEWATERING WELL RECORD
Act 218, P.A. 1972

(3)

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

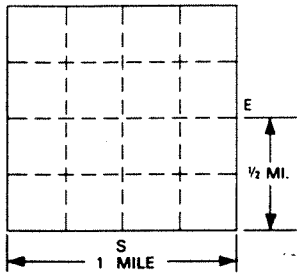
1 LOCATION OF WELL FEB 23 1981

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	¼ ¼ ¼	1	3 ~~N~~S.	7 ~~E~~/W

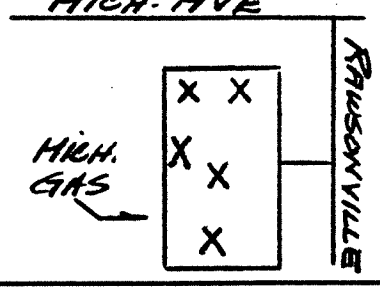
STARTING POINT:
Distance and Direction from Nearest Road Intersection
1/2 Mile South of Michigan Avenue on Rawsonville Road

LOCATION:
From Eng. Plan Sheet No. _____
Other: _____
Engineering Firm: _____

Locate with "X" in section below



Sketch Map:



PROJECT OWNER: Michigan Consolidated Gas
Address: Ypsilanti, Michigan
Project Name: _____
Type of Project ☐ Sewer ☐ Pumping Station ☐ Foundations Other:

2 ☐ Single Well
☒ Several Wells: Total Number of Wells 5
Total Distance Covered _____ ft, N/S/E/W
Includes Wells From Station _____ to Station _____

Well Depth — Range 18 ft. _____ ft.
Date of Drilling 6 Month 80 Year

4 ☐ Cable Tool ☒ Rotary ☐ Bored (Auger) ☐ _____
☐ Jetted ☐ Driven

3 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sandy Gravel	4'	4'
Wet Gravel	2'	6'
Sand	4'	10'
Blue Clay	8'	18'
(USE REMARKS SECTION IF NEEDED)		

5 CONSTRUCTION DETAILS: ☐ Drive Points ☐ Rock Well ☐ Natural Pack ☒ Gravel Pack
Drill Hole Size: Diam 36" in Depth 18' ft
Casing: Diam 26" in Depth 17-18 ft
Gravel Pack: From 18 ft to 0 ft
Pack Material: Pea Stone ~~EHS~~
Screened From 12 ft to 20 ft

6 STATIC WATER LEVEL 4 ft ~~above~~/below land surface

8 ABANDONMENT PROCEDURES:
Wells under 40 feet
☒ Parent Material: from _____ ft to _____ ft
☐ Finer Textured Soils: from _____ ft to _____ ft
☐ Other: _____
Wells over 40 feet:
Bentonite-Fine Textured Soil Mixture
from _____ ft to _____ ft
Other: _____

Special Cases: ☐ Gas ☐ Flowing Well ☐ Bedrock ☐ _____

Grout
☐ Bentonite Grout ☐ Neat Cement Grout
from _____ ft to _____ ft

7 DEWATERED LEVEL _____ ft
Pump Operated 24 hr/day,
Pump Capacity _____ gpm
Discharge Point Pond 200' West
Water filtered with Straw
(river, pond, lake, storm sewer, etc.)

10 REMARKS, Water Quality, Gas, etc.
Low Yield
ADDED INFO BY DRILLER, ITEM #10
*CORRECTED BY
**ADDITION BY
ELEVATION
DEPTH TO ROCK

9 ABANDONMENT CERTIFICATION
This well has been abandoned under my jurisdiction and this report is true to the best of my knowledge and belief.

ION CONSTRUCTION CO. D 1315
REGISTERED CONTRACTOR NAME: REGISTRATION NUMBER
Address 505 TERRITORIAL ROAD, MANCHESTER, MICH
Signed _____ 6/16/80
AUTHORIZED REPRESENTATIVE DATE

11 DRILLING CONTRACTOR'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

UNION CONSTRUCTION CO. D 1315
REGISTERED CONTRACTOR NAME: REGISTRATION NUMBER
Address 505 TERRITORIAL ROAD, MANCHESTER, MICH.
Signed James Wilde 6/13/80
AUTHORIZED REPRESENTATIVE DAT

D67k

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. DEC 16 1981 (4) MW-3

WATER WELL RECORD

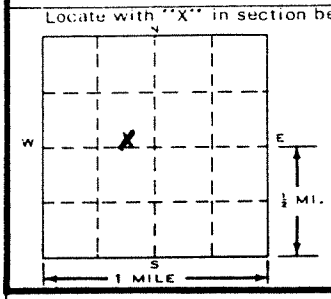
ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

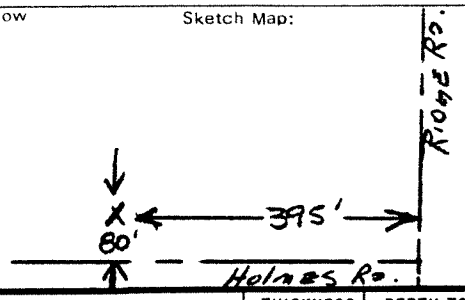
1 LOCATION OF WELL	81-3				
County: Washtenaw	Township Name: Ypsilanti	Fraction: ¼ SE ¼ NW ¼	Section Number: 1	Town Number: 3 ~~xxS.~~	Range Number: 7 E/~~W~~

Distance And Direction from Road Intersections:
80' N. of C/L Holmes Rd.
395' W. of C/L Ridge Rd.
Street address & City of Well Location

Locate with "X" in section below



Sketch Map:



3 OWNER OF WELL:
Ypsilanti Community Utility Authority
Address: 2770 Clark Rd.
Ypsilanti, Mich. 48197

4 WELL DEPTH: (completed) Date of Completion
15 ft.

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

6 USE: ☐ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☒ W.L. Monitoring

7 CASING: Threaded ☒ Welded ☐ Diam. ____ in. to ____ ft. Depth; ____ in. to ____ ft. Depth
Height: Above/~~Below~~ Surface 11" ft.
Weight ____ lbs./ft.
Drive Shoe? Yes ☐ No ☒

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Brown Sand Topsoil	2"	2"
Tannish Yellow Very Fine & Fine Sand	2'10"	3'
Yellow-occasionally w/1/2" x 3" brown topsoil lens Clayey, Silty, Fine & Very Fine Sand	2'	5'
Whitish Tan trace fine gravel Med.& fine & Very Fine Sand	2'	7'
Lt. Tan Gravelly Sand	1'	8'
Gray Gravelly, Sand	4'	12'
Gray Med.-Fine & Very Fine Sand	3'	15'+

USE A 2ND SHEET IF NEEDED

8 SCREEN:
Type: Johnson Dia.: 1¼"
Slot ~~Size~~ #7 Length 36"
Set between 12 ft. and 15 ft.
Fittings: threaded

9 STATIC WATER LEVEL
9½ ft. below land surface

10 PUMPING LEVEL below land surface
____ ft. after ____ hrs. pumping ____ g.p.m.
Slug test 12½ GPM fails to fill to top of 2" Pipe
____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ____ Chlorides (Cl) ____
Hardness ____ Other ____

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

13 Well Grouted? ☐ Yes ☒ No
☐ Neat Cement ☐ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
____ feet ____ Direction ____ Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: N/A ☐ Not installed
Manufacturer's Name ____
Model Number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
Type: ☐ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.
Glenn Miller, Consulting Geologist

ADDED INFO. BY DRILLER, ITEM NO.

*CORRECTED BY:

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Sterling Drilling Co. (REGISTERED BUSINESS NAME) 0666 (REGISTRATION NO.)
Address 6236 W. Grand River, Brighton, MI 48116
Signed ____ (AUTHORIZED REPRESENTATIVE) Date Oct. 30, 1981

D67d 100M (Rev. 12-68) ADDITION

GEOLOGICAL SURVEY COPY

DEWATERING WELL RECORD
Act 218, P.A. 1972

(5) TW-3

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

SEP 21 1981

1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	¼ ¼ ¼	1	3 N/S	7 E/W

STARTING POINT:

Distance and Direction from Nearest Road Intersection

800' South of Michigan Ave.

250' West of Rawsonville Road

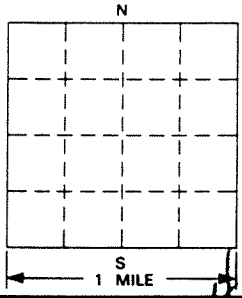
LOCATION:

From Eng. Plan Sheet No. _____

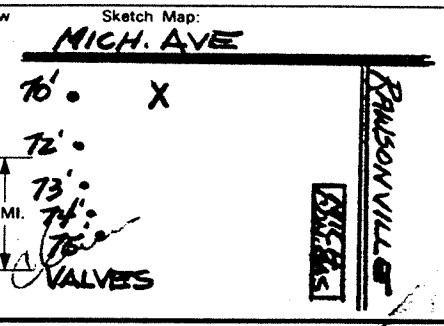
Other: _____

Engineering Firm: _____

Locate with "X" in section below



Sketch Map:



PROJECT OWNER: Michigan Consolidated Gas

Address: _____

Project Name: _____

Type of ☐ Sewer ☐ Pumping Station

Project ☐ Foundations Other:

2 ☒ Single Well

☐ Several Wells: Total Number of Wells _____

Total Distance Covered _____ ft, N/S/E/W

Includes Wells From Station _____ to Station _____

Well Depth — Range 20 ft. _____ ft. Date of Drilling 7/22 Month 1981 Year

4 ☐ Cable Tool ☒ Rotary ☐ Bored (Auger)
☐ Jetted ☐ Driven ☐ _____

3 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sandy Clay	6	6
Silty Sand	5	11
Blue Clay	9	20
(USE REMARKS SECTION IF NEEDED)		

5 CONSTRUCTION DETAILS: ☐ Drive Points ☐ Rock Well ☐ Natural Pack ☒ Gravel Pack

Drill Hole Size: Diam 36 in Depth _____ ft

Casing: Diam 24 in Depth _____ ft

Gravel Pack: From 20 ft to 0 ft

Pack Material: Pea Stone Mason Sand

Screened From 14 ft to 20 ft

6 STATIC WATER LEVEL _____ ft above/below land surface

8 ABANDONMENT PROCEDURES:

Wells under 40 feet

☐ Parent Material: from _____ ft to _____ ft

☐ Finer Textured Soils: from _____ ft to _____ ft

☐ Other: _____

Wells over 40 feet:

Bentonite-Fine Textured Soil Mixture

from _____ ft to _____ ft

Other: _____

Special Cases: ☐ Gas ☐ Flowing Well ☐ Bedrock ☐ _____

Grout

☐ Bentonite Grout ☐ Neat Cement Grout

from _____ ft to _____ ft

7 DEWATERED LEVEL _____ ft

Pump Operated 24 hr/day,

Pump Capacity _____ gpm

Discharge Point Creek 100' West

(river, pond, lake, storm sewer, etc.)

10 REMARKS, Water Quality, Gas, etc.

9 ABANDONMENT CERTIFICATION

This well has been abandoned under my jurisdiction and this report is true to the best of my knowledge and belief.

U N CONSTRUCTION CO. D 1315

REGISTERED CONTRACTOR NAME: REGISTRATION NUMBER

Address 505 TERRITORIAL ROAD MANCHESTER, MICHIGAN 48158

Signed _____ 7/27/81

AUTHORIZED REPRESENTATIVE DATE

11 DRILLING CONTRACTOR'S CERTIFICATION

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

UNION CONSTRUCTION CO. D 1315

REGISTERED CONTRACTOR NAME: REGISTRATION NUMBER

Address 505 TERRITORIAL ROAD MANCHESTER, MICHIGAN 48158

Signed James Welda 7/22/81

AUTHORIZED REPRESENTATIVE DATE

D67k

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. DEC 16 1981 (6) NW4

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL 81-4

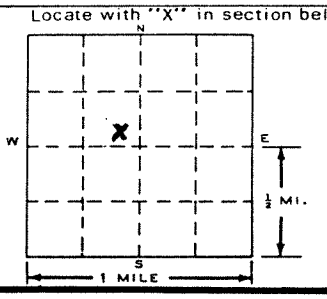
County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	¼ SE¼ NW¼	1	3 N/S.	7 E/W.

Distance And Direction from Road Intersections

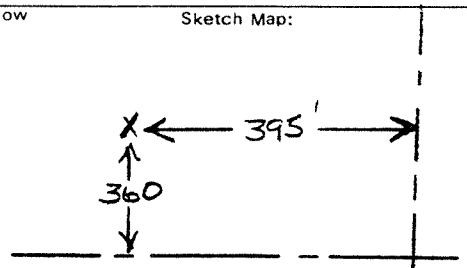
360' N. of C/L Holmes Rd.
395' W. of C/L Ridge Rd.

Street address & City of Well Location

Locate with "X" in section below



Sketch Map:



3 OWNER OF WELL:
Ypsilanti Community Utility Authority
Address
2770 Clark Rd.
Ypsilanti, Mich. 48197

4 WELL DEPTH: (completed) Date of Completion
19 ft.

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

6 USE: ☐ Domestic ☐ Public Supply ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ W.L. Monitoring

7 CASING: Threaded ☒ Welded ☐ Height: Above/Below
Diam. Surface 3/33 ft.
____ in. to ____ ft. Depth Weight ____ lbs./ft.
____ in. to ____ ft. Depth Drive Shoe? Yes ☐ No ☒

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Brown Sand Topsoil Typical Fill	2"	2"
Variegated Yellow & Tan Clayey, Silty, Gravelly Sand	1'10"	2'
Yellow Silty, Clayey, Very Fine & Fine Sand	1'	3'
Yellow Clayey, Silty, Very Fine Sand	3'	6'
Black Sludge	2½'	8½'
Greenish Gray Silty, Clayey, Very Fine Sand	1½'	10'
Gray Very Fine & Fine Sand	3'	13'
Vraiegated Greenish Gray & Gray Clayey, Very Fine Sand, Silt	5'	18'
Gray Sandy, Silty, Clay	14'	32'
Gray Sandy, Silty, Clay	18'	50'

ADDED INFO. BY DRILLER, ITEM NO.
CORRECTED BY
USE A 2ND SHEET IF NEEDED
ADDITIONAL

8 SCREEN:
Type: Johnson Dia.: 1½"
Slot/Gauge #7 Length 36"
Set between 16 ft. and 19 ft.
Fittings: threaded

9 STATIC WATER LEVEL
12½' ft. below land surface

10 PUMPING LEVEL below land surface
____ ft. after ____ hrs. pumping ____ g.p.m.
Slug test 7½ GPM Fills to top of Pipe
____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ____ Chlorides (Cl) ____
Hardness ____ Other ____

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

13 Well Grouted? ☐ Yes ☒ No
☐ Neat Cement ☐ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
____ feet ____ Direction ____ Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: N/A ☐ Not installed
Manufacturer's Name ____
Model Number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
Type: ☐ Submersible
☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

Glenn Miller, Consulting Geologist

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Sterling Drilling Co. 0666
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 6236 W. Grand River, Brighton, MI

Signed ____ Date 30 Oct. 81
AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. ⑦ TW-1

MAY 26 1976

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

SE SE NE

1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	¼ NW ¼ SE ¼ NE ¼	7	3 S	7 E W

Distance And Direction from Road Intersections

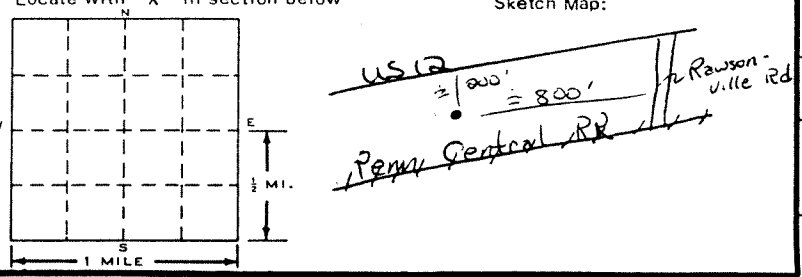
Rawsonville Road and Michigan

Approx 2950 Michigan Ave

Street address & City of Well Location

Locate with "X" in section below

Sketch Map:



3 OWNER OF WELL:

Michigan Consolidated Gas Co.

Address One Woodward Ave.

Detroit 48226 Att: Mr. D. Beaver

4 WELL DEPTH: (completed) 80 ft. **Date of Completion** 10-7-75

ETS 6741 9652340

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

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

7 CASING: Threaded ☒ Welded ☐ Diam. 6 in. to 75-4 ft. Depth; ____ in. to ____ ft. Depth

Height: Above/Below Surface 8" ft. Weight 19.45 lbs./ft. Drive Shoe? Yes ☒ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sandy Clay	4'	4'
Dry Sand	18'	22'
Gravily Clay	50'	72'
Medium Coarse Gravel	8'	80'

8 SCREEN:

Type: Johnson SS Dia.: 6 inch

Slot/ ____ Length 5 Ft.

Set between 74-8" ft. and 80 ft.

Fittings: 5" X 18" nipple

9 STATIC WATER LEVEL 12 ft. below land surface

10 PUMPING LEVEL below land surface

18 ft. after 1½ hrs. pumping 60 g.p.m.

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

11 WATER QUALITY in Parts Per Million:

Iron (Fe) 1.1 Chlorides (Cl) 68

Hardness 272 Other ____

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

13 Well Grouted? ☐ Yes ☒ No ☐ Neat Cement ☐ Bentonite ☐ ____

Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination

____ feet ____ Direction unknown Type

Well disinfected upon completion? ☐ Yes ☐ No

15 PUMP: ☐ Not installed

Manufacturer's Name Red Jacket

Model Number 500T4-5LB HP 5 Volts 230

Length of Drop Pipe 63 ft. capacity 85 G.P.M.

Type: ☒ Submersible ☐ Jet ☐ Reciprocating

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

Test Well

ADDED INFO BY DRILLER, ITEM NO.

*CORRECTED BY B

**ADDITION BY

ELEVATION

DEPTH TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:

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

O.O. Corsaut Inc. (REGISTERED BUSINESS NAME) 0025 (REGISTRATION NO.)

Address 15101 W. 11 Mile Road, Oak Park 48237

Signed ____ (AUTHORIZED REPRESENTATIVE) Date Nov. 6, 1975

Phone

1-LI 1117

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

IR-1

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD (8)

PART 127 ACT 368, P.A. 1978

PERMIT NUMBER

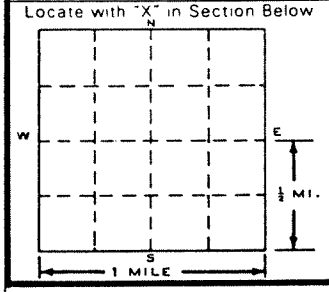
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanit	1/4 1/4 1/4	2	3 * N/S	7 * E/W

Distance And Direction From Road Intersection
Green Oak Golf Course
E. of Prospect on Clark Rd.

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map

3 OWNER OF WELL

Charter Township of Ypsilanti
7200 S. Huron River Dr.
Address Ypsilanti, Mi 48197

Address Same As Well Location? ☐ Yes ☒ No

4 WELL DEPTH (completed)

90 ft.

Date of Completion: 3/21/85

5

☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☐ Auger ☐ Jetted ☐ _____

6 USE

☐ Domestic ☐ Type I Public ☐ Type III Public
☒ Irrigation ☐ Type IIa Public ☐ Heat pump
☐ Test Well ☐ Type IIb Public ☐ _____

7 CASING

Diameter ☐ Steel ☒ Threaded
☐ Plastic ☐ Welded

8 in. to 67'3" ft. depth
_____ in. to _____ ft. depth

Grouted Drill Hole Diameter
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth

Height: Above/Below Surface 1'2" ft.
Weight 29.35 lbs./ft.
Drive Shoe ☒ Yes ☐ No

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Brown sand	14'	14'
Clay	31'	45'
Sandy clay	8'	53'
Dirty sand w/clay	11'	64'
Clean medium sand	6'	70'
Med. coarse sand	11'	81'
Coarse gravel	9'	90'

8 SCREEN

Johnson stainless ☐ Not Installed
Type steel Top 6' #12 Diameter 8"
Slot/Gauze Middle 11' #20 Length 24'
Set Between Bottom 7' #80 66'1" and 90 ft.
FITTINGS ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☒ Blank above screen 1'10" ft. Other _____

9 STATIC WATER LEVEL

20'6" ft. below land surface ☐ Flow

10 PUMPING LEVEL below land surface

51'6" ft. after 7 cont hrs. pumping at 608 G.P.M.
_____ ft. after _____ hrs. pumping at _____ G.P.M.

11 WELL HEAD COMPLETION

☐ Pitless adapter ☒ 12" above grade
☐ Basement offset ☐ Approved pit

12 WELL GROUTED?

☒ No ☐ Yes From _____ to _____ ft.
☐ Neat cement ☐ Bentonite ☐ Other _____
No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

unknown
Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☐ No

14 PUMP

☒ Not Installed ☐ Pump Installation Only
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of Drop Pipe _____ ft. capacity _____ G.P.M.
TYPE ☐ Submersible ☐ Jet _____
PRESSURE TANK
Manufacturer's name _____
Model number _____ Capacity _____ Gallons

RECEIVED
Mich. Dept. of Public Health
DEC 2 1991
BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH/WATER

USE A 2ND SHEET IF NEEDED

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

16 WELL CONTRACTOR'S CERTIFICATION

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

O.O. Corsaut, Inc. 0025
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 15101 W. 11 Mile Rd. Oak Park, Mi 48237

Signed _____ Date 3/21/85
AUTHORIZED REPRESENTATIVE

EMMET COUNTY ENVIRONMENTAL HEALTH

D67d (Rev 10-80)

GEOLOGICAL SURVEY COPY

(9) IR-2

Layne NORTHERN COMPANY INCORPORATED

INDIANAPOLIS • MISHAWAKA • LANSING

☒ TEST

☐ PERMANENT

Job No. L-31529

WELL LOG No. 66A CITY Ypsilanti - Willow Run Village County Washtenaw

Owner Ypsilanti Township Water & Sewer Dept. Township Ypsilanti

(Golf Course Pond - water supply) N½, NE¼, NW¼ Section 2, T. 3 S., R. 7 E.

Location State Michigan

From Land Description at low elevation; near proposed road on west side

From Street or Road N of Clark Rd. on old Willow Run Village Townsite

FORMATION FOUND – DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Clay	0	20	20	
Clay, blue, sandy	20	30	10	
Sand and gravel, brown	30	70	40	
Sand and gravel, blue	70	110	40	
Gravelly blue clay	110	120	10	22'-10"

Hole 11 7/8 "Dia Drilled by: { Cable Tool ____ Rotary X Jetting ____ / Reverse Circ. ____ Bucket ____ Auger ____

Rotary Hole Grouted: Neat Cement ____ Drilling Mud ____ Other Clay seal

Casing 8 5/8 "OD From 12 "above ground to 90 feet below ground. Weight 29 Pounds per foot

Screen 6 "ID Set from 90 to 110 feet Make Cook SB Type WW Slot # 30

Pumping test 300 GPM drawdown to 41' 6" feet after 8 hours pumping

Date Completed 10/14/66 Driller C. McCracken

JN 30 1970

(10)

WATER WELL PUMP RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Township Name	Fraction of Section	Section Number	Township Number	Range Number
Washtenaw	Ypsilanti	¼ ¼ ¼		N/S.	E/W.

Distance And Direction from Road Intersections

Green Oak Golf Course
#. of Prospect on Clark Road

Street address & City of Well Location

OWNER No. _____

6 OWNER OF WELL:

Charter Township of Ypsilanti
Address 7200 S. Huron River Dr.
Ypsilanti, Michigan 48197

2 Date of Pump Installation
4/10/85

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

3 STATIC WATER LEVEL
20'6" ft. below land surface

8 Disinfected upon completion ☒ Yes

4 PUMPING LEVEL below land surface
_____ ft. after ___ hrs. pumping _____ g.p.m.
_____ ft. after ___ hrs. pumping _____ g.p.m.

9 PUMP:
Manufacturer's Name Red Jacket
Model Number 7BV5202CN20T HP 20
Length of Drop Pipe 54 ft. capacity 500 G.P.M.
Type: ☒ Submersible ☐ _____ ☐ Jet ☐ Reciprocating _____

5 Remarks

10 PUMP INSTALLERS CERTIFICATION:
This pump was installed under my jurisdiction and this report is true to the best of my knowledge and belief.

O. O. Corsaut, Inc. — REGISTERED BUSINESS NAME
0025 — REGISTRATION NO.

Address 15101 W. 11 Mile Road, Oak Park Mi 48237

Signed _____ — AUTHORIZED REPRESENTATIVE
Date April 19,1985

D68d 40M 2-67

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. (11) UN-1

DEC 19 1972

WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

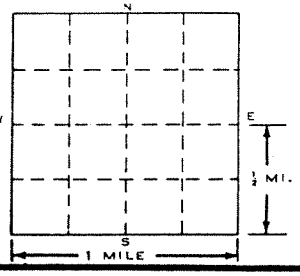
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
WAYNE	VAN BUREN	NE¼ NW¼ NE¼	6	3 S.	8 E.

Distance And Direction from Road Intersections: 50070 E. MICHIGAN

Street address & City of Well Location

Locate with "X" in section below — Sketch Map:



3 OWNER OF WELL:
Address: ROBERT JOHNSON, 50070 E. MICHIGAN, YPSILANTI BELLEVILLE

4 WELL DEPTH: (completed) Date of Completion: ft.

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

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

7 CASING: Threaded ☐ Welded ☐ Diam. ____ in. to ____ ft. Depth; ____ in. to ____ ft. Depth
Height: Above/Below Surface ____ ft. Weight ____ lbs./ft. Drive Shoe? Yes ☐ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
YELLOW SAND	7	7
GRAY SAND	5	12
BLUE CLAY	82	94
BLACK SHALE	21	115
BLUE SHALE	30	145
HARD BROWN SHALE	12	157
SALT WATER		
CALLED DRY HOLE - PULLED PIPE		
PLUGGED WITH BENTONITE & CUTTINGS		

USE A 2ND SHEET IF NEEDED

8 SCREEN:
Type: ____ Dia.: ____
Slot/Gauze ____ Length ____
Set between ____ ft. and ____ ft.
Fittings:

9 STATIC WATER LEVEL
94 ft. below land surface

10 PUMPING LEVEL below land surface
____ ft. after ____ hrs. pumping ____ g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ____ Chlorides (Cl) ____
Hardness ____ Other ____

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

13 Well Grouted? ☐ Yes ☐ No ☐ Neat Cement ☐ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
____ feet ____ Direction ____ Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: ☐ Not installed
Manufacturer's Name ____
Model Number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
Type: ☐ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.
ADDED INFO. BY DRILLER, ILLEGIBLE
*CORRECTED BY: RJP
**ADDITION BY:

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
SLUSSER DRILLING CO. INC (REGISTERED BUSINESS NAME) 0388 (REGISTRATION NO.)
Address 1701 W. MICHIGAN, YPSILANTI
Signed Richard A. Slusser (AUTHORIZED REPRESENTATIVE) Date ____

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO FEB 13 1984

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD (12)

PART 127 ACT 368, P.A. 1978

DW-1

PERMIT NUMBER

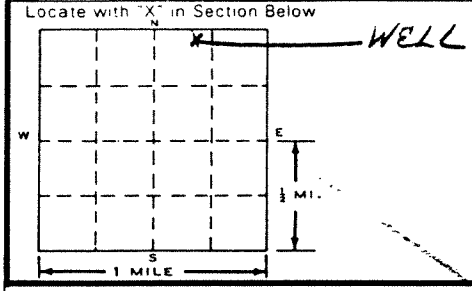
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
WAYNE	VAN BUREN	1/4 1/4 1/4	16	3 N/S	8 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below — Sketch Map



3 OWNER OF WELL

DON HODINGTON

Address 59323 MOTT RD 48111

BELLEVILLE

Address Same As Well Location? ☒ Yes ☐ No

4 WELL DEPTH (completed)

92 ft.

Date of Completion 8-31-83

5

☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug

☐ Hollow rod ☐ Auger ☐ Jetted ☐ _____

6 USE

~~☒ Domestic~~ ☐ Type I Public ☐ Type III Public

☐ Irrigation ☐ Type IIa Public ☒ Heat pump

☐ Test Well ☐ Type IIb Public ☐ _____

7 CASING

Diameter ☐ Steel ☐ Threaded

☒ Plastic ☐ Welded

5 in. to 92 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/~~Below~~ Surface 1 ft.

Weight SDR 21 lbs./ft.

Drive Shoe ☐ Yes ☒ No

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
BLACK DIRT	2	2
SAND	5	7
SAND (COARSE)	6	13
GRAY CLAY	72	85
SAND	5	90
GRAY CLAY	2	92

USE A 2ND SHEET IF NEEDED

8 SCREEN

☐ Not Installed

Type WW STAINLESS Diameter 4" NOM

Slot/Gauze 14 Length 4'

Set between 86 ft. and 90 ft.

FITTINGS ☒ K-Packer ☐ Lead Packer ☐ Bremer Check

☒ Blank above screen 1 ft. Other _____

9 STATIC WATER LEVEL

3[illegible] ft. below land surface ☐ Flow

10 PUMPING LEVEL below land surface

50 ft. after 2 hrs. pumping at 9 G.P.M.

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

11 WELL HEAD COMPLETION

☒ Pitless adapter ☐ 12" above grade

☐ Basement offset ☐ Approved pit

12 WELL GROUTED?

☐ No ☐ Yes From 0 to 86 ft

☐ Neat cement ☒ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type SEPTIC Distance 75 ft. Direction S

Well disinfected upon completion? ☒ Yes ☐ No

14 PUMP

☐ Not Installed ☐ Pump Installation Only

Manufacturer's name RED JACKET

Model number SCV4M CN9GP HP ½ Volts 220

Length of Drop Pipe 60 ft. capacity 9 G.P.M.

TYPE ☒ Submersible ☐ Jet

PRESSURE TANK

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

RECEIVED
Mich. Dept. of Public Health
FEB 18 1984
Environmental Health
Services Administration

15 Remarks, elevation, source of data, etc.

PERMIT # 223460

LOG INFO BY DRILLER, ITEM NO.

*CORRECTED BY

**ADDITION BY

ELEVATION

DEPTH TO ROCK

16 WATER WELL CONTRACTOR'S CERTIFICATION

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

CASEY DRILLING CO INC 81-1586

REGISTERED BUSINESS NAME REGISTRATION NO.

Address DEXTER MI 48130

Signed Charles Crews Date 9-8-83

AUTHORIZED REPRESENTATIVE

D67d (Rev. 10-80)

GEOLOGICAL SURVEY COPY

Washtenaw Sec 11 (13) 3S 7E

ypsi Ford test well #4 Y-12-1

Ky old barn and spur track on Ward Rd NE corner 1941

POC 6"+4" → 62' + 4ft' = 710

735.7 680.7

Yellow sand + few stones 5'
clay + few stones 15'
[illegible] 20'
sand clay 25'
blue clay fen stones 20 45'
clay fen stones 60'
Clay fen fine stones 55'
clay + stones 60'
[illegible] 42'
[illegible] 21'
[illegible] 30'
[illegible] 41'

203-41 ... @ 135' water came to 75' level
@ 13[illegible] to

Sincerbox, Drury & Nimes, Engineers, Ann Arbor

Washtenaw 11? 3 5 7E

(14)

YPSI

w. side Ward road .1 mi S of Ecorse Road 150' from road

Y-11-6

1936

Hr Ward

2 10½

top of well 731
in basement

0

top of well in basement — 684

5' below ground

	Thickness	Depth
top soil	3	3
gravel	5	8
water sand - fine	1	9
gravel sand	13	22
clay	128	150
water gravel	2	152

Static water level in well

24" well bore Steel 47' 62½

Steel Drury Engineer. Engineer by

GEOLOGICAL SURVEY SAMPLE No. [ ]

(15)

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

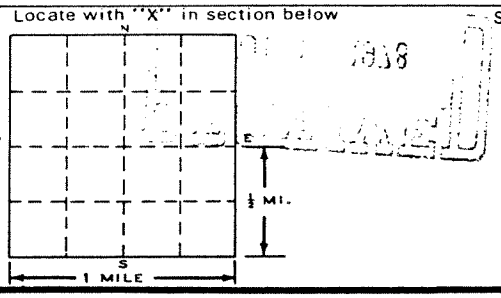
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsi	¼ ¼ ¼	11	3 N/S	7 E/W

Distance And Direction from Road Intersections

Street address & City of Well Location

Locate with "X" in section below — Sketch Map:



3 OWNER OF WELL: E. T. Downs

Address 1101 Allen, Troy, Mich 48084

4 WELL DEPTH: (completed) 138 ft. Date of Completion

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

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

7 CASING: Threaded ☒ Welded ☐ Diam. 4 in. to 134 ft. Depth; ____ in. to ____ ft. Depth

Height: Above/Below Surface 1 ft. Weight 11 lbs./ft. Drive Shoe? Yes ☒ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Yellow Sand & Gravel	17'	17'
Clay & Gravel	80	97'
Hard Pan	37	134'
Water Sand	4'	138'

8 SCREEN: Type: Stainless Dia.: 4" Slot/Gauze #15 Length 5' Set between 134 ft. and 138 ft. Fittings: Packer & Plug

9 STATIC WATER LEVEL 80 ft. below land surface

10 PUMPING LEVEL below land surface 94 ft. after 4 hrs. pumping 20 g.p.m.; ____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million: Iron (Fe) ____ Chlorides (Cl) ____ Hardness ____ Other ____

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

13 Well Grouted? ☐ Yes ☒ No ☐ Neat Cement ☐ Bentonite ☐ ____ Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination 100 feet W Direction Septic Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP: ☐ Not installed

Manufacturer's Name Ringsted

Model Number [illegible] HP 3/4 Volts 220

Length of Drop Pipe 100 ft. capacity 20 G.P.M.

Type: ☒ Submersible ☐ Jet ☐ Reciprocating

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

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

Drillers Log

James Hartwick 12-9-77

17 WATER WELL CONTRACTOR'S CERTIFICATION:

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

John A. Roberts Well Drilling — REGISTERED BUSINESS NAME — 0027 — REGISTRATION NO.

Address 2858 Pleasant Valley, Brighton

Signed [signature] — AUTHORIZED REPRESENTATIVE — Date 6/15/78

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. MAY 9 1977

(16)

DW-2

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

NE

1 LOCATION OF WELL

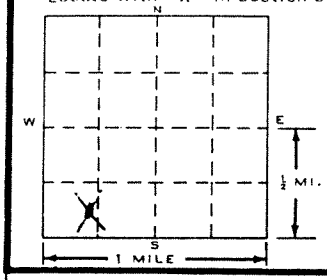
County	Township Name	Fraction	Section Number	Town Number	Range Number
WASHTENAW	YPSILANTI	SW ¼ ~~SW~~ ¼ SW ~~SE~~	11	3 ~~S.~~	7 ~~E~~/W

Distance And Direction from Road Intersections

Street address & City of Well Location 570 LAVERNE

Locate with "X" in section below

Sketch Map:



3 OWNER OF WELL:

Address W. J. GLOVER
570 LAVERNE
YPSILANTI

4 WELL DEPTH: (completed) 131 ft. **Date of Completion** 4-1-77

5 ☐ Cable tool ☑ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ____

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

7 CASING: Threaded ☑ Welded ☐ Diam. 4 in. to 127 ft. Depth; ____ in. to ____ ft. Depth
Height: Above/Below Surface ____ ft. Weight 11 lbs./ft. Drive Shoe? Yes ☑ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
YELLOW SAND	4	4
GRAY SAND	8	12
COARSE GRAY SAND & GRAVEL	4	16
HARD BLUE CLAY	39	55
SOFT BLUE CLAY	23	78
HARD BLUE CLAY & GRAVEL	38	116
SOFT SILTY CLAY	8	124
COARSE SAND & GRAVEL	7	131

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

USE A 2ND SHEET IF NEEDED

8 SCREEN:

Type: STAINLESS Dia.: 4"
Slot/Gauze 12 Length 4 FT.
Set between 127 ft. and 131 ft.
Fittings: HEMP PACKER PLUG 1 FT. BLANK

9 STATIC WATER LEVEL

58 ft. below land surface

10 PUMPING LEVEL below land surface

92 ft. after 4 hrs. pumping 20 g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ____ Chlorides (Cl) ____
Hardness ____ Other ____

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

13 Well Grouted? ☑ Yes ☐ No ☐ Neat Cement ☑ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
100 feet E Direction SEWER Type
Well disinfected upon completion ☑ Yes ☐ No

15 PUMP: ☐ Not installed
Manufacturer's Name AERMOTOR
Model Number SD-12 HP 3/4 Volts 230
Length of Drop Pipe 84 ft. capacity ____ G.P.M.
Type: ☑ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

replacement well

17 WATER WELL CONTRACTOR'S CERTIFICATION:

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

SLUSSER DRILLING CO., INC. 0388
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 1701 W. MICHIGAN, YPSILANTI

Signed Richard A Slusser AUTHORIZED REPRESENTATIVE Date 4-4-77

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

(C) (17) TW-4

12-3S-7E

Ypsilanti Twp. (Washtenaw Co.)

Ford Test Well No. 4

Well No. Y-12-1

Drilling Contractor: Poe Company

Location: NW¼ Section 12, T.3S., R.7E.,
By old barn and spur track at NW corner of Section 12,
of Ecorse Road or Ward Road.

Record by: Testimony from driller.

	Distance Down Feet
Yellow sand and a few stones	5
Clay and a few stones	10
Clay, sand, few stones	15
Fine sand	20
Sand, clay	25
Blue clay, few stones	30, 35, 40, 45
Clay, few stones	50
Clay, stones	55
Clay, few fine stones	60
Clay and stones	65, 70, 75
Sand, gravel, clay	80
Clay, few stones	85
Clay and stones	90, 95, 100, 105, 110, 115, 120, 125, 130
Fine Sand	135
Gravel	136
Fine sand	140

Date Drilled: 7-30-41
Pumping conditions: At 135' water came to 78' level.
At 136' water came to 55' level.

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (18)

WATER WELL AND PUMP RECORD

PERMIT NUMBER [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] MW-5

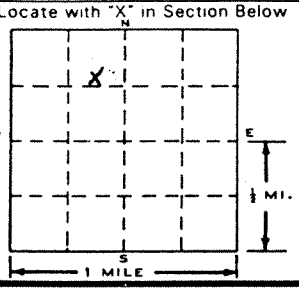
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE¼ NW¼ ¼	12	3 N(S)	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp.

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 10-29-84

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below

Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	5	5
Medium brown fine Sand	2	7
Dark brown/gray Sand	4	11
Fine gray, silty Sand	2	13
Dark gray Silt	2	15
USE A 2ND SHEET IF NEEDED		

8 SCREEN: ☐ Not Installed

Type PVC Diameter 2" ID

Slot/Gauze 010 Length 10'

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 8 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-1

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 507 Maumee, OH 43537

Signed [signature] AUTHORIZED REPRESENTATIVE Date 6/25/85

D67d 2/84

GEOLOGICAL SURVEY COPY

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

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (19)

WATER WELL AND PUMP RECORD

MW-6

PERMIT NUMBER

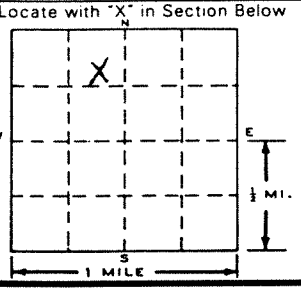
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE ¼ NW ¼ ¼	12	3 (N)S	7 (E)W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: General Motors Corporation
Hydra-Matic Division
Address Ypsilanti, MI 48197

Address Same As Well Location? ☒ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. | Date of Completion 9/24/85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☒ Auger ☐ Jetted ☐ ____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public
☐ Irrigation ☐ Type IIa Public ☐ Heat pump
☒ Test Well ☐ Type IIb Public ☐ ____

7 CASING: Diameter ☒ Steel ☐ Threaded ☐ Plastic ☐ Welded
3 in. to 15 ft. depth
11' in. to 15 ft. depth
Grouted Drill Hole Diameter
8 in. to 15 ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface flush ft.
Weight 7.58 lbs./ft.
Drive Shoe ☐ Yes ☐ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
WOOD	0.2'	0.2'
CONCRETE	0.67'	0.88'
BACKFILL - sand and gravel	4.1'	5.0"
SAND - with trace gravel, med.-fine	8.0'	13.0'
CLAY	2.0'	15.0'

USE A 2ND SHEET IF NEEDED

8 SCREEN: ☐ Not Installed
Type stainless steel Diameter 3'
Slot/Gauze .010 Length 5'
Set between 6 ft. and 11 ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen 6 ft. Other ____

9 STATIC WATER LEVEL:
7' 7/8" ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
____ ft. after ____ hrs. pumping at ____ G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade
☐ Basement offset ☒ Approved pit valve box

12 WELL GROUTED? ☐ No ☒ Yes From 1' to 3 ft.
☐ Neat cement ☒ Bentonite ☐ Other ____
No. of bags of cement ____ Additives 1 bag benseal

13 Nearest source of possible contamination
Type gasoline Distance 0 ft. Direction ____
Well disinfected upon completion? ☐ Yes ☒ No

14 PUMP: ☐ Not Installed ☐ Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe 14 ft. capacity ____ G.P.M.
TYPE: ☐ Submersible ☐ Jet ____
PRESSURE TANK
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

15. Remarks, elevation, source of data, etc.
S.W.#6 Elevation 721.12

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

EARTH SCIENCES SERVICES 1758
REGISTERED BUSINESS NAME REGISTRATION NO.
Address P.O. BOX 5517 MAUMEE, OHIO 43537
Signed ____ Date 11/5/85
AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (20) MW-7

WATER WELL AND PUMP RECORD

PERMIT NUMBER

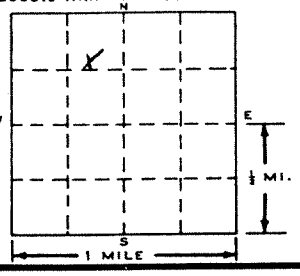
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 11-2-84

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	2	2
Med. brown fine Sand	3	5
Med brown/gray Sand	2	7
brny fine Sand w/ tr. silt	6	13
stiff gray Silt	2	15
USE A 2ND SHEET IF NEEDED		

8 SCREEN: ☐ Not Installed

Type PVC Diameter 2" I.D.

Slot/Gauze .010 Length 10 ft

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 7.5 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: ☑ Not Installed N.A. ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-11

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 557 Maumee OH 43537

Signed Michael T. Clyde Date 6/25/85

AUTHORIZED REPRESENTATIVE

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

D67d 2/84

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (21)

WATER WELL AND PUMP RECORD

MW-8

PERMIT NUMBER

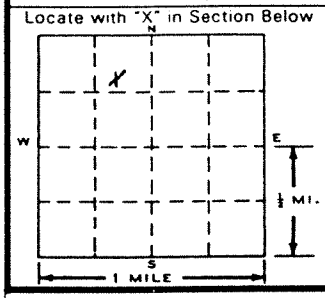
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp.

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 2-8-85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☑ Threaded ☑ Plastic ☐ Welded

2" in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below

Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	1.5	1.5
Medium brown, fine Sand	3.5	5.0
Medium brown/gray fine Sand, tr. silt	5.0	10.0
Gray fine Sand, w/ some silt	5.0	15.0

USE A 2ND SHEET IF NEEDED

8 SCREEN: ☐ Not Installed

Type PVC Diameter 2" I.D.

Slot/Gauze .010 Length 10 ft

Set between 5.0 ft. and 15.0 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 7.0 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 1 to 3 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-13

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc. 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 957 Maumee Ohio 43537

Signed _____ Date 6/25/85

AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT (22) OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

MW-9

PERMIT NUMBER

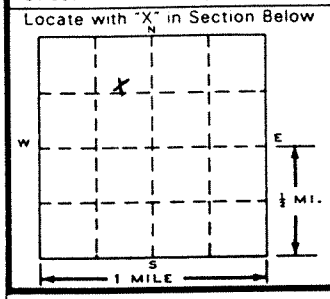
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp.

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 2-12-85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☑ Steel ☑ Threaded ☐ Plastic ☐ Welded

2 in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc. Fill	1	1
Medium brown fine Sand	4	5
Medium brown/gray fine Sand, tr. silt	5	10
Gray Fine Sand w/ some silt	5	15

USE A 2ND SHEET IF NEEDED

8 SCREEN: ☐ Not Installed

Type Galvanized steel Diameter 2" ID

Slot/Gauze 010 Length 10 ft

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check

☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL:

7.0 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-14

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 357 Maumee, OH 43537

Signed Michael V. Gage Date 6/25/85

AUTHORIZED REPRESENTATIVE

Authority: Act 368 PA 1978

Completion: Required

Penalty: Conviction of a violation of any provision is a misdemeanor.

D67d 2/84

GEOLOGICAL SURVEY COPY

DEWATERING WELL RECORD
Act 218, P.A. 1972

(23) TW-5

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	¼ ¼ ¼	12	3 N(S)	7 E(W)

STARTING POINT:
Distance and Direction from Nearest Road Intersection

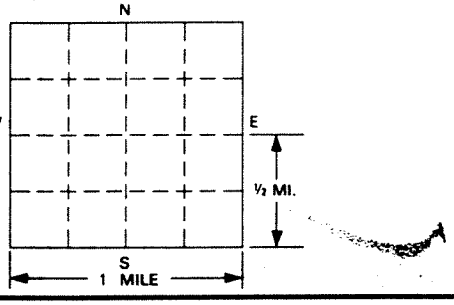
200' South of Gate 3 at
General Motors Assembly Plant, Willow Run

LOCATION:
From Eng. Plan Sheet No. _____

Other: _____

Engineering Firm: _____

Locate with "X" in section below — Sketch Map:



PROJECT OWNER: General Motors

Address: _____

Project Name: _____

Type of ☐ Sewer ☐ Pumping Station

Project ☐ Foundations Other: Water Main Repaid

2 ☐ Single Well
☒ Several Wells: Total Number of Wells 4 Well Depth — Range 24 ft. 26 ft. Date of Drilling 8 Month 85 Year
Total Distance Covered _____ ft, N/S/E/W
Includes Wells From Station _____ to Station _____

4 ☐ Cable Tool ☒ Rotary ☐ Bored (Auger)
☐ Jetted ☐ Driven ☐ _____

3 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	8	8
Fine Sand	8	16
Clay	9	25
(USE REMARKS SECTION IF NEEDED)		

5 CONSTRUCTION DETAILS: ☐ Drive Points ☐ Rock Well
☐ Natural Pack ☒ Gravel Pack
Drill Hole Size: Diam 36 in Depth 26 ft
Casing: Diam 24 in Depth 26 ft
Gravel Pack: From 0 ft to 26 ft
Pack Material: Pea Stone & Mason Sand
Screened From 25 ft to 17 ft

6 STATIC WATER LEVEL N.A. ft above/below land surface

8 ABANDONMENT PROCEDURES:
Wells under 40 feet
☐ Parent Material: from _____ ft to _____ ft
☐ Finer Textured Soils: from _____ ft to _____ ft
☐ Other: _____
Wells over 40 feet:
Bentonite-Fine Textured Soil Mixture
from _____ ft to _____ ft
Other: _____

Special Cases: ☐ Gas ☐ Flowing Well ☐ Bedrock ☐ _____

Grout
☐ Bentonite Grout ☐ Neat Cement Grout
from _____ ft to _____ ft

7 DEWATERED LEVEL _____ ft
Pump Operated _____ hr/day,
Pump Capacity _____ gpm
Discharge Point _____
(river, pond, lake, storm sewer, etc.)

10 REMARKS, Water Quality, Gas, etc.

RECEIVED
Mich. Dept. of Public Health
SEP 18 1985
Bureau of Environmental and Occupational Health - GWQS

9 ABANDONMENT CERTIFICATION
This well has been abandoned under my jurisdiction and this report is true to the best of my knowledge and belief.

ON CONSTRUCTION CO. D 1315
REGISTERED CONTRACTOR NAME: REGISTRATION NUMBER
Address 505 TERRITORIAL ROAD, MANCHESTER, MICH 48158
Signed _____ 8/26/85
AUTHORIZED REPRESENTATIVE DATE

11 DRILLING CONTRACTOR'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

UNION CONSTRUCTION CO. D 1315
REGISTERED CONTRACTOR NAME: REGISTRATION NUMBER
Address 505 TERRITORIAL RD., MANCHESTER, MICH. 481
Signed James D. Wilde 8/26/85
AUTHORIZED REPRESENTATIVE DATE

D67k

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (24)

WATER WELL AND PUMP RECORD

mw-810

PERMIT NUMBER

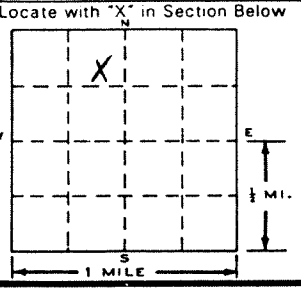
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE ¼ NW ¼ ¼	12	3 N(S)	7 (E)W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: General Motors Corporation
Hydra-Matic Division
Address Ypsilanti, MI 48197

Address Same As Well Location? ☒ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. | Date of Completion 9/18/85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☒ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public
☐ Irrigation ☐ Type IIa Public ☐ Heat pump
☒ Test Well ☐ Type IIb Public ☐ _____

7 CASING: Diameter ☒ Steel ☐ Threaded ☐ Plastic ☐ Welded
3 in. to 11' ft. depth
11' in. to 15 ft. depth
Grouted Drill Hole Diameter
8 in. to 15 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface flush ft.
Weight 7.58 lbs./ft.
Drive Shoe ☐ Yes ☐ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
WOOD	0.2'	0.2'
CONCRETE	0.67'	0.88'
GRAVEL - with trace sand	6.1'	7.0'
GRAVEL	0.5'	7.5'
SAND - with trace gravel, med.-fine	6.5'	14.0'
CLAY - blue to gray	1.0'	15.0'

8 SCREEN: ☐ Not Installed
Type stainless steel Diameter 3'
Slot/Gauze .010 Length 5'
Set between 6 ft. and 11 ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen 6 ft. Other 4' below screen

9 STATIC WATER LEVEL:
6' 6" ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
_____ ft. after _____ hrs. pumping at _____ G.P.M.
_____ ft. after _____ hrs. pumping at _____ G.P.M.

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade
☐ Basement offset ☒ Approved pit valve box

12 WELL GROUTED? ☐ No ☒ Yes From 1' to 3' ft.
☐ Neat cement ☒ Bentonite ☐ Other _____
No. of bags of cement _____ Additives 1 bag benseal

13 Nearest source of possible contamination
Type gasoline Distance _____ ft. Direction _____
Well disinfected upon completion? ☐ Yes ☒ No

14 PUMP: ☐ Not Installed ☐ Pump Installation Only
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of Drop Pipe 14' ft. capacity _____ G.P.M.
TYPE: ☐ Submersible ☐ Jet _____
PRESSURE TANK:
Manufacturer's name _____
Model number _____ Capacity _____ Gallons

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.
S.W.#5 Elevation 721.16

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

EARTH SCIENCES SERVICES 1758
REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 557 MAUMEE, OHIO 43537

Signed Michael T. Gray Date 11/5/85
AUTHORIZED REPRESENTATIVE

D67d 2/84

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

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT (25) OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

MW-9411

PERMIT NUMBER

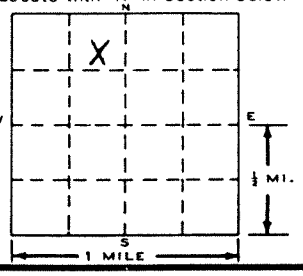
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE ¼ NW ¼ ¼	12	3 N(S)	7 (E)W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: General Motors Corporation
Hydra-Matic Division
Address Ypsilanti, MI 48197

Address Same As Well Location? [X] Yes [ ] No

4 WELL DEPTH: (completed) 15 ft. | Date of Completion 9/20/85

5 [ ] Cable tool [ ] Rotary [ ] Driven [ ] Dug
[ ] Hollow rod [X] Auger [ ] Jetted [ ] ____

6 USE: [ ] Domestic [ ] Type I Public [ ] Type III Public
[ ] Irrigation [ ] Type IIa Public [ ] Heat pump
[X] Test Well [ ] Type IIb Public [ ] ____

7 CASING: Diameter [X] Steel [ ] Threaded [ ] Plastic [ ] Welded
3 in. to 15 ft. depth
11" in. to 15 ft. depth
Grouted Drill Hole Diameter
____ in. to ____ ft. depth
8 in. to 15 ft. depth
Height: Above/Below Surface flush ft.
Weight 7.58 lbs./ft.
Drive Shoe [ ] Yes [X] No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
WOOD	0.2'	0.2'
CONCRETE	0.67'	0.88'
SAND	8.1'	9.0'
SAND	4.0'	13.0'
CLAY	2.0'	15.0'

8 SCREEN: [ ] Not Installed
Type stainless steel Diameter 3'
Slot/Gauze .010 Length 5'
Set between 6 ft. and 11 ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[ ] Blank above screen 6 ft. Other 4' below screen

9 STATIC WATER LEVEL:
7' 2" ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface
____ ft. after ____ hrs. pumping at ____ G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: [ ] Pitless adapter [ ] 12" above grade
[ ] Basement offset [X] Approved pit valve box

12 WELL GROUTED? [ ] No [X] Yes From 1' to 3' ft.
[ ] Neat cement [X] Bentonite [ ] Other ____
No. of bags of cement ____ Additives 1 bag benseal

13 Nearest source of possible contamination
Type gasoline Distance ____ ft. Direction ____
Well disinfected upon completion? [ ] Yes [X] No

14 PUMP: [X] Not Installed [ ] Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe 14 ft. capacity ____ G.P.M.
TYPE: [ ] Submersible [ ] Jet ____
PRESSURE TANK
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

USE A 2ND SHEET IF NEEDED

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

S.W.#4 Elevation 721.05

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

EARTH SCIENCES SERVICES 1758
REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. BOX 557, MAUMEE, OHIO 43537

Signed Michael V. Gac Date 11/5/85
AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT (26) OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER MW7012

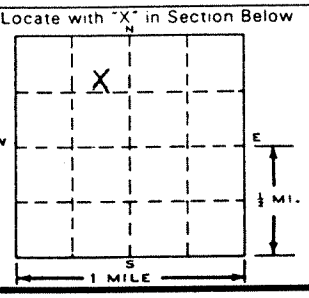
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE ¼ NW ¼ ¼	12	3 N (S)	7 (E) W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below — Sketch Map:



3 OWNER OF WELL

General Motors Corporation
Hydra-Matic Division
Address: Ypsilanti, MI 48197

Address Same As Well Location? [X] Yes [ ] No

4 WELL DEPTH (completed)

15 ft.

Date of Completion: 9/19/85

5

[ ] Cable tool [ ] Rotary [ ] Driven [ ] Dug
[ ] Hollow rod [X] Auger [ ] Jetted [ ] _____

6 USE

[ ] Domestic [ ] Type I Public [ ] Type III Public
[ ] Irrigation [ ] Type IIa Public [ ] Heat pump
[X] Test Well [ ] Type IIb Public [ ] _____

7 CASING

Diameter [X] Steel [ ] Threaded [ ] Plastic [ ] Welded

3 in. to 15 ft. depth
11" in. to 15 ft. depth
Grouted Drill Hole Diameter
8 in. to 15 ft. depth
_____ in. to _____ ft. depth

Height: Above/Below Surface flush ft.
Weight 7.58 lbs./ft.
Drive Shoe [ ] Yes [X] No

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
WOOD	0.2'	0.2'
CONCRETE	0.67'	0.88'
BACKFILL - native soil	2.5'	3.5'
CONCRETE - thin layer	0.5'	4.0'
ND - lt. brn. med.-fine, trace gravel	3.0'	7.0'
GRAVEL - with some silt	1.0'	8.0'
SAND	5.0'	13.0'
CLAY	2.0'	15.0'

USE A 2ND SHEET IF NEEDED

8 SCREEN

[ ] Not Installed
Type stainless steel Diameter 3"
Slot/Gauze .010 Length 5'
Set between 6 ft. and 11 ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[ ] Blank above screen 6 ft. Other 4' below screen

9 STATIC WATER LEVEL

7' ½" ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface

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

11 WELL HEAD COMPLETION

[ ] Pitless adapter [ ] 12" above grade
[ ] Basement offset [X] Approved pit valve box

12 WELL GROUTED?

[ ] No [X] Yes From 1' to 3 ft.
[ ] Neat cement [X] Bentonite [ ] Other _____
No. of bags of cement _____ Additives 1 bag benseal

13 Nearest source of possible contamination

Type gasoline Distance 0 ft. Direction _____
Well disinfected upon completion? [ ] Yes [X] No

14 PUMP

[X] Not Installed [ ] Pump Installation Only
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of Drop Pipe 14 ft. capacity _____ G.P.M.
TYPE: [ ] Submersible [ ] Jet _____
PRESSURE TANK:
Manufacturer's name _____
Model number _____ Capacity _____ Gallons

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

S.W.#3 Elevation 721.18

16. WATER WELL CONTRACTOR'S CERTIFICATION

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

Earth Sciences Services 1758
REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 557 Maumee, Ohio 43537

Signed _____ Date 11/5/85
AUTHORIZED REPRESENTATIVE

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

D67d 2/84

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT (27) OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

MW43

PERMIT NUMBER [ ][ ][ ][ ][ ][ ][ ][ ][ ]

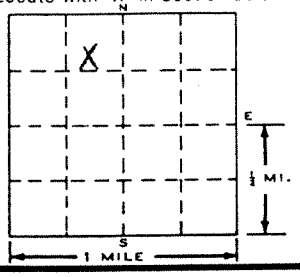
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE ¼ NW ¼ ¼	12	3 N(S)	7 E(W)

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL

General Motors Corporation
Hydra-Matic Division
Address Ypsilanti, MI 48197

Address Same As Well Location? [X] Yes [ ] No

4 WELL DEPTH: (completed)

15 ft. | Date of Completion 9/17/85

5

[ ] Cable tool [ ] Rotary [ ] Driven [ ] Dug
[ ] Hollow rod [X] Auger [ ] Jetted [ ] _____

6 USE:

[ ] Domestic [ ] Type I Public [ ] Type III Public
[ ] Irrigation [ ] Type IIa Public [ ] Heat pump
[X] Test Well [ ] Type IIb Public [ ] _____

7 CASING:

Diameter [X] Steel [ ] Threaded [ ] Plastic [ ] Welded

3 in. to 15 ft. depth
11" in. to 15 ft. depth
Grouted Drill Hole Diameter
8 in. to 15 ft. depth
_____ in. to _____ ft. depth

Height: Above/Below
Surface flush ft.
Weight 7.58 lbs./ft.
Drive Shoe [ ] Yes [X] No

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
WOOD	0.2'	0.2'
CONCRETE	0.67'	0.88'
CLAY - gravel and backfill	2.1'	3.0'
SAND - med.-fine brn., med. to dark	1.0'	4.0'
ND - and gravel, trace silt	4.0'	8.0';
SAND - trace gravel, med.-fine	1.0'	9.0'
SAND - trace clay and gravel	3.0'	12.0'
CLAY - gray to blue	3.0'	15.0'
USE A 2ND SHEET IF NEEDED		

8 SCREEN:

[ ] Not Installed
Type stainless steel Diameter 3'
Slot/Gauze .010 Length 5'
Set between 6 ft. and 11 ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[ ] Blank above screen 6 ft. Other 4' below screen

9 STATIC WATER LEVEL:

5' 9½" ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface

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

11 WELL HEAD COMPLETION:

[ ] Pitless adapter [ ] 12" above grade
[ ] Basement offset [X] Approved pit valve box

12 WELL GROUTED?

[ ] No [X] Yes From 1' to 3' ft.
[ ] Neat cement [X] Bentonite [ ] Other _____
No. of bags of cement _____ Additives 1 bag benseal

13 Nearest source of possible contamination

Type gasoline Distance 0 ft. Direction _____
Well disinfected upon completion? [ ] Yes [X] No

14 PUMP:

[X] Not Installed [ ] Pump Installation Only
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of Drop Pipe 14 ft. capacity _____ G.P.M.
TYPE: [ ] Submersible [ ] Jet _____
PRESSURE TANK:
Manufacturer's name _____
Model number _____ Capacity _____ Gallons

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

S.W.#2 Elevation 721.09

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

EARTH SCIENCES SERVICES 1758
REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. BOX 557, MAUMEE, OHIO 43537

Signed Michael J. Cline Date 11/5/85
AUTHORIZED REPRESENTATIVE

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

D67d 2/84

GEOLOGICAL SURVEY COPY

(28)

MW-14

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

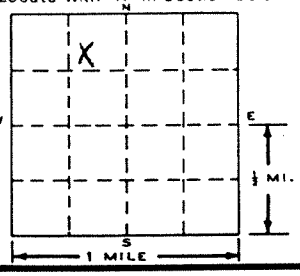
PERMIT NUMBER

1 LOCATION OF WELL					
County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE ¼ NW ¼ ¼	12	3 N(S)	7 (E)W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: General Motors Corporation
Hydra-Matic Division
Address Ypsilanti, MI 48197

Address Same As Well Location? [X] Yes [ ] No

4 WELL DEPTH: (completed) 15 ft. | Date of Completion 9/18/85

5 [ ] Cable tool [ ] Rotary [ ] Driven [ ] Dug
[ ] Hollow rod [X] Auger [ ] Jetted [ ] ____

6 USE: [ ] Domestic [ ] Type I Public [ ] Type III Public
[ ] Irrigation [ ] Type IIa Public [ ] Heat pump
[X] Test Well [ ] Type IIb Public [ ] ____

7 CASING: Diameter [X] Steel [ ] Threaded [ ] Plastic [ ] Welded
3 in. to 15 ft. depth
11' in. to 15 ft. depth
Grouted Drill Hole Diameter
8 in. to 15 ft. depth
____ in. to ____ ft. depth

Height: Above/Below Surface flush ft.
Weight 7.58 lbs./ft.
Drive Shoe [ ] Yes [X] No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
WOOD	0.2'	0.2'
CONCRETE	0.67'	0.88'
CLAY - sand and gravel backfill	5.1'	6.0'
SAND - med.-fine, lt. brn.	2.0'	8.0'
ND - med.-fine, lt. brn.	4.5'	12.5'
CLAY - gray-blue	2.5'	15.0'
USE A 2ND SHEET IF NEEDED		

8 SCREEN: [ ] Not Installed
Type stainless steel Diameter 3"
Slot/Gauze .010 Length 5'
Set between 6' ft. and 11's ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[X] Blank above screen 6' ft. Other 4' below screen

9 STATIC WATER LEVEL:
6' ½" ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface
____ ft. after ____ hrs. pumping at ____ G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: [ ] Pitless adapter [ ] 12" above grade
[ ] Basement offset [X] Approved pit valve box

12 WELL GROUTED? [ ] No [X] Yes From 1' to 3 ft.
[ ] Neat cement [X] Bentonite [ ] Other ____
No. of bags of cement ____ Additives 1 bag benseal

13 Nearest source of possible contamination
Type gasoline Distance 0 ft. Direction ____
Well disinfected upon completion? [ ] Yes [X] No

14 PUMP: [X] Not Installed [ ] Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe 14 ft. capacity ____ G.P.M.
TYPE: [ ] Submersible [ ] Jet ____
PRESSURE TANK:
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

15. Remarks, elevation, source of data, etc.
S.W.#1 Elevation 721.10

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

EARTH SCIENCES SERVICES 1758
REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. BOX 857 MAUMEE, OHIO 43537

Signed Michael V. Gigl Date 11/5/85
AUTHORIZED REPRESENTATIVE

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

D67d 2/84

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (29)

WATER WELL AND PUMP RECORD

MW-15

PERMIT NUMBER

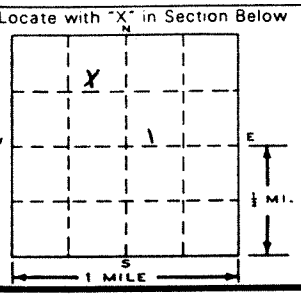
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division of General Motors

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 10-29-84

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below

Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	3	3
Brown fine Sand	4	7
Dk. brown fine Sand	4	11
Gray fine Sand, tr. silt	2	13
Stiff gray Silt	2	15
USE A 2ND SHEET IF NEEDED		

8 SCREEN: ☐ Not Installed

Type PVC Diameter 2" I.D.

Slot/Gauze 010 Length 10 ft

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 8 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-2

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 577 Mgumee OH 43537

Signed _____ Date 6/25/85

AUTHORIZED REPRESENTATIVE

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

D67d 2/84

GEOLOGICAL SURVEY COPY

(30)

MW-16

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
WATER WELL AND PUMP RECORD

PERMIT NUMBER [ ][ ][ ] [ ][ ] [ ][ ][ ][ ]

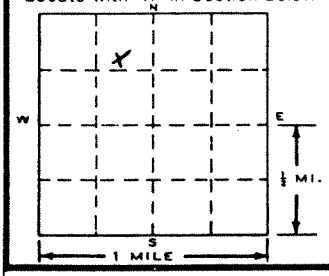
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE¼ NW¼ ¼	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 10-29-84

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ ____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded
2 in. to 5 ft. depth
____ in. to ____ ft. depth
Grouted Drill Hole Diameter
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface 0 ft.
Weight ____ lbs./ft.
Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	2	2
Med. brown fine Sand	5	7
Dk. brown fine Sand	4	11
Gray fine Sand w/ silt	2	13
Lt gray silty Sand	2	15
USE A 2ND SHEET IF NEEDED		

8 SCREEN: ☐ Not Installed
Type PVC Diameter 2" I.D.
Slot/Gauze 010 Length 10 ft
Set between 5 ft. and 15 ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen ____ ft. Other ____

9 STATIC WATER LEVEL:
8 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
____ ft. after ____ hrs. pumping at ____ G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.
☐ Neat cement ☑ Bentonite ☐ Other ____
No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination
Type ____ Distance ____ ft. Direction ____
Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
TYPE: ☐ Submersible ☐ Jet ____
PRESSURE TANK:
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

15. Remarks, elevation, source of data, etc.
MW-3

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Earth Sciences Services, Inc 1758
REGISTERED BUSINESS NAME REGISTRATION NO.
Address P.O. Box 557 Maumee OH 43537
Signed [signature] AUTHORIZED REPRESENTATIVE Date 6/25/85

D67d 2/84

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

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (31)

WATER WELL AND PUMP RECORD

MW-17

PERMIT NUMBER [ ][ ][ ][ ][ ][ ][ ][ ][ ]

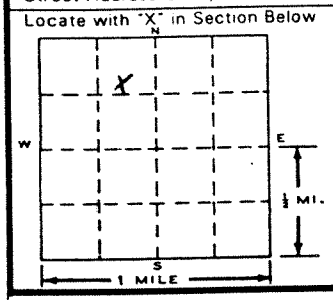
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 — **Date of Completion** 10-24-85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc. fill	3	3
Med. brown fine Sand	4	7
DK. brown fine Sand	4	11
gray fine Sand w/ silt	2	13
stiff gray Silt	2	15

USE A 2ND SHEET IF NEEDED

8 SCREEN: ☐ Not Installed

Type PVC — Diameter 2" I.D.

Slot/Gauze 010 — Length 10 ft

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 8 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-4

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc — 1758

REGISTERED BUSINESS NAME — REGISTRATION NO.

Address P.O. Box 557 Maumee OH 43537

Signed _____ Date 6/25/85

AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (32)

WATER WELL AND PUMP RECORD

86-3 MW28 86-3

PERMIT NUMBER

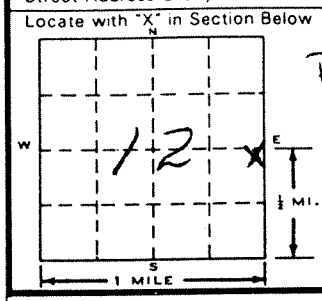
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE¼ SW¼ ¼	12	3 XXX S	7 E/W

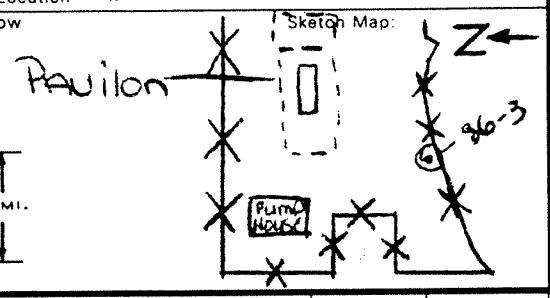
Distance And Direction From Road Intersection
2152' North of C.L. Tyler Road
3'4" N. of S. chain link fence property line
87' East of South property line fence
1215' E. of C.L. McGregor Road (extended North)

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:



3 OWNER OF WELL:
Wayne County
Address Airport Division
West Fuel Farm, Willow Run Airport
Address Same As Well Location? [X] Yes [ ] No

4 WELL DEPTH: (completed) 11 ft. | Date of Completion 13 Sept 86

5 [ ] Cable tool [ ] Rotary [ ] Driven [ ] Dug
[ ] Hollow rod [X] Auger [ ] Jetted [ ] ____

6 USE: [ ] Domestic [ ] Type I Public [ ] Type III Public
[ ] Irrigation [ ] Type IIa Public [ ] Heat pump
[ ] Test Well [ ] Type IIb Public [X] monitoring

7 CASING: Diameter [ ] Steel [X] Threaded [ ] Plastic [ ] Welded
2 in. to 5 ft. depth
____ in. to ____ ft. depth
Grouted Drill Hole Diameter
9 in. to 4.5 ft. depth
____ in. to ____ ft. depth
Height: XXX Above/Below
Surface 0.33 ft.
Weight 3.5 lbs./ft.
Drive Shoe [ ] Yes [X] No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Tan, sand	2"	2"
Black Ashphalt	4"	6"
Tan silt, clay, gravel & sand	1'	1.5'
Pale yellow clay, very fine & fine sand	1.5'	3'
Pale yellow clay, very fine & fine sand	1'	4'
Light clay, very fine & fine sand	2'	6'
Tan clay, very fine & fine sand	1.5'	7.5'
Gray silty clays, fine & very fine sand	2.5'	10'
Very fine sand, silty clay	3'	13'+

8 SCREEN: Stainless Steel [ ] Not Installed
Type S Diameter 2"
Slot/~~Gauge~~ #7 Length 6.5'
Set between 5.5' ft. and 11' ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[ ] Blank above screen ____ ft. Other threaded

9 STATIC WATER LEVEL:
7.11' ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface
N/A
____ ft. after ____ hrs. pumping at ____ G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: [ ] Pitless adapter [ ] 12" above grade
threaded cap [X] Basement offset [ ] Approved pit

12 WELL GROUTED? [ ] No [X] Yes From 2.5' to 4.5' ft.
[ ] Neat cement [X] Bentonite [ ] Other ____
No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination
Type Aviation Fuels Distance 40'- ft. Direction North
Filler Pipes 200'
Well disinfected upon completion? [ ] Yes [X] No

14 PUMP: [X] Not Installed [ ] Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
TYPE: [ ] Submersible [ ] Jet ____
PRESSURE TANK
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

RECEIVED
Mich. Dept. of Public Health
JAN 06 1988
Bureau of Environmental and Occupational Health

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.
Surface Elevation 717.02'
Top of Casing 716.69' MSL
12-15-87

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Sterling Drilling Company 0666
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 6236 W. Grand River, Brighton, MI 48116
Signed Glenn Miller AUTHORIZED REPRESENTATIVE Date 13 Sept. 1986

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

D67d 2/84

GEOLOGICAL SURVEY COPY

(33) Mw29 86-1

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER

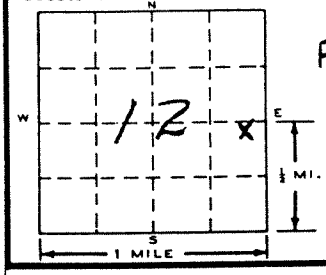
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE¼ SW¼ ¼	12	3S N/S	7E E/W

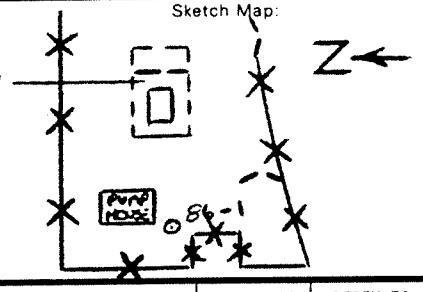
Distance And Direction From Road Intersection
2221' North of C.L. Tyler Road
96' South of North of property line
1160' East of C.L. McGregor Road (extended North)
44' East of property line

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:



3 OWNER OF WELL: Wayne County Airport Division
Address West Fuel Farm, Willow Run Airport
Address Same As Well Location? ☒ Yes ☐ No

4 WELL DEPTH: (completed) 11.8' ft. | **Date of Completion** 19 Sept 86

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☒ Auger ☐ Jetted ☐ ____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☒ monitoring

7 CASING: Diameter ☐ Steel ☒ Threaded ☐ Plastic ☐ Welded
2" in. to 8.5 ft. depth
____ in. to ____ ft. depth
Grouted Drill Hole Diameter
9 in. to 8 ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface 1.75 ft.
Weight 3.5 lbs./ft.
Drive Shoe ☐ Yes ☒ No

8 SCREEN: ☐ Not Installed
Type Stainless Steel Diameter 2"
Slot/Gauge XXX #7 Length 3'
Set between 8.8' ft. and 11.8' ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen ____ ft. Other threaded

9 STATIC WATER LEVEL:
8.11' ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
N/A
____ ft. after ____ hrs. pumping at ____ G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade
threaded Cap ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☒ Yes From 6' to 8' ft.
☐ Neat cement ☒ Bentonite ☐ Other ____
No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination
Type filler Distance 70 ft. Direction east
pipes
Well disinfected upon completion? ☐ Yes ☐ No

14 PUMP: ☒ Not Installed ☐ Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
TYPE: ☐ Submersible ☐ Jet ____
PRESSURE TANK:
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Brown silty, clayey, sand TOPSOIL	6"	6"
Blackish gray, silty, gravelly clayey, very fine, fine SAND	1'	1.5'
Blackish gray, silty, gravelly, clayey, very fine, fine SAND	3'	4.5'
Dark gray, trace gravel, silty, clayey, very fine, fine SAND	1.5'	6'
Variegated black & blackish gray silty, clayey, very fine, fine SAND. Typical fill	1'	7'
Blackish gray, silty, clayey, very fine, fine SAND	4'	11'
Tan, gravel, silty, very fine, fine SAND. Typical fill.	2'	13'

RECEIVED
Mich. Dept. of Public Health
JAN 06 1988
Bureau of Environmental and Occupational Health - EWSD

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.
Surface Elevation 717.88'
Top of Casing 719.63'
12-15-87
A-PM

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Sterling Drilling Company C666
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 6236 W. Grand River, Brighton, MI 48116
Signed Glenn Miller AUTHORIZED REPRESENTATIVE Date 19 Sept. 1986

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

D67d 2/84

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (34) XX

WATER WELL AND PUMP RECORD

MW-30 86-4

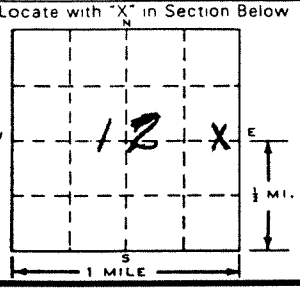
PERMIT NUMBER

1 LOCATION OF WELL

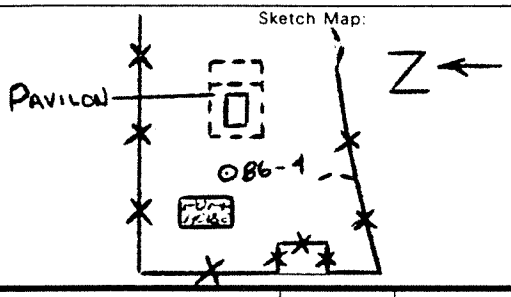
County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE ¼ SW ¼ ¼	12	3 XX N/S	7 XX E/W

Distance And Direction From Road Intersection
2277' North of C.L. Tyler Road
1236' East of C.L. McGregor Road (extended North)
126' North of South property line fience (S. gate posts)
.5' East of East edge pump house
Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:



3 OWNER OF WELL: Wayne County Airport Division
Address West Fuel Farm, Willow Run Airport
Address Same As Well Location? [X] Yes [ ] No

4 WELL DEPTH: (completed) 11' ft. | Date of Completion 8/87

5 [ ] Cable tool [ ] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [X] Auger [ ] Jetted [ ] ____

6 USE: [ ] Domestic [ ] Type I Public [ ] Type III Public [ ] Irrigation [ ] Type IIa Public [ ] Heat pump [ ] Test Well [ ] Type IIb Public [X] monitoring

7 CASING: Diameter [ ] Steel [XX] Threaded [ ] Plastic [ ] Welded
____ in. to 7.6 ft. depth
____ in. to ____ ft. depth
Grouted Drill Hole Diameter
9" in. to 7' ft. depth
____ in. to ____ ft. depth
Height: XXX Above/Below
Surface 0.41' ft.
Weight 3.5 lbs./ft.
Drive Shoe [ ] Yes [X] No

8 SCREEN: Stainless Steel [ ] Not Installed
Type ____ Diameter 2"
Slot/Gauze XX #7 Length 3'
Set between 7.8' ft. and 10.8' ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check [ ] Blank above screen ____ ft. Other threaded

9 STATIC WATER LEVEL: 7.82' ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface N/A
____ ft. after ____ hrs. pumping at ____ G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: threaded cap [ ] Pitless adapter [ ] 12" above grade [ ] Basement offset [ ] Approved pit

12 WELL GROUTED? [ ] No [X] Yes From 5' to 7' ft.
[ ] Neat cement [X] Bentonite [ ] Other ____
No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination
Type filler pipes Distance 20' ft. Direction South
Well disinfected upon completion? [ ] Yes [ ] No

14 PUMP: [X] Not Installed [ ] Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
TYPE: [ ] Submersible [ ] Jet ____
PRESSURE TANK:
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
White broken lime-stone and SLAG	6"	6"
Grayish black, silty, clayey, gravel, very fine to medium SAND	1.5'	2'
Blackish gray, silty, clayey, very fine, fine sand, GRAVEL	2'	4'
Dark gray, silty, gravel, clayey, very fine, fine, medium SAND	2'	6'
Dark gray, silty, gravel, clayey, very fine-fine SAND	6'	12'
Grayish tan, silty, gravel, clayey, very fine, fine SAND	1'	13'

USE A 2ND SHEET IF NEEDED

RECEIVED
Mich. Dept. of Public Health
JAN 06 1988
Bureau of Environmental and Occupational Health

15. Remarks, elevation, source of data, etc.
Surface Elevation 717.39'
Top of Casing 716.98

12-15-87

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Sterling Drilling Company 0666
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 6236 W. Grand River, Brighton MI 48116
Signed Glenn Miller Date 18 Sept. 1986
AUTHORIZED REPRESENTATIVE
Glenn Miller

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

D67d 2/84

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT (35) OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

MW-31 86-5

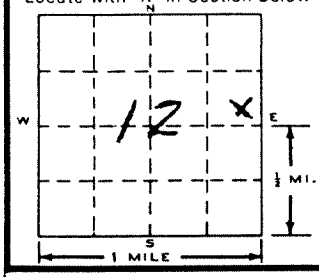
PERMIT NUMBER

1 LOCATION OF WELL

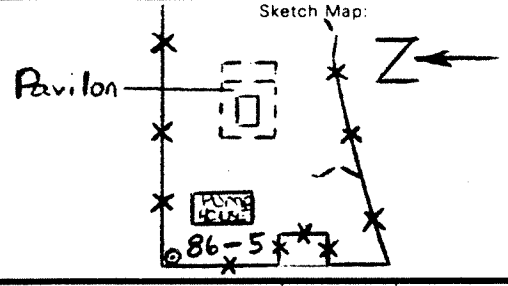
County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	SE ¼ NE ¼ ¼	12	3 XX N/S	7 E/W

Distance And Direction From Road Intersection
2375' North of Center Line Tyler Road
11' South of North property fence
13.5' East of West property line fence
1132' East of C.L. McGregor Road (extended North)
Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:



3 OWNER OF WELL: Wayne County Airport Division
Address West Fuel Farm, Willow Run Airport
Address Same As Well Location? [X] Yes [ ] No

4 WELL DEPTH: (completed) 13' ft. | **Date of Completion** 15 Sept 86

5 [ ] Cable tool [ ] Rotary [ ] Driven [ ] Dug
[ ] Hollow rod [X] Auger [ ] Jetted [ ] ____

6 USE: [ ] Domestic [ ] Type I Public [ ] Type III Public
[ ] Irrigation [ ] Type IIa Public [ ] Heat pump
[ ] Test Well [ ] Type IIb Public [X] monitoring

7 CASING: Diameter [ ] Steel [X] Threaded [ ] Plastic [ ] Welded
2" in. to 7' ft. depth
____ in. to ____ ft. depth
Grouted Drill Hole Diameter
9" in. to 7' ft. depth
____ in. to ____ ft. depth
Height: Above/Below XXX
Surface 1.25' ft.
Weight 3.5 lbs./ft.
Drive Shoe [ ] Yes [X] No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Brown clayey, silty, sand TOPSOIL	3.5'	3.5'
Light gray tan, clayey, silty, SAND	3.5'	3.5'
Gray, clayey, gravel, with tan, sandy, SILTY	3'	10'
Gray, very fine, fine, medium SAND	3'	13'

8 SCREEN: [ ] Not Installed
Type Stainless Steel Diameter 2"
Slot/Gauze XXX #10 Length 6.50'
Set between 7' ft. and 13.5' ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[ ] Blank above screen ____ ft. Other threaded

9 STATIC WATER LEVEL: 9.0' ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface N/A
____ ft. after ____ hrs. pumping at ____ G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: [ ] Pitless adapter [ ] 12" above grade
threaded cap [ ] Basement offset [ ] Approved pit

12 WELL GROUTED? [ ] No [X] Yes From 5' to 7' ft.
[ ] Neat cement [X] Bentonite [ ] Other ____
No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination
Type filler pipes Distance 95' ft. Direction East
Well disinfected upon completion? [ ] Yes [ ] No

14 PUMP: [X] Not Installed [ ] Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
TYPE: [ ] Submersible [ ] Jet ____
PRESSURE TANK:
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

RECEIVED
Mich. Dept. of Public Health
JAN 06 1988
Bureau of Environmental and Occupational Health - GWCS

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.
Surface Elevation 718'
Top of Casing 719.69'

12-15-87
H. Pohl

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Sterling Drilling Company 0666
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 6236 W. Grand River, Brighton MI 48116
Signed Glenn Miller AUTHORIZED REPRESENTATIVE Date 15 Sept. 86

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

D67d 2/84

GEOLOGICAL SURVEY COPY

MW-5

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (36)

WATER WELL AND PUMP RECORD

PERMIT NUMBER

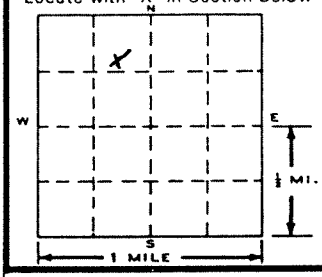
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE¼ NW¼ ¼	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division of General Motors

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 10-29-84

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc. fill	2	2
Dk brown fine Sand	5	7
Gray fine Sand	4	11
Gray fine Sand w/ silt	2	13
Stiff gray Silt	2	15

8 SCREEN: ☐ Not Installed

Type PVC Diameter 2" I.D.

Slot/Gauze 010 Length 10 ft

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 7.5 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

USE A 2ND SHEET IF NEEDED

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

MW-5

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 559 Maumee, OH 43537

Signed _____ Date 6/25/85

AUTHORIZED REPRESENTATIVE

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

D67d 2/84

GEOLOGICAL SURVEY COPY

(37)

MW-19

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER

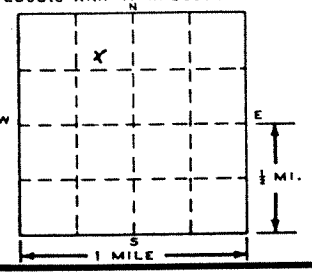
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 10-29-85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ ____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 5 ft. depth

____ in. to ____ ft. depth

Grouted Drill Hole Diameter

____ in. to ____ ft. depth

____ in. to ____ ft. depth

Height: Above/Below

Surface 0 ft.

Weight ____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

8 SCREEN: ☐ Not Installed

Type PVC Diameter 2" I.D.

Slot/Gauze 010 Length 10 ft

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check

☐ Blank above screen ____ ft. Other ____

9 STATIC WATER LEVEL:

8 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

____ ft. after ____ hrs. pumping at ____ G.P.M.

____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other ____

No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination

Type ____ Distance ____ ft. Direction ____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name ____

Model number ____ HP ____ Volts ____

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

TYPE: ☐ Submersible ☐ Jet ____

PRESSURE TANK:

Manufacturer's name ____

Model number ____ Capacity ____ Gallons

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	1.5	1.5
DK brown Sand	1.5	3.0
Md. brown Sand	4	7
Gray fine Sand	4	11
Gray fine Sand w/ silt	2	13
Stiff gray Silt	2	15

USE A 2ND SHEET IF NEEDED

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

MW-6

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 557 Manvel TX 43537

Signed Michael T. Gleason Date 6/25/85

AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

MW-20

GEOLOGICAL SURVEY NO. (38)

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER

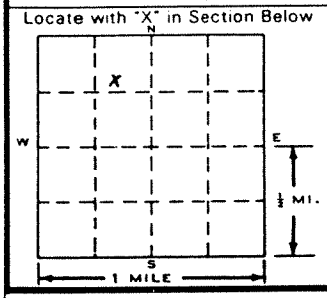
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 10-30-85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 05 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	2	2
DK brown fine Sand	3	5
Med brown fine Sand	2	7
Fine gray Sand w/ fr silt	4	11
Fine gray Sand w/ some silt	2	13
Stiff gray Silt	2	15

USE A 2ND SHEET IF NEEDED

8 SCREEN: ☐ Not Installed

Type PVC Diameter 2" I.D.

Slot/Gauze 010 Length 10 ft

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 7.5 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-7

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services Inc 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 551 Maumee OH 43537

Signed Michael V. Gize Date 6/25/85

AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

(39) MW-21

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER

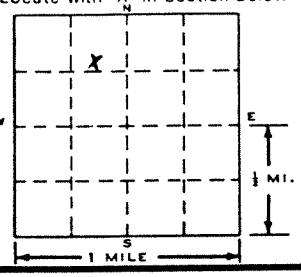
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 10-30-84

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	2	2
Dk. brown fine Sand	3	5
Med brown fine Sand	2	7
Gray fine Sand	4	11
ray fine Sand w/ tr. silt	2	13
Stiff gray Silt	2	15
USE A 2ND SHEET IF NEEDED		

8 SCREEN: ☐ Not Installed

Type PVC Diameter 2" I.D.

Slot/Gauze 010 Length 10 ft

Set between 5 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 8 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-8

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services Corp. 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 557 Mequon OH 43537

Signed _____ Date 6/25/85

AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (40)

WATER WELL AND PUMP RECORD

MW-22

PERMIT NUMBER

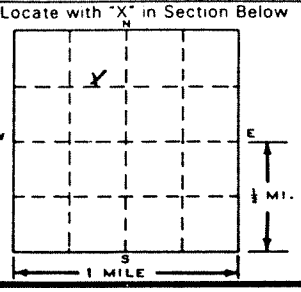
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division
General Motors Corp

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 10-30-84

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public
☐ Irrigation ☐ Type IIa Public ☐ Heat pump
☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded
2 in. to 5 ft. depth
_____ in. to _____ ft. depth
Grouted Drill Hole Diameter
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface 0 ft.
Weight _____ lbs./ft.
Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
DK brown silty Clay	2	2
Med brown fine Sand	3	5
Gray fine Sand	2	7
Gray fine Sand w/ tr. silt	6	13
Stiff gray Silt	2	15
USE A 2ND SHEET IF NEEDED		

8 SCREEN: ☐ Not Installed
Type PVC Diameter 2" I.D.
Slot/Gauze 010 Length 10 ft
Set between 5 ft. and 15 ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL:
8 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
_____ ft. after _____ hrs. pumping at _____ G.P.M.
_____ ft. after _____ hrs. pumping at _____ G.P.M.

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 2 to 4 ft.
☐ Neat cement ☑ Bentonite ☐ Other _____
No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination
Type _____ Distance _____ ft. Direction _____
Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of Drop Pipe _____ ft. capacity _____ G.P.M.
TYPE ☐ Submersible ☐ Jet _____
PRESSURE TANK:
Manufacturer's name _____
Model number _____ Capacity _____ Gallons

15. Remarks, elevation, source of data, etc.
MW-9

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Earth Sciences Services, Inc 1758
REGISTERED BUSINESS NAME REGISTRATION NO.

Address PO Box 357 Mauneee OH 43537

Signed _____ Date 6/25/85
AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

MW-23

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT (41) OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER [ ][ ][ ][ ][ ][ ][ ][ ][ ]

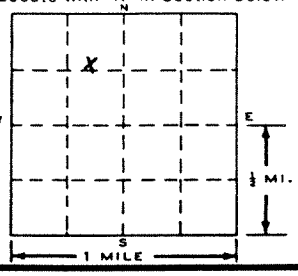
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division
General Motors Corp

Address: Ypsilanti, Michigan 48197

Address Same As Well Location? [x] Yes [ ] No

4 WELL DEPTH: (completed) 15 ft. 0 | **Date of Completion** 10-30-84

5 [ ] Cable tool [ ] Rotary [ ] Driven [ ] Dug [ ] Hollow rod [x] Auger [ ] Jetted [ ] _____

6 USE: [ ] Domestic [ ] Type I Public [ ] Type III Public [ ] Irrigation [ ] Type IIa Public [ ] Heat pump [ ] Test Well [ ] Type IIb Public [x] Monitor

7 CASING: Diameter [ ] Steel [ ] Threaded [x] Plastic [ ] Welded
2 in. to 5 ft. depth
_____ in. to _____ ft. depth
Grouted Drill Hole Diameter
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface 0 ft.
Weight _____ lbs./ft.
Drive Shoe [ ] Yes [x] No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	3	3
DK brown fine Sand	2	5
Med brown fine Sand	2	7
Brn, fine Sand	4	11
Gray fine Sand w/ fr. silt	2	13
Stiff gray Silt	2	15

USE A 2ND SHEET IF NEEDED

8 SCREEN: [ ] Not Installed
Type PVC Diameter 2" I.D.
Slot/Gauze 010 Length 10 ft
Set between 5 ft. and 15 ft.
FITTINGS: [ ] K-Packer [ ] Lead Packer [ ] Bremer Check
[ ] Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL:
8 ft. below land surface [ ] Flow

10 PUMPING LEVEL: below land surface
_____ ft. after _____ hrs. pumping at _____ G.P.M.
_____ ft. after _____ hrs. pumping at _____ G.P.M.

11 WELL HEAD COMPLETION: [ ] Pitless adapter [ ] 12" above grade [ ] Basement offset [ ] Approved pit

12 WELL GROUTED? [ ] No [x] Yes From 2 to 4 ft.
[ ] Neat cement [x] Bentonite [ ] Other _____
No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination
Type _____ Distance _____ ft. Direction _____
Well disinfected upon completion? [ ] Yes [x] No

14 PUMP: N.A [x] Not Installed [ ] Pump Installation Only
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of Drop Pipe _____ ft. capacity _____ G.P.M.
TYPE: [ ] Submersible [ ] Jet _____
PRESSURE TANK
Manufacturer's name _____
Model number _____ Capacity _____ Gallons

15. Remarks, elevation, source of data, etc.
MW-10

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Earth Sciences Services Corp 1758
REGISTERED BUSINESS NAME REGISTRATION NO.

Address PO Box 507 Maumee OH 43537

Signed [signature] Date 6/25/85
AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

MW-24

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT (42) OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PART 127 ACT 368, P.A. 1978

PERMIT NUMBER

1 LOCATION OF WELL

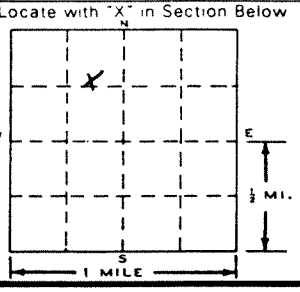
County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below

Sketch Map



3 OWNER OF WELL

Hydra-matic Division
General Motors
Address Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed)

15 ft. 0

Date of Completion: 11-2-84

5

☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE

☐ Domestic ☐ Type I Public ☐ Type III Public
☐ Irrigation ☐ Type IIa Public ☐ Heat pump
☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING

Diameter: ☐ Steel ☐ Threaded ☑ Plastic ☐ Welded

2 in. to 5 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	2	2
DK brown fine Sand	3	5
Med brown/gray Sand	2	7
Fine gray Sand w/ tr. silt	6	13
Stiff gray Silt	2	15

USE A 2ND SHEET IF NEEDED

8 SCREEN

☐ Not Installed

Type PVC Diameter 2" I.D.

Slot/Gauze 010 Length 10

Set between 5 ft. and 15 ft.

FITTINGS ☐ K-Packer ☐ Lead Packer ☐ Bremer Check

☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL

7.5 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION

☐ Pitless adapter ☐ 12" above grade
☐ Basement offset ☐ Approved pit

12 WELL GROUTED?

☐ No ☑ Yes From 2 to 4 ft

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP

N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

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

MW-12

16. WATER WELL CONTRACTOR'S CERTIFICATION

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

Earth Sciences Services, Inc. 1758
REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 557 Marysville OH 43537

Signed [signature] AUTHORIZED REPRESENTATIVE Date 6/25/85

D67d (Rev. 10-80)

GEOLOGICAL SURVEY COPY

MW-25

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (43)

WATER WELL AND PUMP RECORD

PERMIT NUMBER [ ][ ][ ] [ ][ ] [ ][ ][ ][ ]

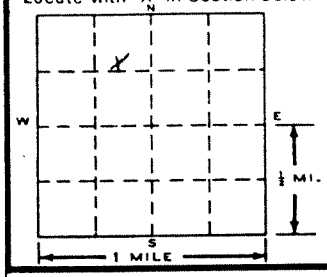
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE1/4 NW1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp.

Address Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. | Date of Completion 2-6-85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☑ Steel ☐ Threaded ☐ Plastic ☐ Welded

3 in. to 3 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below

Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	1.5	1.5
Med brown sand	3.5	5
Med brown/gray fine sand, tr. silt	5	10
Gray fine Sand w/ silt	5	15

8 SCREEN: ☐ Not Installed

Type Galvanized Diameter 3" I.D.

Slot/Gauze 010 Length 12'

Set between 3 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check ☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL: 6.5 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From _____ to _____ ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

USE A 2ND SHEET IF NEEDED

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

~~Monitor~~ RW-1

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc. 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 554 Mannee, OH 43537

Signed [signature] AUTHORIZED REPRESENTATIVE Date 6/25/85

D67d 2/84

GEOLOGICAL SURVEY COPY

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

MW-26

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (44)

WATER WELL AND PUMP RECORD

PERMIT NUMBER [ ][ ][ ] [ ][ ] [ ][ ][ ][ ]

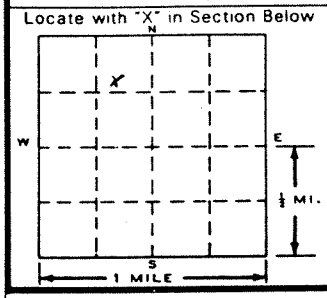
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N (S)	7 (E) W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division
General Motors Corp.
Address Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 2-7-85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public
☐ Irrigation ☐ Type IIa Public ☐ Heat pump
☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: ☑ Steel ☐ Threaded ☐ Plastic ☐ Welded
Diameter 3 in. to 3 ft. depth
_____ in. to _____ ft. depth
Grouted Drill Hole Diameter
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface 0 ft.
Weight _____ lbs./ft.
Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	1.5	1.5
Med brown fine Sand, tr silt	3.5	5
Med brown/gray fine Sand, tr. silt	5	10
Gray fine Sand w/ silt	5	15

8 SCREEN: ☐ Not Installed
Type Galvanized Diameter 3" I.D.
Slot/Gauze 010 Length 12'
Set between 3 ft. and 15 ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL:
6.5 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
_____ ft. after _____ hrs. pumping at _____ G.P.M.
_____ ft. after _____ hrs. pumping at _____ G.P.M.

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 3 to 1 ft.
☐ Neat cement ☑ Bentonite ☐ Other _____
No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination
Type _____ Distance _____ ft. Direction _____
Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of Drop Pipe _____ ft. capacity _____ G.P.M.
TYPE: ☐ Submersible ☐ Jet _____
PRESSURE TANK:
Manufacturer's name _____
Model number _____ Capacity _____ Gallons

USE A 2ND SHEET IF NEEDED

15. Remarks, elevation, source of data, etc.
RU MW-2

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Earth Sciences Services, Inc 1758
REGISTERED BUSINESS NAME REGISTRATION NO.
Address P.O. Box 557 Maumee, OH 43537
Signed [signature] Date 6/25/85
AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT OF PUBLIC HEALTH (45)

WATER WELL AND PUMP RECORD

MW-27

PERMIT NUMBER [ ][ ][ ][ ][ ][ ][ ][ ][ ]

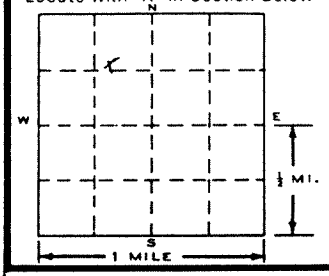
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
Washtenaw	Ypsilanti	NE 1/4 NW 1/4 1/4	12	3 N/S	7 E/W

Distance And Direction From Road Intersection

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map:

3 OWNER OF WELL: Hydra-Matic Division General Motors Corp

Address Ypsilanti, Michigan 48197

Address Same As Well Location? ☑ Yes ☐ No

4 WELL DEPTH: (completed) 15 ft. 0 | Date of Completion 2-7-85

5 ☐ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☑ Auger ☐ Jetted ☐ _____

6 USE: ☐ Domestic ☐ Type I Public ☐ Type III Public ☐ Irrigation ☐ Type IIa Public ☐ Heat pump ☐ Test Well ☐ Type IIb Public ☑ Monitor

7 CASING: Diameter ☑ Steel ☐ Threaded ☐ Plastic ☐ Welded

3" in. to 3 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below

Surface 0 ft.

Weight _____ lbs./ft.

Drive Shoe ☐ Yes ☑ No

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Misc fill	1.5	1.5
Med brown fine Sand	3.5	5
Med brown/gray fine Sand, tr. silt	5	10
Gray fine Sand w/ silt	5	15

8 SCREEN: ☐ Not Installed

Type Galvanized Diameter 3" I.D.

Slot/Gauze 010 Length 12'

Set between 3 ft. and 15 ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check

☐ Blank above screen _____ ft. Other _____

9 STATIC WATER LEVEL:

6.5 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

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

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

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 1 to 3 ft.

☐ Neat cement ☑ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☐ Yes ☑ No

14 PUMP: N.A. ☑ Not Installed ☐ Pump Installation Only

Manufacturer's name _____

Model number _____ HP _____ Volts _____

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

TYPE: ☐ Submersible ☐ Jet _____

PRESSURE TANK:

Manufacturer's name _____

Model number _____ Capacity _____ Gallons

USE A 2ND SHEET IF NEEDED

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

Monitored RW-3

16. WATER WELL CONTRACTOR'S CERTIFICATION:

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

Earth Sciences Services, Inc 1758

REGISTERED BUSINESS NAME REGISTRATION NO.

Address P.O. Box 557 Maumee, OH 43537

Signed Michael V. Gigl Date 6/25/85

AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

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

GEOLOGICAL SURVEY SAMPLE No. [ ] (46)

WATER WELL RECORD

ACT 294 PA 1965

TW6

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Twp.	Fraction	Section No.	Town	Range
WASHTENAW	YPSILANTI	NE¼ NW¼ NE¼	13	3S N/S.	7E E/W.

Distance And Direction from Road Intersections

3050 TYLER RD.

Street address & City of Well Location

OWNER No.

3 OWNER OF WELL: J. FONS CO.

Address 3651 HAMLIN ROAD

UTICA MICH 48087

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sand	19	0 to 19
Clay	12	19 to 31

4 WELL DEPTH: (completed) ft. Date of Completion 3-19-69

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

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

7 CASING: Diam. Threaded ☐ Welded ☐

____in. to 14 ft. Depth

____in. to ____ft. Depth

Height: Above/Below surface ____ft.

Weight ____lbs/ft.

Drive Shoe? Yes ☐ No ☐

8 SCREEN:

Type: Johnson Dia.: 4

Slot/Gauze 10 Length 36

Set between 28 ft. and 31 ft.

Fitting: Pack Sand 19 to 31

9 STATIC WATER LEVEL

Dry ft. below land surface

10 PUMPING LEVEL below land surface

Dry ft. after ____hrs. pumping ____g.p.m.

____ft. after ____hrs. pumping ____g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ____ Chlorides (Cl) ____

Hardness ____

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

13 GROUTING:

Well Grouted? ☐ Yes ☐ No

Material: ☐ Neat Cement ☐ ____

Depth: From ____ft. to ____ft.

14 SANITARY:

Nearest Source of possible contamination

____feet ____Direction ____Type

Well disinfected upon completion ☐ Yes ☐ No

15 PUMP:

Manufacturer's Name ____

Model Number ____ HP ____

Length of Drop Pipe ____ft. capacity ____G.P.M.

Type: ☐ Submersible ☐ ____ ☐ Jet ☐ Reciprocating

ADDED INFO. BY DRILLER, ITEM NO.

*CORRECTED BY:

**ADDITION BY

16 Remarks, elevation, source of data, etc.

Well # 5

17 WATER WELL CONTRACTOR'S CERTIFICATION:

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

John Patton — REGISTERED BUSINESS NAME — 0175 — REGISTRATION NO.

Address 2635 Longview Rochester

Signed John Patton — AUTHORIZED REPRESENTATIVE — Date Mar 31 1969

D67D 100M 6-66

JUN 4 1969 GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. [ ] (47)

WATER WELL RECORD

ACT 294 PA 1965

TW-7

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Twp	Fraction	Section No.	Town	Range
WASHTENAW	YPSILANTI	NW ¼ NW ¼ NE ¼	13	3S N/S.	7E E/W.

Distance And Direction from Road Intersections: 3050 TYLER RD.

Street address & City of Well Location

OWNER No.

3 OWNER OF WELL: J. FONS CO.

Address 3651 HAMLIN ROAD UTICA MICH 48087

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sand	16	0 to 16
Clay	1	16 to 17

4 WELL DEPTH: (completed) ft. Date of Completion 3-19-69

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

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

7 CASING: Diam. Threaded ☐ Welded ☐

___ in. to ___ ft. Depth 4

___ in. to ___ ft. Depth

Height: Above/Below surface ___ ft.

Weight ___ lbs/ft.

Drive Shoe? Yes ☐ No ☐

8 SCREEN:

Type: Johnson Dia.: 4

Slot/Gauze 10 Length ___

Set between 14 ft. and 17 ft.

Fittings:

9 STATIC WATER LEVEL

Dry ft. below land surface

10 PUMPING LEVEL below land surface

Dry ft. after ___ hrs. pumping ___ g.p.m.

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

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ___ Chlorides (Cl) ___

Hardness ___

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

13 GROUTING:

Well Grouted? ☐ Yes ☐ No

Material: ☐ Neat Cement ☐ ___

Depth: From ___ ft. to ___ ft.

14 SANITARY:

Nearest Source of possible contamination

___ feet ___ Direction ___ Type

Well disinfected upon completion ☐ Yes ☐ No

15 PUMP:

Manufacturer's Name ___

Model Number ___ HP ___

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

Type: ☐ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

ADDED INFO. BY DRILLER, ITEM NO.

*CORRECTED BY:

**ADDITION BY:

16 Remarks, elevation, source of data, etc.

Well #4

17 WATER WELL CONTRACTOR'S CERTIFICATION:

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

John Rattee — REGISTERED BUSINESS NAME

0175 — REGISTRATION NO.

Address 2635 Longview Rochester

Signed John Rattee — AUTHORIZED REPRESENTATIVE Date May 31 1969

D67D 100M 6-66

JUN 4

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. _____ (48)

WATER WELL RECORD

ACT 294 PA 1965

TW-8

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Twp.	Fraction	Section No.	Town	Range
WASHTENAW	YPSILANTI	NE¼ NW¼ NE¼	13	3 S N/S.	7E E/W.

Distance And Direction from Road Intersections: 3050 TYLER RD

OWNER No. _____

Street address & City of Well Location

3 OWNER OF WELL: J. FONS CO.

Address 3651 HAMLIN ROAD

UTICA MICH 48087

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sand	23	0 to 23
Clay	1	23 to 24

4 WELL DEPTH: (completed) ft. Date of Completion 3-19-69

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

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

7 CASING: Diam. Threaded ☐ Welded ☐

1¼ in. to ___ ft. Depth

___ in. to ___ ft. Depth

Height: Above/Below surface ___ ft.

Weight ___ lbs/ft.

Drive Shoe? Yes ☐ No ☐

8 SCREEN:

Type: Johnson Dia.: 1¼

Slot/Gauze 10 Length 36

Set between 21 ft. and 24 ft.

Fittings:

9 STATIC WATER LEVEL

Dry ft. below land surface

10 PUMPING LEVEL below land surface

Dry ft. after ___ hrs. pumping ___ g.p.m.

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

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ___ Chlorides (Cl) ___

Hardness ___

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

13 GROUTING:

Well Grouted? ☐ Yes ☐ No

Material: ☐ Neat Cement ☐ _____

Depth: From ___ ft. to ___ ft.

14 SANITARY:

Nearest Source of possible contamination

___ feet ___ Direction ___ Type

Well disinfected upon completion ☐ Yes ☐ No

15 PUMP:

Manufacturer's Name ___

Model Number ___ HP ___

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

Type: ☐ Submersible ☐ _____ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

Well #3

17 WATER WELL CONTRACTOR'S CERTIFICATION:

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

John Rattee — REGISTERED BUSINESS NAME

0175 — REGISTRATION NO.

Address 2635 Longview Rochester

Signed John Rattee — AUTHORIZED REPRESENTATIVE

Date Mar 31 1969

D67D 100M 6-66

JUN 4 1969

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. [ ] (49)

WATER WELL RECORD

ACT 294 PA 1965

TW9

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Twp.	Fraction	Section No.	Town	Range
WASHTENAW	YPSILANTI	~~NE~~ ¼ NW¼ NE¼ **	13	3 S N/S.	7 E E/W.

Distance And Direction from Road Intersections: 3050 TYLER RD.

Street address & City of Well Location

OWNER No.

3 OWNER OF WELL: J. FONS CO.

Address 3651 HAMLIN ROAD UTICA MICH 48087

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sand	12	0 to 12
Sand Water	6	12 to 18

4 WELL DEPTH: (completed) ft. Date of Completion 3-19-69

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

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

7 CASING: Diam. Threaded ☐ Welded ☐

4 in. to ___ ft. Depth

___ in. to ___ ft. Depth

Height: Above/Below surface ___ ft.

Weight ___ lbs/ft.

Drive Shoe? Yes ☐ No ☐

8 SCREEN:

Type: Johnson Dia.: 4

Slot/Gauze 10 Length 36

Set between 15 ft. and 18 ft.

Fittings:

9 STATIC WATER LEVEL

12 ft. below land surface

10 PUMPING LEVEL below land surface

15 ft. after 1 hrs. pumping 12 g.p.m.

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

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ___ Chlorides (Cl) ___

Hardness ___

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

13 GROUTING:

Well Grouted? ☐ Yes ☐ No

Material: ☐ Neat Cement ☐ ___

Depth: From ___ ft. to ___ ft.

14 SANITARY:

Nearest Source of possible contamination

___ feet ___ Direction ___ Type

Well disinfected upon completion ☐ Yes ☐ No

15 PUMP:

Manufacturer's Name ___

Model Number ___ HP ___

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

Type: ☐ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

DIRECTED BY

ADDITION BY

16 Remarks, elevation, source of data, etc.

Well #2

17 WATER WELL CONTRACTOR'S CERTIFICATION:

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

John Rattee — REGISTERED BUSINESS NAME

0175 — REGISTRATION NO.

Address 2635 Longview Rochester

Signed John Rattee — AUTHORIZED REPRESENTATIVE Date Mar 31 1969

D67D 100M 6-66

JUN 4 1969

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. 7 (50) DW-3

OCT 4 1972

WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

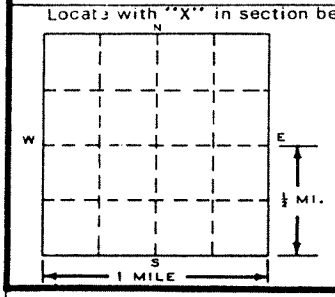
1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
WASHT.	Ypsilanti	NE¼ NE¼ SW¼	13	3 (N.)	7 (E.) W.

Distance And Direction from Road Intersections: 1560 Woodale

Street address & City of Well Location

Locate with "X" in section below — Sketch Map:



3 OWNER OF WELL: Clinton Farr
Address 1560 Woodale Ypsilanti

4 WELL DEPTH: (completed) 91 ft. — Date of Completion

5 ☐ Cable tool ☑ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ____

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

7 CASING: Threaded ☑ Welded ☐ — Height: Above/Below Surface ____ ft.
4 in. Diam. to 87 ft. Depth — Weight 11 lbs./ft.
____ in. to ____ ft. Depth — Drive Shoe? Yes ☑ No ☐

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sand Gravel	12	12
Clay Blue	63	75
Sand Gravel	16	91

8 SCREEN: Type: Red Brass Dia.: 4"
Slot/Gauze 25 Length 4'
Set between 87 ft. and 91 ft.
Fittings:

9 STATIC WATER LEVEL ____ ft. below land surface

10 PUMPING LEVEL below land surface
80 ft. after 2 hrs. pumping 40 g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ____ Chlorides (Cl) ____
Hardness ____ Other ____

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

13 Well Grouted? ☒ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
____ feet ____ Direction ____ Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: ☐ Not installed
Manufacturer's Name Gould
Model Number UE J HP ½ Volts 230
Length of Drop Pipe 63 ft. capacity ____ G.P.M.
Type: ☐ Submersible ☐ Jet ☐ Reciprocating

ADDED INFO. BY DRILLER, ITEM NO.
*CORRECTED BY: JH
**ADDITION BY
USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.
Replacement Well

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
P. B. Scusser Well Drilling Co. 0388
REGISTERED BUSINESS NAME — REGISTRATION NO.
Address 715 Cambridge, Ypsilanti, Mich.
Signed Richard O Allen — AUTHORIZED REPRESENTATIVE — Date 8-2-71

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. _____ (51)

WATER WELL RECORD

ACT 294 PA 1965

TW10

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

JUN 04 1969

1 LOCATION OF WELL

County	Twp	Fraction	Section No.	Town	Range
WASHTENAW	YPSILANTI	~~NE~~ ¼ NW¼ NE¼	13	3S N/S.	7E E/W.

Distance And Direction from Road Intersections: 3050 TYLER RD.

Street address & City of Well Location

OWNER No. _____

3 OWNER OF WELL: J. FONS CO.

Address 3651 HAMLIN ROAD UTICA MICH 48087

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sand	18	0 to 18
3 Water Sand	3	18 to 21

4 WELL DEPTH: (completed) 21 ft. Date of Completion 3-19-69

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

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

7 CASING: Diam. Threaded ☐ Welded ☐
____ in. to 14 ft. Depth
____ in. to ____ ft. Depth
Height: Above/Below surface ____ ft.
Weight ____ lbs/ft.
Drive Shoe? Yes ☐ No ☐

8 SCREEN:
Type: Johnson Dia.: 14
Slot/Gauze 10 Length 36"
Set between ____ ft. and ____ ft.
Fittings:

9 STATIC WATER LEVEL
16 ft. below land surface

10 PUMPING LEVEL below land surface
16 ft. after 1 hrs. pumping 9" g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) _____ Chlorides (Cl) _____
Hardness _____

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

13 GROUTING:
Well Grouted? ☐ Yes ☐ No
Material: ☐ Neat Cement ☐ _____
Depth: From ____ ft. to ____ ft.

14 SANITARY:
Nearest Source of possible contamination
____ feet ____ Direction ____ Type
Well disinfected upon completion ☐ Yes ☐ No

ADDED [illegible] DRILLER, [illegible]

*CORRECTED BY: _____

**ADDITION BY _____

15 PUMP:
Manufacturer's Name _____
Model Number _____ HP _____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
Type: ☐ Submersible ☐ _____ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

Well #1

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

John Rattee — REGISTERED BUSINESS NAME — 0175 — REGISTRATION NO.

Address 2635 Lor Grove Rochester

Signed John Rattee — AUTHORIZED REPRESENTATIVE — Date Mar 31 1969

D67D 100M 6-66

JUN 2 1969

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. [ ] (52) DW-4 [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

NOV 10 1972

WATER WELL RECORD
ACT 294 PA 1965

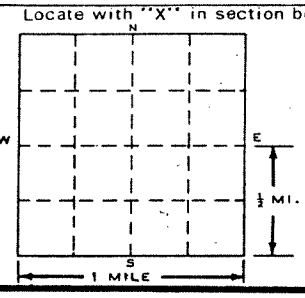
MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Township Name	Fraction	Section Number	Town Number	Range Number
WASHT	Ypsilanti	¼ NE¼ NE¼	14	3 N(S)	7 E W.

Distance And Direction from Road Intersections
Corner Tyler Rd. Service Dr
500 ft ~~East~~ Service Dr South S. Tyler
Street address & City of Well Location

Locate with "X" in section below



Sketch Map:

3 OWNER OF WELL:
Address: Hoad Corp 1159 E. Michigan Ave Ypsilanti

4 WELL DEPTH: (completed) Date of Completion
85 ft. MAY 15 71

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

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

7 CASING:
Threaded ☒ Welded ☐
Diam. 4 in. to 81 ft. Depth
____ in. to ____ ft. Depth
Height: Above/Below Surface ____ ft.
Weight 11 lbs./ft.
Drive Shoe? Yes ☒ No ☐

2 FORMATION

FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Yellow Sand	5	5
Sand Gravel	8	13
Blue clay	55	68
Sand Gravel	17	85
ADDED INFO. BY DRILLER. ITEM #6		
CORRECTED BY: JH		
ADDITION BY: USE A 2ND SHEET IF NEEDED		

8 SCREEN:
Type: Red Brass Dia.: 4"
Slot/Gauze 20 Length 4'
Set between 81 ft. and 85 ft.
Fittings: Packer Plug

9 STATIC WATER LEVEL
40 ft. below land surface

10 PUMPING LEVEL below land surface
70 ft. after 2 hrs. pumping 30 g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ____ Chlorides (Cl) ____
Hardness ____ Other ____

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

13 Well Grouted? ☒ Yes ☐ No
☐ Neat Cement ☒ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
____ feet ____ Direction Sewer Type
Well disinfected upon completion ☒ Yes ☐ No

15 PUMP:
☐ Not installed
Manufacturer's Name ____
Model Number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
Type: ☐ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.
New Well
Industrial Firm
No Permit issued

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
SLUSSER DRILLING CO INC. 0388
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 1701 W MICHIGAN, YPSI
Signed Richard A Slusser Date 5-15-72
AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

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GEOLOGICAL SURVEY SAMPLE No. ____ (53)

WATER WELL RECORD

ACT 294 PA 1965

DW-5

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County	Twp.	Fraction	Section No.	Town	Range
Wayne	Van Buren	SW¼ NW¼ SW¼	18	3 N/S.	8 E/W.

Distance And Direction from Road Intersections: 1000' N. I-94 Service Rd. Deadend of Rawsonville Rd.

OWNER No. ____

Street address & City of Well Location: 1785 Rawsonville Rd.

3 OWNER OF WELL: Thompson + McCally

Address

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Top Soil-Sandy	1	1
Sand-yellow	9	10
Gray Sand & Fine Gravel	6	16
Clay, Light Gray Soft + Plastic	37	53
Clay-Soft-Silty Sand-Some Gravel	14	67
Clayey Clay w/embedded Gravel	9	76
Gravel-Fine To Medium w/Some Sand Water Bearing	8	84
Washed Screen w/1000 Gal. Fresh water-Developed with Air Lift	11	95

4 WELL DEPTH: (completed) 95 ft. Date of Completion 10-18-67

5 ☐ Cable tool ☑ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ____

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

7 CASING: Diam. 4 in. to 91 ft. Depth; Threaded ☐ Welded ☑; ____ in. to ____ ft. Depth

Height: Above/Below surface ____ ft.; Weight ____ lbs/ft.; Drive Shoe? Yes ☑ No ☐

8 SCREEN: Type: Red Brass-Slotted Dia.: 3 inch; Slot/Gauze 30 Length 4 Feet; Set between 91 ft. and 95 ft.; Fittings: Closed Bottom-1' Blank at Top w/ Hemp Packer

9 STATIC WATER LEVEL 60 ft. below land surface

10 PUMPING LEVEL below land surface 80 ft. after 2 hrs. pumping 18-20 g.p.m.; ____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million: Iron (Fe) ____ Chlorides (Cl) ____ Hardness ____

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

13 GROUTING: Well Grouted? ☑ Yes ☐ No; Material: ☐ Neat Cement ☐ 80 Vis Bentonite + Clay cuttings; Depth: From 91 ft. GL ft.

14 SANITARY: Nearest Source of possible contamination 75 feet N Direction Septic Type; Well disinfected upon completion ☑ Yes ☐ No

15 PUMP: Manufacturer's Name VEH Could; Model Number ____ HP ½; Length of Drop Pipe 74 ft. capacity 10 G.P.M.; Type: ☒ Submersible ☐ ____ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO. BY DRILLER, ITEM 16

*CORRECTED BY: ____

**ADDITION BY: ____

17 WATER WELL CONTRACTOR'S CERTIFICATION:

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

R.B. Slusser — REGISTERED BUSINESS NAME — 0388 — REGISTRATION NO.

715 Cravo Ridge — Address Ypsilanti, Mich

Signed R.B. Slusser — AUTHORIZED REPRESENTATIVE — Date Nov 27 67

D67D 100M 6-66

AUG 2 1968

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GEOLOGICAL SURVEY NO AUG 3 1983

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PART 127 ACT 368, P.A. 1978

DW-6

(54)

PERMIT NUMBER

1 LOCATION OF WELL

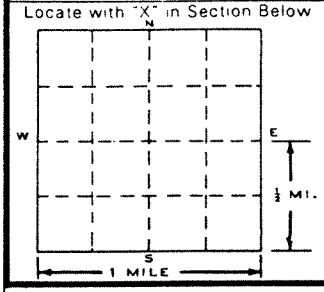
County	Township Name	Fraction	Section Number	Town Number	Range Number
Wayne	Van Buren	SE ¼ ¼ ¼	18	3XXS	8 EXX

Distance And Direction From Road Intersection

49350 North I-94 Service Drive

Street Address & City of Well Location

Locate with "X" in Section Below



Sketch Map

3 OWNER OF WELL

Wayne Disposal, Inc.

Address P. O. Box 5187
Dearborn, MI 48128

Address Same As Well Location? ☐ Yes ☒ No

4 WELL DEPTH (completed)

116 ft.

Date of Completion: 12-6-82

5

☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug
☐ Hollow rod ☐ Auger ☐ Jetted ☐ _____

6 USE

☐ Domestic ☐ Type I Public ☐ Type III Public
☐ Irrigation ☐ Type IIa Public ☐ Heat pump
☐ Test Well ☐ Type IIb Public ☒ Processing

7 CASING

Diameter ☒ Steel ☒ Threaded ☐ Plastic ☐ Welded

4 in. to 108 ft. depth

_____ in. to _____ ft. depth

Grouted Drill Hole Diameter

_____ in. to _____ ft. depth

_____ in. to _____ ft. depth

Height: Above/Below Surface _____ ft.

Weight 11 lbs./ft.

Drive Shoe ☒ Yes ☐ No

2 FORMATION DESCRIPTION

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Yellow Sand	6	6
Gray Sand	5	11
Soft Blue Clay	22	33
Hard Blue Clay	33	66
Fine Silty Sand	29	95
Fine Sand & Gravel	20	115
Black Shale	1	116

USE A 2ND SHEET IF NEEDED

8 SCREEN

☐ Not Installed

Type Stainless Diameter 4"

Slot/Gauge XXX 12 Length 8'

Set between 108 ft. and 116 ft.

FITTINGS ☐ K-Packer ☐ Lead Packer ☐ Bremer Check

☒ Blank above screen 1 ft. Other Hemp Packer

9 STATIC WATER LEVEL

60 ft. below land surface ☐ Flow

10 PUMPING LEVEL below land surface

100 ft. after 2 hrs. pumping at 35 G.P.M.

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

11 WELL HEAD COMPLETION

☒ Pitless adapter ☐ 12" above grade
☐ Basement offset ☐ Approved pit

12 WELL GROUTED?

☐ No ☒ Yes From _____ to _____ ft.

☐ Neat cement ☒ Bentonite ☐ Other _____

No. of bags of cement _____ Additives _____

13 Nearest source of possible contamination

Type _____ Distance _____ ft. Direction _____

Well disinfected upon completion? ☒ Yes ☐ No

14 PUMP

☐ Not Installed ☐ Pump Installation Only

Manufacturer's name Aermotor

Model number 4ST30 HP 3 Volts 220

Length of Drop Pipe 100 ft. capacity _____ G.P.M.

TYPE ☒ Submersible ☐ Jet _____

PRESSURE TANK

Manufacturer's name Well X Trol

Model number WX252 Capacity _____ Gallons

RECEIVED
Mich. Dept. of Public Health

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

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

16. WATER WELL CONTRACTOR'S CERTIFICATION

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

Slusser Drilling Co., Inc. 81-0388/[illegible]
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 1701 W. Michigan Ave Ypsilanti, MI

Signed Richard A. Slusser Date 12-28-82
AUTHORIZED REPRESENTATIVE

D67d (Rev 10-80)

GEOLOGICAL SURVEY COPY

SECTION G

REFERENCES

9803-003 Phase II, Hydrogeologic Investigation, Chip House Tank Farm; ABB; July 1992

9803-004 Phase I, Hydrogeologic Investigation at the Chip House Underground Storage Tank Farm; ABB; August 1990

9803-006 Chip House Remediation Project; OBG Technical Services, Inc.; July 1993

9803-007 Hydrogeologic Investigation at Bay K-35 Main Manufacturing Building, GM Willow Run Plant; ABB; December 1991

9803-009 Phase II Hydrogeologic Investigation of Bay K-35, PE #2492; NTH Consultants; September 30, 1994

9803-010 Report on Hydrogeologic Study and Contamination Assessment; NTH Consultants; March 12, 1992

9803-017 Soil and Groundwater Investigation in a Drum-Handling Area; E.C. Jordan; May 1988

9803-019 Phase II; Hydrogeologic Investigation at the Drum-Handling Area; ABB; December 1993

9803-021 Phase I, Hydrogeologic Investigation at Department 263; ABB; December 1993

9803-022 Hydrogeologic Investigation at Bay E-49 Main Manufacturing Building, GM Powertrain Willow Run Plant; ABB; March 1992

9803-023 Phase II Hydrogeologic Investigation, Bay E-49; O'Brien & Gere; January 1994

9803-027 Transmittal of Boring Logs and Laboratory Data for Salvage Yard to Walt Mixon, GM, from Craig Kielty; ABB; April 1995

9803-031 Transmission Fluid Contamination of Soil and Groundwater at the Hydra-matic Williow Run Plant; GM Research; August 1987

9803-037 Hydrogeologic Assessment Dynamometer Area; O'Brien & Gere; February 1990

9803-048 Hydrogeologic Investigation at the North Yard; C-E Environmental; July 1989

9803-055 Report on Phase I Hydrogeologic Study of Building 17; NTH Consultants; March 16, 1993

9803-056 Investigation Summary Report, Phase I Hydrogeologic Investigation, Product Engineering Tank Farm, Hydra-matic Willow Run Plant, General Motors Corporation, Ypsilanti, Michigan; Groundwater Technology; February 12, 1990

9803-057 Product Engineering Tank Farm, Phase II, Hydrgeologic Investigation; O'Brien & Gere; September 1990

9803-058 Product Engineering Tank Farm, Phase II Additional Hydrogeologic Investigation; O'Brien & Gere; November 1991

9803-059 Product Engineering Tank Farm, Phase II Hydrogeologic Investigation; O'Brien & Gere; July 1992

9803-061 Hydrogeologic Investigation at Bays L/E-5 Main Manufacturing Building, GM Powertrain Willow Run Plant; ABB; March 1992

9803-063 Supplemental Hydrogeologic Investigation at Bay E-5 Main Manufacturing Building, GM Powertrain Willow Run Plant; ABB; April 1993

9803-064 Report for Hydrogeological Site Investigation and Removal of Storm Retention Skimmer Tank #84; The Chester Engineers; August 13, 1992

9803-065 Hydrogeologic Investigation at the Building #19 Tank Farm;C-E Environmental; July 1989

9803-066 Summary of Corrective Actions at the Building #19 Tank Farm; C-E Environmental; February 1990

9803-067 Phase III, Hydrogeologic Investigation at the Building #19 Underground Storage Tank Farm; ABB; December 1991

9803-071 Phase II, Hydrogeologic Investigation at the Salvage Building Underground Storage Tank Farm; ABB; July 1992

9803-074 Monitoring Removal of Quench Oil Tanks 48 and 49, Bay C-40, GM Powertrain, Ypsilanti, Michigan; ABB; July 21, 1992

9803-075 Hydrogeologic Investigation at Bay C-40 Main Manufacturing Building; ABB; December 1993

9803-076 Hydrogeologic Investigation in the Bay Q-24 Area; C-E Environmental; July 1989

9803-078 Investigation Summary Report, Phase I Hydrogeologic Investigation, Bay E-28, Hydra-Matic Willow Run Plant, General Motors Corporation, Ypsilanti, Michigan; February 12, 1990

9803-080 Technical Memorandum NO.2, Hand-Auger Borings and Recovery Well Installation, Bay E-28, GM Powertrain, Ypsilanti, Michigan; ABB; September 1992

9803-081 Bay E-28, Phase II, Hydrogeologic Investigation; O'Brien & Gere; April 1991

9803-088 Hydrogeologic Investigation at the Transmission Subtest Area; C-E Environmental; July 1989

9803-089 Phase II, Hydrogeologic Investigation at the Transmission Subtest Area; C-E Environmental; December 1989

9803-091 Technical Memorandum NO. 1, Installation of Hydrocarbon Recovery Wells, Subtest Area; ABB; April 1992