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**1996 ANNUAL SUMMARY REPORT
GROUNDWATER REMEDIATION PROGRAM AND SOIL
REMEDICATION/GROUNDWATER TREATMENT PROGRAM
FORMER CARBORUNDUM FACILITY
WHEATFIELD, NEW YORK**

UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

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**1996 ANNUAL SUMMARY REPORT
GROUNDWATER REMEDIATION PROGRAM AND SOIL
REMEDICATION/GROUNDWATER TREATMENT PROGRAM
FORMER CARBORUNDUM FACILITY
WHEATFIELD, NEW YORK**

by

**Haley & Aldrich, Inc.
Cleveland, Ohio**

for

**BP Oil Company
Cleveland, Ohio**

**File No. 79002-089
March 1997**



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14 March 1997
File No. 79002-089



NYSDEC - Div. Haz. Waste Remediation
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Attention: Mr. Martin L. Doster, P.E.

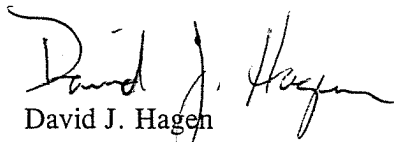
Subject: 1996 Annual Summary Report
Carborundum Facility, Wheatfield, New York

Dear Mr. Doster,

On behalf of our client, BP Oil Company, we are pleased to provide the attached 1996 Annual Summary report for the above-referenced facility. The report is the 1996 annual summary issued under the "Addendum to the Remedial Design/Remedial Action Work Plan" prepared by Haley & Aldrich and dated December 1993. The report contains site information from the period of 15 December 1995 through 15 December 1996 including the Groundwater Recovery System (GRS) monitoring, progress on the soil remediation program, groundwater sampling results and other miscellaneous project activities.

If you have any questions or require additional information regarding the report, please contact us.

Sincerely yours
HALEY & ALDRICH INC.


David J. Hagen
Project Coordinator

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LIST OF ACRONYMS

<u>Acronym</u>	<u>Meaning</u>
NYSDEC	New York State Department of Environmental Conservation
BP	BP Oil Company
M/H	McLaren/Hart, Inc.
Hull	Hull & Associates, Inc.
ATI	Analytical Technologies, Inc.
GTC	General Testing Corporation
RD/RA WP	Remedial Design/Remedial Action Work Plan (E&E, January 1993)
RD/RA WP Addendum	Addendum to the Remedial Design/Remedial Action Work Plan (H&A, December 1993)
GRS	Groundwater Recovery System
SRGwTS	Soil Remediation and Groundwater Treatment System
SRS	Soil Remediation System
O&M	Operation and Maintenance
CCR	Construction Closeout Report
VEW	Vacuum Extraction Wells
AIW	Air Injection Wells
PZ	Pneumatic Piezometers
SPDES	Stormwater Pollution Discharge Elimination System
PPE	Personal Protective Equipment
POTW	Publically Owned Treatment Works
H&S	Health & Safety
VOC	Volatile Organic Compound

I. INTRODUCTION

Site activities associated with environmental projects at the Carborundum Facility (Figure 1 and 2) in Wheatfield, New York from the period 15 December 1995 through 15 December 1996 are summarized herein. This document represents the 1996 annual summary report produced under the procedures outlined in the Addendum to the Remedial Design/Remedial Action Work Plan (Haley & Aldrich, 1993). The report is intended to summarize significant activities that occurred during the 1996 Annual Period including the Groundwater Recovery System upgrades and operations, Soil Remediation and Groundwater Treatment System (SRGwTS) construction and operations, waste handling activities, permit issues, site sampling and analysis, and site health and safety.

II. GROUNDWATER RECOVERY SYSTEM

On January 1993, a Groundwater Recovery System (GRS) (Figure 2) was initiated. The goals of the GRS are:

- To provide on-site migration control to limit further movement of dissolved solvents to off-site areas.
- To capture the dissolved solvents beneath the former Department of Defense (DoD) housing complex.
- To extract and treat dissolved solvents from groundwater.
- To de-water overburden soils during periods of high water levels to enhance soil vapor extraction remediation of on-site soils.

The following sections summarize GRS operation and maintenance, performance, and planned future activities.

2.1 System Operation and Maintenance

Haley & Aldrich continued O&M on GRS extraction wells P-2, P-3, and P-4 through 9 March 1996, when M/H took over O&M of these wells. M/H, under contract to BP for SRGwTS O&M, operated and maintained extraction wells PW-1 and PW-2 until 31 May 1996. In June 1996, Hull was contracted by BP to continue the O&M of both the GRS (P-2 through PW-2) and the SRGwTS. The goal of the O&M program for the GRS was to keep GRS pumping at rates to achieve the GRS goals identified above, while maintaining system operations within operational and permitted levels. O&M activities included system inspections, routine maintenance, minor equipment repairs, adjustment of pumping controls, as well as significant equipment/system repairs. Significant O&M activities during the annual period are summarized below.

GRS O&M Activities

- The lower pump in P-4 was discovered to be inoperable on 6 October 1995. The upper pump in P-4 was unaffected and assisted in maintaining water levels in the well. Pumps in P-4 were replaced on 1 to 8 March 1996.
- Pumping well P-3 was temporarily shut down on 15 December 1996, due to a minor leak in the system piping. The leak was immediately repaired.
- The Partlow level indicator in P-4 was repaired in April and May 1996. The level meter was replaced in October 1996 due to continued malfunctions.

- The flow meters and totalizing flow meters for P-3 and P-4 continued to experience problems through 1996. The flow meters in P-4 were repaired in December 1995 and recalibrated in February 1996. The flow meters in P-3 and P-4 were damaged by an electrical surge on 28 May 1996 and were replaced on 9 August 1996. During this period, the wells continued to be operated at normal levels, since the pumps are level controlled. Flow rates during this period were estimated from overall GRS pumping rates and historical information.
- Pumps in PW-2 were manually cycled during low water level periods in 1996, to accommodate low well yields. However, during higher water level periods, the pumps operate as designed in automatic mode.

GRS O&M activities are also summarized in the monthly progress reports issued for the site.

Table II summarizes GRS performance and system uptime. As a result of minor amount of system and well down times and routine maintenance during the year, the combined average system uptime, based on operational hours versus total hours was approximately 95%. The individual well performance for the 1996 Annual Period, from highest to lowest, is P-2 99%, PW-1 99%, PW-2 99%, P-4 89%, and P-3 88%. Downtime during 1996 was associated with minor equipment repairs, power supply problems, and treatment system downtime. Pumps in well PW-2 were manually disabled during portions of the year to prevent high pump on/off cycling rates due to low water levels and well yields (less than 1 gpm during low water level periods). The well was operated on an as-needed basis throughout the year. When water levels rose, PW-2 was returned to automatic operation mode. System performance, as summarized below, can be maximized in the 1997 Annual Period by maximizing treatment system and well uptime. Proactive O&M of the GRS will continue through the 1997 Annual Period to continue optimal GRS performance.

2.2 System Performance

Performance of the GRS is gauged by the ability of the system to meet the four goals identified in the beginning of this section. The performance of the system in meeting each of the four goals, as well as recommendations to increase future performance are identified below.

A. Migration Control

The primary goal of the GRS is to provide on-site migration control and limit further impacts of dissolved solvents to off-site areas. Figures 3 through 15 present the interpreted groundwater potentiometric surface from monthly water levels. Based on the interpreted groundwater capture zones and low site water levels, migration control was maintained through most of the 1996 Annual Period. However, the interpreted capture zone for the 27 November 1996 event, indicates that the western portion of the capture zone may have diminished in size likely due to increased aquifer recharge during Fall rain events. Although the groundwater capture zone changed size during

the period, water level data indicate water from the solvent source areas were primarily contained within the GRS capture zone. Operations maximizing pumping during high water level periods, should allow the GRS to continue to meet this goal during the 1997 period.

B. Capture Zone Development

The second goal of the GRS is to capture the dissolved solvents beneath the former DoD housing complex. Figures 3 through 15 indicate the interpreted groundwater potentiometric surface and capture zone based on monthly water level measurements. The approximate extent of capture defines the zone in which groundwater will flow to the pumping wells.

As the figures indicate, the capture zone has remained fairly constant in shape and size over the 1996 Annual Period, although diminishing in size during November 1996. The capture zone has not significantly changed in size from the 1995 Annual Period. Based on the water level information, interpreted groundwater potentiometric surface, and the interpreted capture zone at the end of the reporting period, the GRS has captured on-site groundwater and capture appears to extend as far to the east-southeast as monitoring well B-31M. However, capture of the groundwater plume beneath the former DoD housing has not been attained to date. Although pumping rates at P-3 and P-4 (wells closest to the western property boundary) have been maximized to the extent possible, capture has not extended beyond the extraction wells to the west and southwest. The reduction in permeability to the west and southwest of the site limits the development of a capture zone in this area.

Effects of the GRS pumping are indicated in water levels and water quality from wells on the former DoD property. Water levels in monitoring wells B-21M and B-22M have dropped over 3 to 10 feet from pre-pumping levels (Appendix A). Groundwater quality in B-22M, the only well on the former DoD property that has detectable levels of solvents, has trended lower than historic levels, although changes are unable to be quantified. Natural attenuation processes including degradation and dilution require relatively long time periods to observe quantitative trends. Both groundwater level and water quality changes on the former DoD property can be attributed to the migration control maintained on site by the GRS. Conditions in the former DoD area, as well as all areas beyond the capture zone, will continue to be monitored to evaluate GRS effectiveness and impacts on Groundwater levels and water quality in the monitoring wells to the west-southwest, beyond the former DoD property, appears to have similar decreasing concentration trends to that observed on the former DoD property.

GRS operating conditions in beginning portions of 1996 were limited by the 480 gpm discharge limit of the POTW. However with the switch-over to the SPDES outfall in October 1996, discharges up to 600 gpm enabled the GRS to operate at higher capacity during high water level periods. Although the capture zone is not currently extending significantly past the property boundary to the west, capture zone

development may continue with anticipated GRS operations at full capacity through the 1997 Annual Period. Conditions will continue to be monitored in 1997.

C. Groundwater Extraction and Mass Recovery

The third goal of the GRS is to extract dissolved phase solvents to reduce on-site concentrations of volatile organic compounds. Figure 16 and Table II summarize the extraction performance of the GRS. The data indicate over 140 million gallons of groundwater were extracted by the GRS, yielding approximately 581 pounds of contaminants extracted for the 1996 Annual Period. These results are over 25 to 65 percent higher than that observed during the 1995 Annual Period. The average total GRS pumping rate for the 1996 Annual Period was approximately 266 gpm, up significantly from 207 gpm in during 1995. Source control wells P-2, PW-1, and PW-2 yielded the highest ratio of mass extracted per gallon pumped. Boundary capture wells P-3 and P-4 yielded reduced mass per gallon extracted and were influenced by lower solvent concentrations in the vicinity of the wells. Continued GRS operations at near full capacity, will continue to remove available mass in the source area groundwater.

D. Overburden Dewatering

The last goal of the GRS is to de-water overburden soils during periods of high water level to enhance soil vapor extraction remediation of on-site soils. Water levels in on site wells relative to the top of rock are depicted in the time series plots of Appendix A and cross-sections shown in Figures 17, 18, and 19. These figures indicate that, in December 1996, the bedrock groundwater potentiometric surface was below the top of bedrock across the area of remediation. This indicates that the GRS is continuing to maintain water levels below the top of rock to facilitate soil vapor extraction. Continued GRS operations at current or increased levels through the 1997 Annual Period should maintain water levels below the top of rock.

2.3 Recommendations and Planned Future GRS Activities

Based on the overall performance of the GRS and the positive results in relation to the four goals of the program, the program could be operated at higher rates during high water level periods. In addition an increase in GRS capacity over the 1996 performance is available since the discharge has been switched to the SPDES outfall. This will allow increased extraction rates and a corresponding increase in remedial effectiveness (ie. capture zone, mass extraction, and bedrock groundwater control with respect to source area remediation) in 1997.

Future activities relative to the Carborundum Facility GRS also include the following:

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- Continue to operate and maintain the GRS pumping at maximum levels, including any adjustments to the system required to maintain desired water levels.
- Monitor water levels on a monthly basis.
- Obtain groundwater quality samples from the extraction and monitoring wells as detailed in Table III. Continue to evaluate groundwater quality data down-gradient of the capture zone to determine if the apparent trend of decreasing concentrations continues in 1997.
- Continue to evaluate the effectiveness of the level-controlled system throughout the next reporting period.

III. SOIL REMEDIATION PROGRAM

The Soil Remediation Program (SRP) was initiated in mid-1993 to remediate impacted soil to clean-up levels (3ppm TCE, 1ppm DCE, and 0.5ppm VC) or to the limit of the remedial technology. Under a design-build-operate contract with BP, M/H designed a Soil Remediation/Groundwater Treatment System (SRGwTS) incorporating a soil vacuum extraction system to achieve the SRP goals, as well as treat groundwater extracted by the GRS for discharge to the SPDES outfall. The SRGwTS design was developed based upon the extent of contaminants in soil determined from the Grid Boring Program described in the "RD/RA Work Plan Addendum", H&A December 1993, and a VES pilot test performed at the site. The detailed design and work plan was completed in October 1993, and included installation of 80 Vacuum Extraction Wells (VEW's), 162 Air Injection Wells (AIW's), and 155 Pneumatic Piezometers (PZ's), a treatment building, impermeable geocomposite cap, and associated vapor extraction piping and equipment. Construction of the SRGwTS by M/H and selected subcontractors began in October 1993 and was completed by August 1994.

The following sections summarize the implementation of the program including system operation, maintenance, performance, and planned future activities.

3.1 System Operations and Maintenance

The SRGwTS continued full-time operations throughout the 1996 Annual Period. M/H continued O&M the SRGwTS through May 1996, Hull began O&M of the system in June 1996. Hull retained the system operator, to maintain O&M continuity. Table IV and Figures 20 and 21 summarize the SRGwTS operations for the 1996 Annual Period.

The Groundwater Treatment System (GwTS) has had an operational uptime average of 98% for the year, slightly above that of 1995. System downtime has been associated with Soil Remediation System operations, such as vapor phase carbon change-out, and silt entrainment from water in VEW's, minor equipment malfunctions and repairs, and routine maintenance. Significant operation and maintenance activities for the GwTS include or addressed the following: siltation of water filters from VEW's, air/water siltation and clean-out, minor freezing of system process lines and adjustment of heat tracing, siltation of liquid phase carbon units and required back-flushing of the units, and water backups at the POTW discharge point. Entrainment of sediment from VEW's continued to be a significant problem throughout 1996, with filters change-out requiring frequently. The sediment from the VEW's appeared to be associated with major rainfall events. Operations and maintenance activities are detailed in M/H's and Hull's monthly progress reports issued in conjunction with the site monthly reports. GwTS operations will continue to be optimized in 1997.

The Soil Remediation System (SRS) uptime has averaged above 95% for the year, slightly above that of 1995. The significant operations and maintenance activities during the year include the following:

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- On 1 December 1995, one of the vacuum blowers caught fire. The blower was ultimately sent to the manufacturer for repairs and replaced on 15 April 1996. The SRGwTS continued to operate at normal levels on the remaining three vacuum blowers. The blower motor was subsequently replaced in December 1996.
- On 24 April 1996, the vapor phase carbon units were changed out and sent to Calgon Carbon, Co's., Cattlesburg, Ky facility for reactivation.
- Several VEW's and AIW's were damaged by delivery trucks, requiring casing and piping repairs.
- Increased power requirements from the Metallurgy facility resulted in power outages in July and August 1996. Supplemental capacity was added to the power station to accommodate the requirements.
- In September 1996, a hole in the paved roadway in front of the loading door of the south portion of the Filters Building was apparently created by soil loss around a VEW, which required repairs.
- Piping for the SRS east of the north portion of the Filters Building was moved to accommodate building expansion.

The performance and capacity of the system has been limited due to several operational problems including the following:

- Short circuiting of VEW's was observed at numerous wells throughout the 1996 annual period. The short-circuit apparently is resulting from desiccation and cracking of the bentonite seal in the well and around the well-cap interface. The wells exhibit significantly increased airflows and are turned off to prevent loss of vacuum. The seals around wells observed to be leaking, were repaired with additional hydrated bentonite sealant.
- Significant quantities of sediment and water were removed during normal VEW operations. The air-water separator and associated water filters experienced significant accumulations of sediment consisting of silt and clay soil particles. The sediment is apparently being carried by the water removed from the VEW's and appeared to be associated with significant rainfall events. The sediment has required frequent filter change-outs and tank clean-outs.
- Operation of the air injection system under passive and active operations does not appear to significantly increase subsurface airflow rates. To accommodate the low capacity of the soil to handle injected air, air rates were regulated below 5 psi by bleeding or venting injected air.

Detailed operation and maintenance activities, and problems encountered during the reporting period are detailed in M/H's and Hull's monthly progress reports issued in conjunction with the site monthly reports.

Operations during the 1996 Annual Period targeted the entire vacuum extraction well field (nearly all eighty wells). Wells exhibiting excessive water, silt, or airflow rates (indicative of short-circuiting) were not operated to prevent/reduce entrainment of water from VEW's until the problem was addressed. The water entrainment continued to be a problem throughout 1996. Water entrainment averaged over 2.5 gpm, for a total of more than 1.3 million gallons for 1996.

3.2 System Performance

The performance of the SRGwTS is gauged by its ability to effectively remove organic solvents from site soils and treat extracted groundwater, while remaining in compliance with the air permit and water discharge. Table IV and Figures 20 and 21 summarize the performance of the system. The performance in meeting remedial goals, as well as recommendations to increase future performance, are identified below.

A. Groundwater Treatment Performance

The goal of the GwTS is to treat extracted groundwater to meet SPDES discharge requirements. Although the system did not discharge to the SPDES outfall for the complete year, discharges from the treatment system have been below limits for VOC's identified in the SPDES permit and have been significantly below levels previously detected based upon compliance sampling (Appendix B). Based upon the VOC analyzer readings of air stripper discharges, total mass removal from the groundwater in 1995 was approximately 332 pounds, below the GRS estimates indicated in Section 2.2.D for the period. It is anticipated the GwTS will continue to operate at design capacity to meet permit requirements and remediation goals.

B. Soil Remediation Performance

The goal of the SRS is to remediate soils within the AOC to established clean-up levels. One measure of effectiveness is mass removal compared to estimates of in-place mass. Table IV and Figure 21 indicates mass removal for system operations, based on VOC analyzer readings of vapor concentrations and system operating parameters. The mass is calculated using air flow rates and VOC levels on a daily basis, as report in M/H's monthly progress reports. Based on the VOC data, approximately 157 lbs. of solvents were removed from soils during 1996, for a total removal of approximately 2380 lbs for the project. Average daily removal rate dropped from a high of approximately 6.5 lbs during the previous year to an average of 0.43. Removal rates are considerably lower than measured in 1995, which may be

attributed to several factors including: existence of subsurface water reducing SRS effectiveness, contaminant mass reduction in source areas, rate of contaminant removal controlled by diffusion thereby reducing availability of contaminants for removal. It is apparent that the SRS has reached an asymptotic condition with no increase in the contaminant mass removal rate expected.

In addition to mass removal, remedial effectiveness can be indicated by the reduction in soil vapor concentrations measured in the piezometers. Soil vapor concentrations were measured from selected piezometers in July and November 1996. Figures 22, 23, 24, and 25 represent results from the July 1996 and Figures 26, 27, 28, and 29 represent results from the November 1995 event, which a significant reduction in soil vapor readings. The significant reduction in soil vapor readings from the baseline is promising and may represent a real change indicating progress in source area remediation. Additional soil vapor sampling events of all piezometer points, combined with soil confirmation sampling will be necessary to confirm the observed downward trends in soil vapor concentrations.

3.3 Future SRGwTS Activities

Based on the overall performance of the SRGwTS and the results indicated to date, an increase in system operations and effectiveness will be required to meet remedial goals and scheduled completion dates.

Future activities relative to the SRGwTP include the following:

- Continue to operate and maintain the GwTS.
- Address current SRS limitations.
- Monitor mass removal rates, and air and water discharge concentrations.

IV. WASTE HANDLING PROGRAM

The waste handling program for the GRS and SRGwTS consists of tracking the generation and the proper disposition of soils, personal protective equipment, construction debris, and O&M materials. The program is intended to provide compliance with applicable local, state and federal regulations related to hazardous waste. In addition, the program is designed to provide proper waste handling while minimizing handling and costs. During the 1996 Annual period Haley & Aldrich, in conjunction with The Carborundum Company, M/H, and Hull, maintained a primary role in characterizing and arranging for waste disposal of materials generated by GRS and SRGwTS construction. M/H and Hull, in conjunction with Haley & Aldrich and The Carborundum Company, handled wastes generated from SRGwTS O&M. Summarized below are significant waste handling activities for the site.

4.1 Soils and Ex-Situ Treatment Cell

The ex-situ cell was constructed to handle excavated soils from SRGwTS construction activities that were segregated "clean" and "dirty" based on field screening/headspace testing results. Soils exceeding the screening criteria were placed in the ex-situ cell located in the Metallurgics courtyard area for vacuum treatment. In addition, waste soils generated during the O&M phase of the SRGwTS operation were transferred to the cell for remediation as appropriate. The total soil volume placed in the cell during remedial construction was approximately 400 cubic yards of soil for treatment. Vacuum extraction operations began in mid-1994 and continued throughout much of the 1996 Annual Period, until the soils were removed from the cell.

Vapor concentration readings from air extracted from the cell in 1995 indicated low to non-detect levels of VOCs. Therefore, soil in the cell was sampled on 18 to 20 January 1996 to confirm attainment of cleanup levels. Approximately 20 soil samples collected and analyzed for VOCs, indicated VOCs levels significantly below site cleanup goals. The data, summarized in "Ex-Situ Cell Sampling Program Results", issued by Haley & Aldrich on 30 April 1996, concluded that the cell soils met the cleanup criteria. At the approval of the NYSDEC, the Ex-Situ Cell was dismantled and the soils were removed for use as onsite fill during the period of 11 to 18 October 1996. Construction material in contact with the soils (ie. poly sheeting) was disposed with O&M material (ie. filter bags). No further Ex-Situ cell operations are anticipated.

4.2 Personal Protective Equipment

During the 1995 Annual Period, minimal waste personal protective equipment (PPE) was generated during O&M activities. The waste generated, which had been in contact with hazardous materials has been included in the spent water filters disposal. Waste PPE during the 1997 period will continue to be handled with waste O&M materials.

4.3 SRGwTS Operations and Maintenance Materials

Operations and maintenance of the SRGwTS generates used filter bags, PPE, waste lubricating oil, sediment from filtering, and spent carbon absorption units. M/H and Hull, in conjunction with Haley & Aldrich and The Carborundum Company, continued to characterize and dispose of these materials once sufficient quantities (full 55 gallon drums) were accumulated and prior to the 90 day temporary storage limit throughout the 1996 Annual Period.

During the 1996 38, 55-gallon drums of used filter bags and O&M wastes (ie. PPE, poly sheeting, etc.) were generated during operations. New regulations pertaining to the disposal of the materials effective in January 1995, required landfill disposal by micro-encapsulation of the drummed waste at Chemical Waste Management's Model City Landfill as they were classified. A total of 49 drums of waste from the current and previous years' activities were transported to Chemical Waste Management's Model City Landfill for micro-encapsulation. Approximately 3 drums of waste remain on site at the end of the period for disposal in 1997.

Approximately 55 gallons of spent lubricating oil were removed by Safety Clean for proper disposal. On 24 April 1996, the vapor phase carbon units were changed out and sent to Calgon Carbon, Co's., Cattlesburg, Ky facility for reactivation.

V. PERMIT ISSUES

Activities relating to the GRS and SRGwTS have proceeded and continue to proceed under several permits including water discharge permit to the POTW, air discharge Certificate to Operate, and a revised SPDES discharge permit. Key activities associated with the permits are summarized below.

5.1 POTW Waste Water Discharge Permit

Groundwater extracted from GRS operations during the 1996 Annual period was discharged to the POTW until 2 October 1996, when it was transferred to the SPDES outfall. The discharges proceeded under an existing permit with the Niagara County Sewer District for the Carborundum Facility, renewed on 1 June 1996 and expires 1 June 1998. Based on analytical results obtained from monthly, quarterly, and annual sampling events discharges were within POTW limits, Appendix B. The discharge permit has a limitation of 480 gpm on total water discharges. Discharges in 1997 are expected to continue at the SPDES outfall and the POTW will no longer serve the GRS or SRGwTS.

5.2 Air Permit

The Permit to Construct an air emission source was obtained by M/H in October 1993. The NYSDEC Air Division issued the final Certificate to Operate in August 1995 to The Carborundum Company. The permit will be effective for a period of five years. As reported in the monthly operations reports by M/H and Hull for 1996, VOCs were detected at the mid-point of the vapor carbon units at levels below the permit. This indicates that the system was in compliance with the air permit. On 24 April 1996, the vapor phase carbon units were changed out and sent to Calgon Carbon, Co's., Cattlesburg, Ky facility for reactivation.

5.3 SPDES Permit

An application for a modified discharge under the existing site SPDES permit was submitted to the NYSDEC on 23 December 1993. The SPDES discharge is ultimately to Cayuga Creek. The revised application replaced and superseded the prior application submitted 3 November 1993. The permit modifications included the addition of treated groundwater and limited site stormwater. The orientation and the location of the established outfall were modified as part of the SPDES Upgrade. In the draft permit the NYSDEC has established two defined outfalls; 01A will be located at the Treatment Building discharge, and 001 will be located at the meter house constructed during the SPDES outfall modification construction. The draft discharge limits include requirements for weekly metals and organic compound monitoring.

The NYSDEC issued an initial draft SPDES permit for public notice on 11 March 1994. Due to concerns raised by BP/Carborundum over low metals discharge limits and the naturally occurring high metal levels (particularly dissolved phase zinc) in the local bedrock aquifer, the permit requirements were reviewed by the NYSDEC and BP/Carborundum. On 24 July 1996 the finalized SPDES permit was issued by the NYSDEC, which is scheduled to expire on 1 April 1997. The final permit included higher discharge limits for zinc.

SPDES discharge began on 2 October 1996 and continued through the end of 1996. Haley & Aldrich performed the initial discharge monitoring and compliance reporting in October and November 1996, while Hull assumed compliance monitoring in late November 1996. Discharge monitoring, submitted monthly to the NYSDEC, indicate that the discharges have been within permit levels.

VI. SAMPLING AND ANALYSIS

Monitoring for the remediation program includes both routine surveillance of groundwater conditions and discharges, as well as task-specific sampling and analysis events. The sampling and analyses that have taken place during the 1996 Annual period are summarized below.

6.1 Groundwater Surveillance

Monitoring of groundwater conditions includes both groundwater level measurements and groundwater quality sampling and analysis. The groundwater level and sampling events were performed in accordance with the schedule outlined in Table III. Groundwater levels were taken from all of the wells in the monitoring network on:

<u>1996</u>		
8 January	6 February	6 March
2 April	1 May	4 June
8 July	8 August	5 September
1 October	27 November	24 December

Groundwater samples were taken from selected monitoring wells (see Table III) on: 8 to 11 January, 2 to 10 April, and 1 to 4 October 1995. The yearly groundwater sampling event of all 36 monitoring wells and 5 monitoring wells was performed during the period of 8 to 18 July 1995. Analytical Technologies, Inc. (ATI)/American Environmental Network - Florida, Inc. (AEN) provided the laboratory analysis (EPA Method 8010) and DataCert has reviewed the data reports during the 1996 Annual period. The results of the level and sampling events are included in the tables and time series plots of Appendix A. Laboratory analytical reports and level monitoring records are on file at Haley & Aldrich and available upon request. Analytical results for wells located on private property were transmitted to the property owner through individual correspondence.

As part of the groundwater monitoring program, a yearly monitoring well maintenance program was conducted by Haley & Aldrich during the period of 10 to 17 July 1996. The well maintenance is detailed in the report "Annual Monitoring Well Maintenance Program - 1996" issued by Haley & Aldrich on 29 July 1996. During the previous maintenance activities, monitoring wells B-35M were observed to be damaged beyond repair. Monitoring well B-35M will be sampled with a peristaltic pump for water quality sampling, if possible.

6.2 POTW Discharge Compliance Monitoring

In compliance with the discharge permit for the POTW, monthly, quarterly, and semi-annual sampling of the discharge water quality was performed by Haley & Aldrich (January - November 1996) and Hull (December 1996). The monthly analyses are performed using EPA Method 8010; the quarterly using EPA Method 8010 and 8240; and the semi-annual

using EPA Method 8010, 8240, and 8270. The samples are composed of four samples collected over a 24 hour period and composited. The sampling events for the 1996 annual period were:

<u>1996</u>	
9-10 January	5-6 February (semi-annual)
6-7 March	2-3 April
30 April-1 May (quarterly)	3-4 June
8-9 July	8-9 August (semi-annual)
3-4 September	7-8 October
4-5 November (quarterly)	

A summary of the monthly analytical results calculated to yield mass loading is included in the tables in Appendix B. Summaries of the monthly analytical results are also published in the monthly reports issues for the site. The monthly, quarterly, and semi-annual analytical results indicate continued POTW permit compliance.

6.3 Redland-Niagara Quarry Seep and Pond Sampling

In conjunction with the groundwater surveillance, groundwater seeps on the quarry wall and ponded water were sampled at the Redland-Niagara Quarry on 10 April and 2 October 1996 (pond only) by Haley & Aldrich. ATI/AEN provided the laboratory analysis (EPA Method 8010). The analytical reports are provided in Appendix C.

The analytical results from the seep samples indicate non-detect for VOCs for the 10 April 1996 event. The analytical results from the pond samples indicate detectable levels of cis-1,2-DCE (31 ppb) for the 10 April 1996 event, and non-detect for VOCs for the 12 October 1996 event. These results are consistent with historic results. In communications with the landowner, the NYSDEC has indicated that there appears to be no health risk associated with the quarry seeps. Monitoring of the solvent levels in the quarry will continue through the 1996 period.

6.4 Annual Cayuga Creek Sediment Sampling

In association with the groundwater surveillance program, sediment in the Cayuga Creek had been sampled approximately 100 feet downstream of the SPDES outfall to the creek. However, due to the lack of VOC's, this sampling was discontinued for 1996 at the authorization of the NYSDEC.

6.5 Piezometer Vapor Sampling

Soil vapor from the pneumatic piezometers, installed as part of the SRGwTS, is currently being sampled on a semi-annual basis to qualitatively monitor the progress of the soil

remediation efforts. The baseline piezometer vapor concentration sampling event was conducted during the period of 2 August to 25 August 1994, prior to the full operation of the VES by M/H. All piezometers and piezometer sampling ports were included in the event. The baseline was intended to establish subsurface conditions prior to the operation of the VES, which will allow evaluation of vapor extraction remediation progress, and assessment of the potential of success for final confirmatory soil sampling. Semi-annual piezometer sampling events were conducted during the periods of 18 July and 25 November 1996. The results of events are presented in Figures 22 through 29 and in Appendix D. The results of the sampling indicate remediation is likely impacting subsurface soil vapor concentrations. The latest results indicate a significant reduction in soil vapor concentrations from baseline measurements and is a promising sign of the impact of remediation efforts.

6.6 Future Sampling and Analysis Activities

Scheduled activities for the 1997 Annual period include the following:

- Monthly water level monitoring of all monitoring wells and pumping wells;
- Quarterly sampling of selected monitoring wells and the pumping wells as identified in Table III;
- Annual sampling of all monitoring and pumping wells as identified in Table III;
- Semi-annual sampling of Redland-Niagara Quarry wall seeps and ponded water;
- SPDES discharge compliance sampling;

VII. HEALTH AND SAFETY

Health and safety activities during the period included continued worker and community H&S monitoring. Site health and safety was undertaken in accordance with OSHA 1910.120 and was restricted to Level D protection requirements.

7.1 Site Health and Safety Plan

During this period all contractors assigned to the remediation efforts operated under the provisions of the Site Health and Safety Plan. This plan has been reviewed and accepted by health and safety representatives from The Carborundum Company, BP Oil, McLaren Hart, and Haley & Aldrich. All new personnel assigned to the site are given a health and safety orientation that includes introduction to the Site Health and Safety Plan.

7.2 Performance Report

During the 1996 Annual Period, only minor accidents, injuries, and incidents have occurred at the site. A summary of the reportable accidents, injuries, incidents and releases during the for the 1996 Annual period is given below:

<input type="checkbox"/>	Total Manhours Worked - 1996 Annual Period: (without accident, incident, or release):	2,200 2,200
<input type="checkbox"/>	Reportable Accidents or Injuries:	None
<input type="checkbox"/>	Reportable Incidents:	None
<input type="checkbox"/>	Reportable Releases:	None

For details on the above noted information please refer to the monthly reports during the period.

TABLE I
PUMPING WELL SPECIFICATIONS
Former Carborundum Facility
Wheatfield, New York

Well	Pump (A/B)	Head (ft)	Grundfos Pump Model Number	Flow Range (Low/Hi) (gpm)	Design Flow (gpm)	Design Flow Range (Low-Hi) (gpm)	Maximum Flow Range (Low-Hi) (gpm)	Ground Surface Elevation	Top of Casing	Design Well Bottom Elevation	As Built Well Bottom Elevation	DESIGN SET POINTS		CURRENT SET POINTS		DESIGN PUMP DEPTH		AS-BUILT PUMP DEPTH	
												Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
P-2	NA	350	225S150-6	150	125	125	150 - 290	618.2	619.2	NA	561.0	On	NA	NA	NA	NA	NA	50.5	568.8
		125		290								Off		570.0					
P-3	A	340	75S75-12	45	50	50	18 - 127	623.9	624.9	NA	567.9	On	46.0	578.9	34.9	590.0	47.8	44.0	580.9
	B	190	25S20-11	95	25	25	18 - 127					Off	53.6	571.3	41.9	583.0	54.8	49.0	575.9
P-4	A	265	40S30-9	18	40	40	1.7 - 62					On	53.6	571.3	44.9	580.0	52.4	54.0	570.1
	B	165		32								Off	55.0	569.9	46.9	578.0	58.4	56.5	565.6
PW-1	A	230	5505-13	24	5	5	5 - 45	624.0	624.1	563.5	568.6	On	52.0	572.1	39.1	585.0	48.3	40.4	576.7
	B	125		55								Off	57.6	566.5	49.1	575.0	58.4	56.5	565.6
PW-2	A	360	80S50-5	1.7	100	100	40 - 185					On	59.0	565.1	54.1	570.0	568.8	46.4	570.6
	B	115		7								Off	46.0	571.0	36.1	580.9	48.3	40.4	576.7
PW-2	A	210	60S50-7	48	50	50	50 - 150	620.0	617.0	560.0	567.9	On	52.0	565.0	38.1	578.9	54.3	46.4	570.6
	B	140		110								Off	52.0	565.0	38.1	578.9	54.3	46.4	570.6
PW-2	A	200	60S50-7	40	50	50	18 - 107					On	54.0	563.0	44.2	572.8	563.8	44.2	569.4
	B	120		75								Off	47.6	566.0	38.5	575.1	563.8	44.2	569.4
PW-2	A	200	60S50-7	40	50	50	18 - 107	617.0	613.6	557.0	562.6	On	51.6	562.0	42.0	571.6	54.6	49.0	564.7
	B	120		75								Off	51.6	562.0	42.0	571.6	54.6	49.0	564.7
PW-2	A	215	25S15-9	18	25	25	18 - 107					On	51.6	562.0	45.4	568.2	54.6	49.0	564.7
	B	145		32								Off	53.6	560.0	47.4	566.2	54.6	49.0	564.7

Revised 4/15/94 Corrected 6/8/95

NA = Not Applicable

TABLE II
GRS PERFORMANCE SUMMARY

Well	Category	Units		December 1995	January 1996	February 1996	March 1996	April 1996	May 1996	June 1996	July 1996	August 1996	September 1996	October 1996	November 1996	December 1996	Annual Total 1996 (1)	
		Days	(%)	16	31	29	31	30	31	30	31	31	30	31	30	15	366	
P-2	Uptime		(%)	100	100	100	100	100	100	100	100	100	100	100	93	100	99	
	Average Flow		(gpm)	140	132	143	145	155	157	150	113	82	94	139	172	174	137	
	Total Flow		(gal x 1,000)	3,232	5,910	5,955	6,484	6,684	7,007	6,501	5,047	3,675	4,056	6,219	7,433	3,755	71,957	
	Average Concentration		(ppb)	920	513	513	513	518	518	518	558	558	558	651	651	651	651	NA
	Total Contaminant Removed		(lbs)	24.8	25.3	25.5	27.8	28.9	30.3	28.1	23.5	17.1	18.9	33.8	40.4	20.4	344.7	
P-3	Uptime		(%)	13	100	7	100	100	97	100	100	97	100	100	93	100	88	
	Average Flow		(gpm)	1	23	22	60	73	47	14	14	12	12	34.3	48	51	32	
	Total Flow (3)		(gal x 1,000)	20	1,010	919	2,681	3,169	2,108	605	625	557	515	1,531	2,075	1,108	16,922	
	Average Concentration		(ppb)	2.4	2.4	2.4	2.4	4.6	4.6	4.6	2.2	2.2	2.2	5.5	5.5	5.5	NA	
	Total Contaminant Removed		(lbs)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.6	
P-4	Uptime		(%)	38	100	69	50	97	94	100	100	97	100	97	93	100	89	
	Average Flow		(gpm)	36	9	23	16	34	30	6	6	9	16	23	21	17	18	
	Total Flow (3)		(gal x 1,000)	828	424	948	710	1,447	1,344	259	268	382	688	1,017	913	360	9,587	
	Average Concentration		(ppb)	92	76	76	76	228	228	228	134	134	134	95	95	95	NA	
	Total Contaminant Removed		(lbs)	0.6	0.3	0.6	0.5	2.8	2.6	0.5	0.3	0.4	0.8	0.8	0.7	0.3	11.1	
PW-1	Uptime		(%)	100	100	100	100	100	100	100	100	97	100	100	93	100	99	
	Average Flow		(gpm)	40	47	49	47	55	53	36	26	23	25	37	42	44	40	
	Total Flow		(gal x 1,000)	930	2,084	2,057	2,101	2,385	2,352	1,555	1,145	1,029	1,082	1,632	1,835	954	21,140	
	Average Concentration		(ppb)	1080	430	430	430	1050	1050	1050	380	380	380	1020	1020	1020	NA	
	Total Contaminant Removed		(lbs)	8.4	7.5	7.4	7.5	20.9	20.6	13.6	3.6	3.3	3.4	13.9	15.6	8.1	133.9	
PW-2	Uptime		(%)	100	100	100	100	100	100	100	100	97	100	100	90	100	99	
	Average Flow		(gpm)	65	37	76	72	70	75	9	0	0	0	29	32	67	39	
	Total Flow		(gal x 1,000)	1,488	1,648	3,173	3,198	3,045	3,365	410	0	0	14	1,297	1,396	1,441	20,476	
	Average Concentration		(ppb)	1010	871	871	871	120	120	120	111	111	111	380	380	380	NA	
	Total Contaminant Removed		(lbs)	12.5	12.0	23.1	23.2	3.0	3.4	0.4	0.0	0.0	0.0	4.1	4.4	4.6	90.8	
GRS Total	Uptime		(%)	70	100	75	90	99	98	100	100	98	100	99	93	100	95	
	Average Flow		(gpm)	282	248	313	340	387	362	216	159	126	147	262	316	353	266	
	Total Flow		(gal x 1,000)	6,498	11,075	13,053	15,174	16,731	16,175	9,331	7,084	5,644	6,354	11,696	13,650	7,618	140,082	
	Total Contaminant Removed		(lbs)	46.4	45.0	56.6	59.0	55.7	56.9	42.7	27.4	20.8	23.1	52.7	61.2	33.4	580.9	

Notes:
1. FOR THE PERIOD OF 12/15/95 TO 12/15/95.
2. UPTIME ESTIMATED AND REFLECTS POTENTIAL UPTIME.
3. ESTIMATED VALUES, FLOW METERS DOWN DURING THE PERIOD OF MAY, JUNE, JULY, AND AUGUST.

TABLE III
GROUNDWATER MONITORING PROGRAM
Former Carborundum Facility
Wheatfield, New York

WELL No.	GROUNDWATER SAMPLING/LEVEL MEASUREMENTS											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
B-3M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-4M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-5M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-6M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-7M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-8M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-9M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-10M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-11M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-12M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-13M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-14M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-15M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-16M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-17M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-18M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-19M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-20M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-21M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-22M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-23M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-24M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-25M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-26M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-27M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-28M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-29M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-30M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-31M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-32M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
B-33M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-34M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-35M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-37M	L	L	L	L	L	L	S/L	L	L	L	L	L
B-38M	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
P-2	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
P-3	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
P-4	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
PW-1	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
PW-2	S/L	L	L	S/L	L	L	S/L	L	L	S/L	L	L
Quarry Seep & Pond				S						S		

Notes:

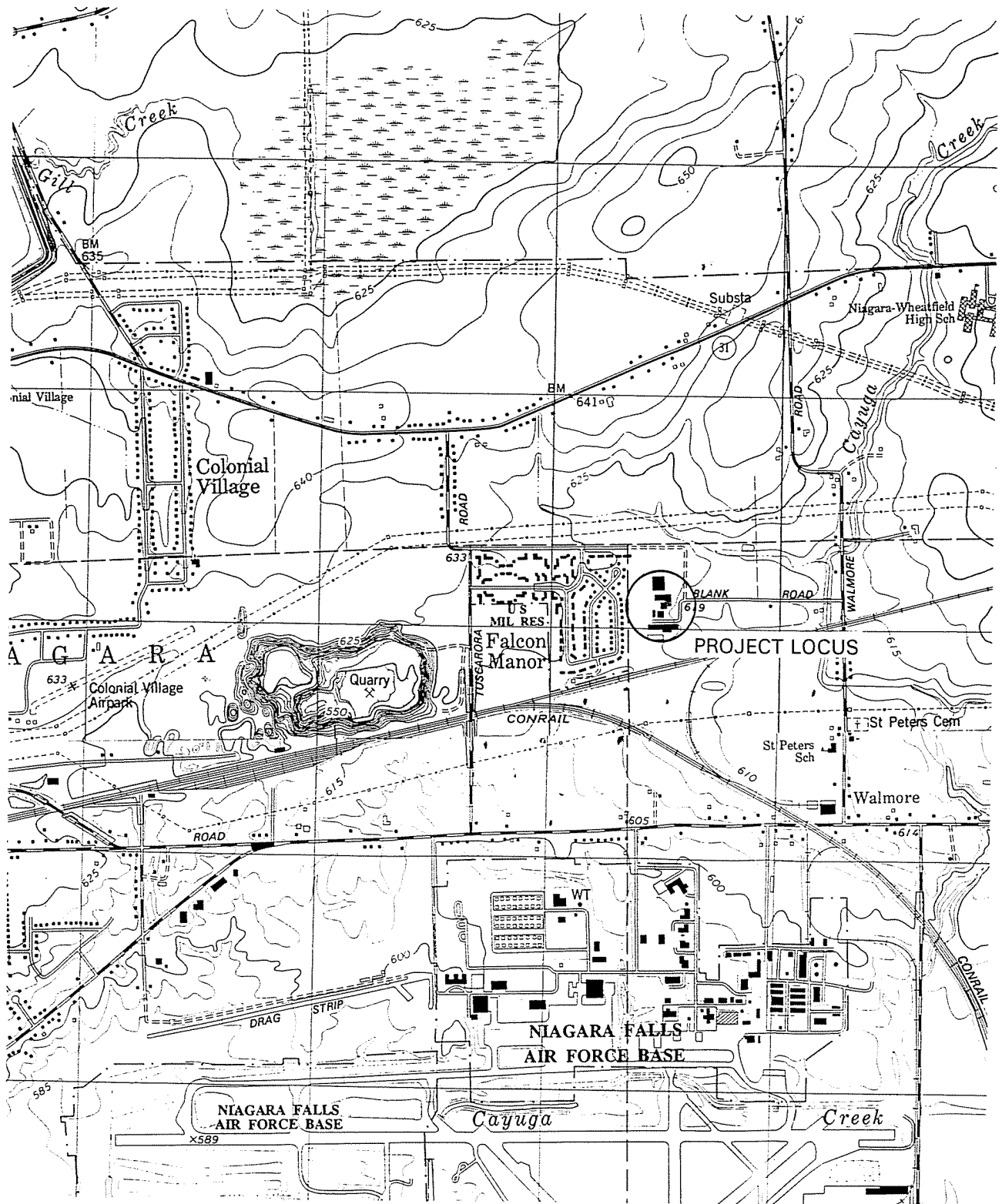
1. S indicates that groundwater sampling and analysis will be performed. L indicates that groundwater level measurements will be taken.
2. July was selected for the yearly sampling event, since it typically has had the highest TCE concentrations.
3. The well sampling may change as the groundwater remediation program alters the plume of configuration.

TABLE IV
SRGwTS PERFORMANCE SUMMARY
Former Carborundum Facility
Wheatfield, New York

System Category	Units	December 1995	January 1996	February 1996	March 1996	April 1996	May 1996	June 1996	July 1996	August 1996	September 1996	October 1996	November 1996	December 1996	Annual Total 1996 (1)
Groundwater Treatment System															
Uptime	(%)	96%	94%	97%	96%	97%	98%	98%	100%	100%	98%	99%	99%	99%	98%
Avg Daily Mass Removal	(lbs)	1.20	1.10	1.15	1.00	1.04	0.99	0.83	0.74	0.60	0.74	0.89	0.94	0.79	0.92
Monthly Total Mass Removal	(lbs)	20.4	34.1	32.1	30.9	27.1	30.7	25.0	23.0	18.7	22.1	27.5	28.2	11.8	331.5
Soil Remediation System															
Uptime	(%)	99%	99%	97%	98%	73%	96%	92%	96%	94%	98%	98%	99%	99%	95%
Avg Daily Mass Removal	(lbs)	0.67	0.49	0.45	0.46	0.57	0.53	0.41	0.41	0.43	0.51	0.27	0.23	0.13	0.43
Monthly Total Mass Removal	(lbs)	11.4	15.1	12.5	14.4	17.2	15.0	12.2	12.8	13.3	15.4	8.5	6.8	2.0	156.5
Project to Date Total Mass Removal	(lbs)	2235	2250	2262	2277	2294	2309	2321	2334	2347	2363	2371	2378	2380	2380

Notes:

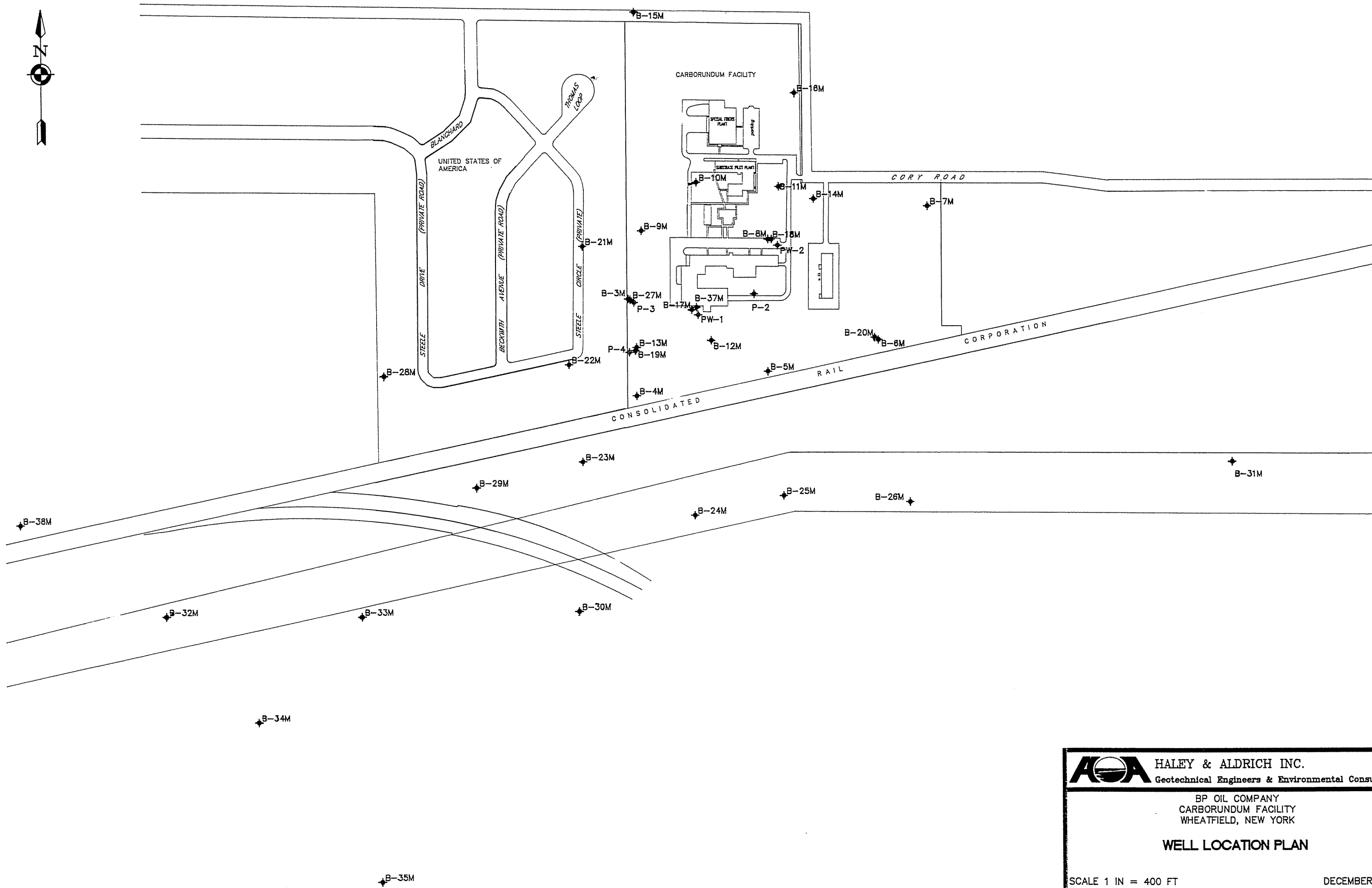
1. For the period of 12/15/95 to 12/15/96.



USGS QUADRANGLES: RANSOMVILLE & TONAWANDA WEST, NEW YORK

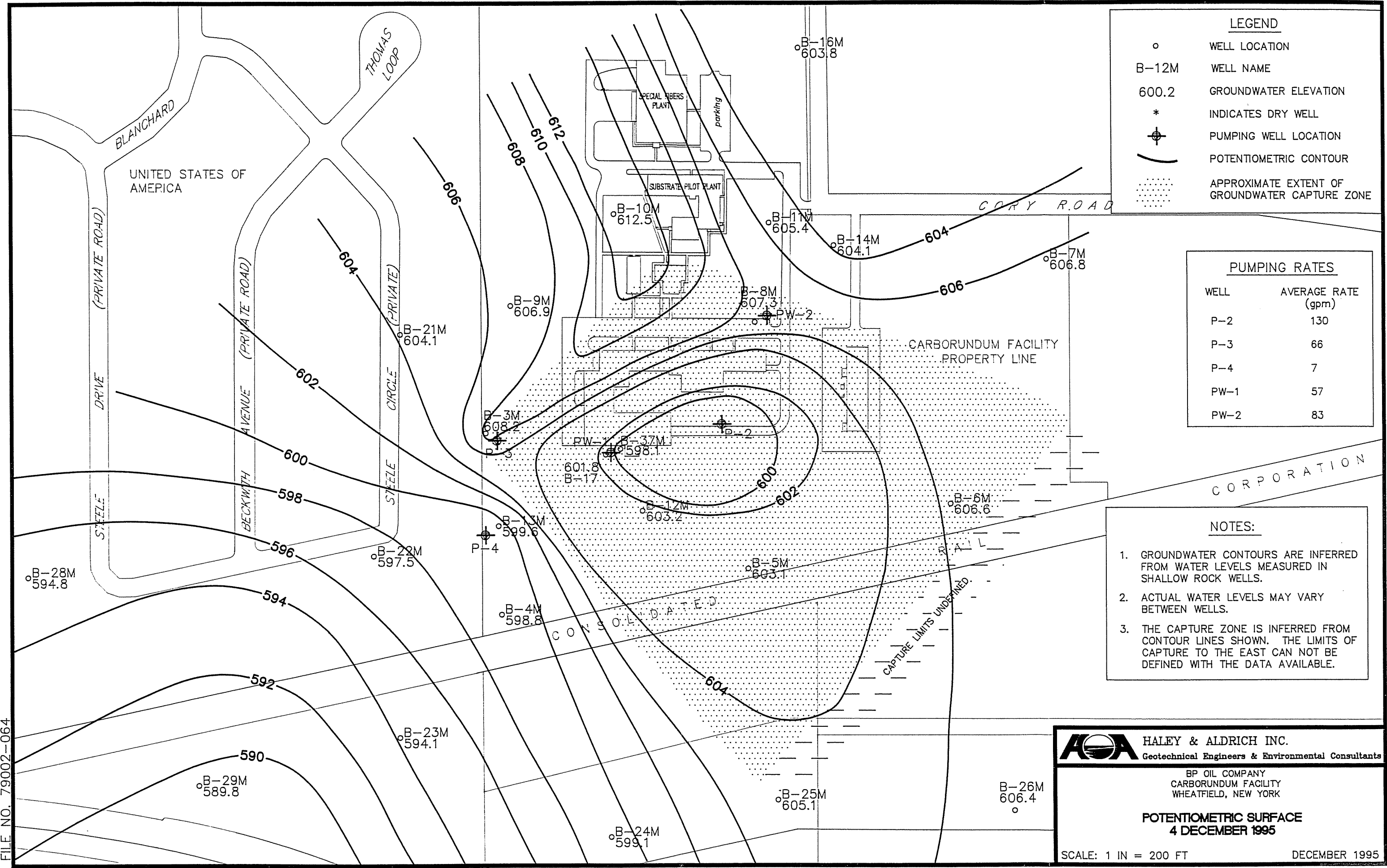
HALEY & ALDRICH INC.	
	Geotechnical Engineers & Environmental Consultants
BP OIL COMPANY CARBORUNDUM FACILITY WHEATFIELD, NEW YORK	
PROJECT LOCUS	
SCALE: 1 IN. = 2000 FT.	

FILE NO.: 79002-064



	HALEY & ALDRICH INC. Geotechnical Engineers & Environmental Consultants
	BP OIL COMPANY CARBORUNDUM FACILITY WHEATFIELD, NEW YORK
WELL LOCATION PLAN	
SCALE 1 IN = 400 FT	DECEMBER 1994

FIGURE 2



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

PUMPING RATES

WELL	AVERAGE RATE (gpm)
P-2	130
P-3	66
P-4	7
PW-1	57
PW-2	83

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

HALEY & ALDRICH INC.
 Geotechnical Engineers & Environmental Consultants

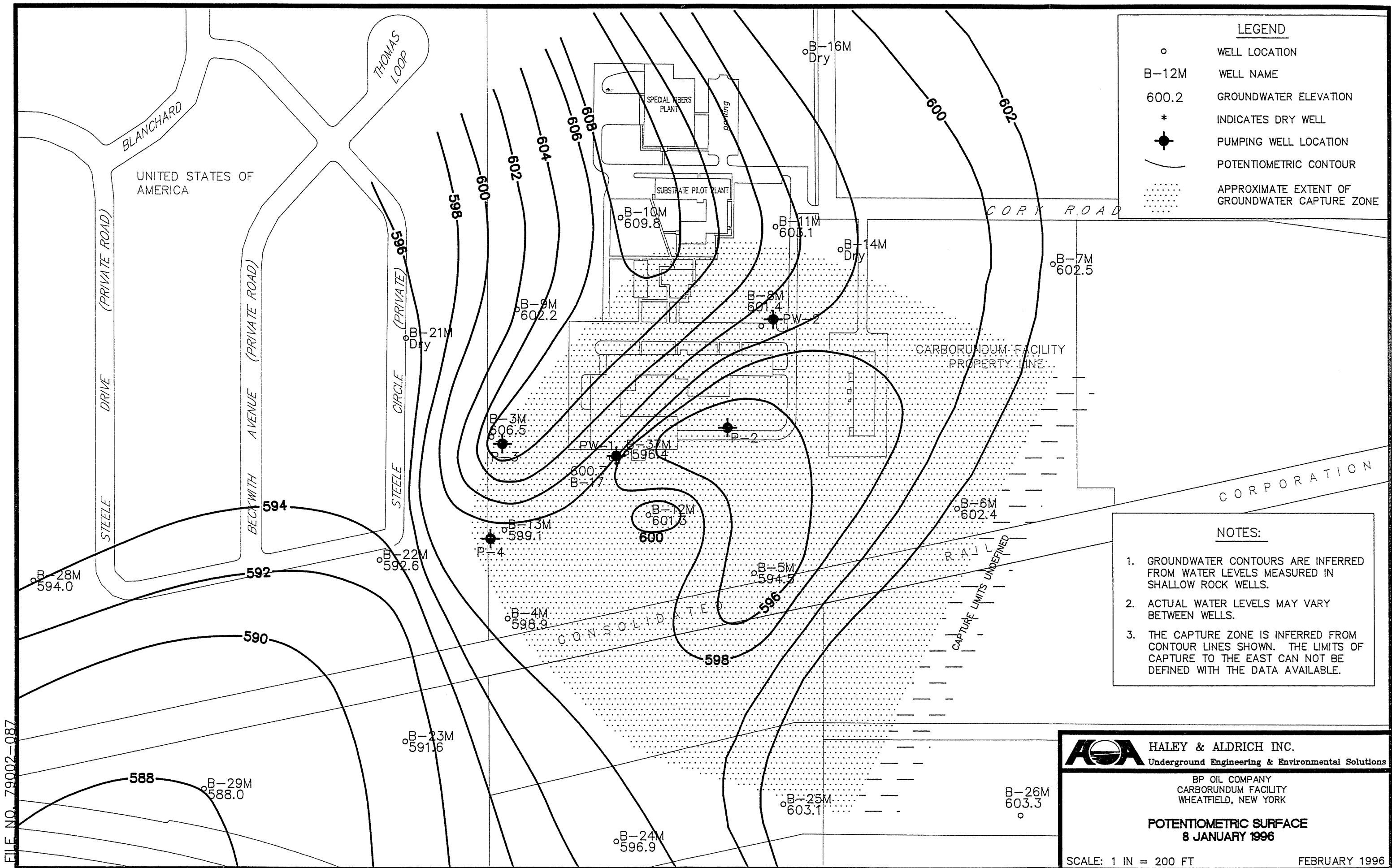
BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

**POTENTIOMETRIC SURFACE
 4 DECEMBER 1995**

SCALE: 1 IN = 200 FT DECEMBER 1995

FILE NO. 79002-064

FIGURE 3



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

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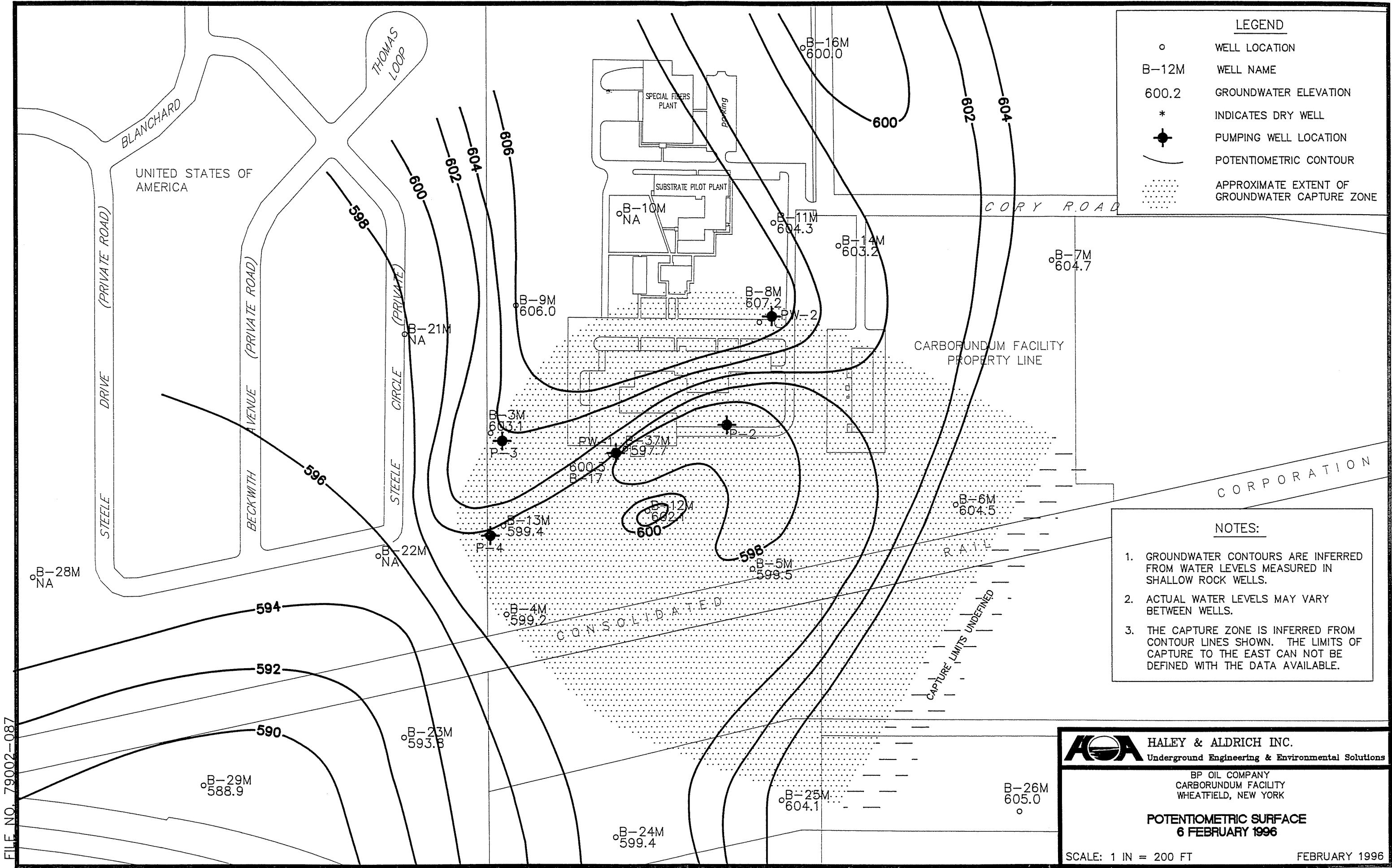
BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

POTENTIOMETRIC SURFACE
8 JANUARY 1996

SCALE: 1 IN = 200 FT FEBRUARY 1996

FILE NO. 79002-087

FIGURE 4



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

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BP OIL COMPANY
CARBORUNDUM FACILITY
WHEATFIELD, NEW YORK

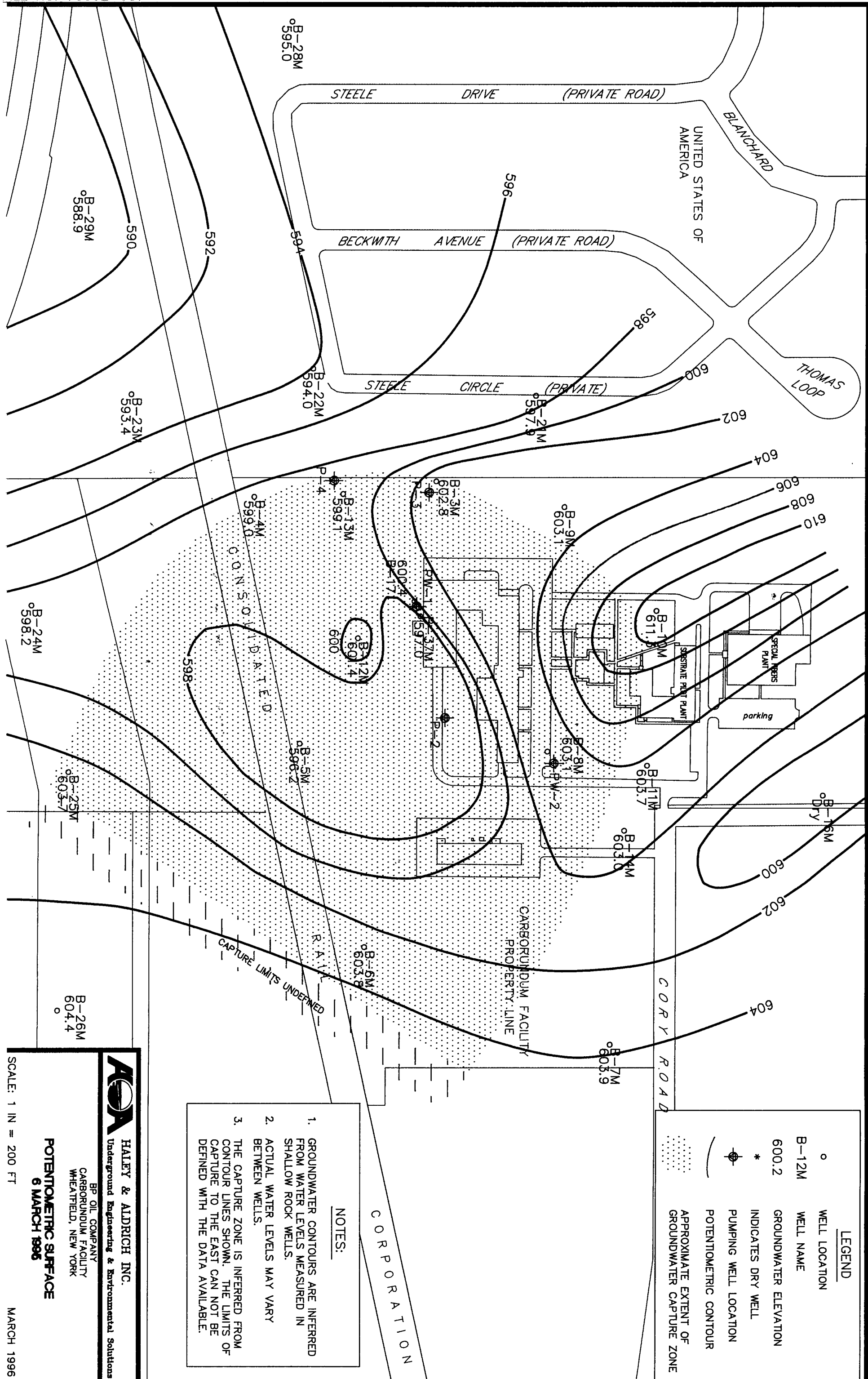
POTENTIOMETRIC SURFACE
6 FEBRUARY 1996

SCALE: 1 IN = 200 FT

FEBRUARY 1996

FILE NO. 79002-087

FIGURE 5



LEGEND	
○	WELL LOCATION
B-12M	WELL NAME
600.2	GROUNDWATER ELEVATION
*	INDICATES DRY WELL
⊕	PUMPING WELL LOCATION
—	POTENTIOMETRIC CONTOUR
⋯	APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

- NOTES:**
1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
 2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
 3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

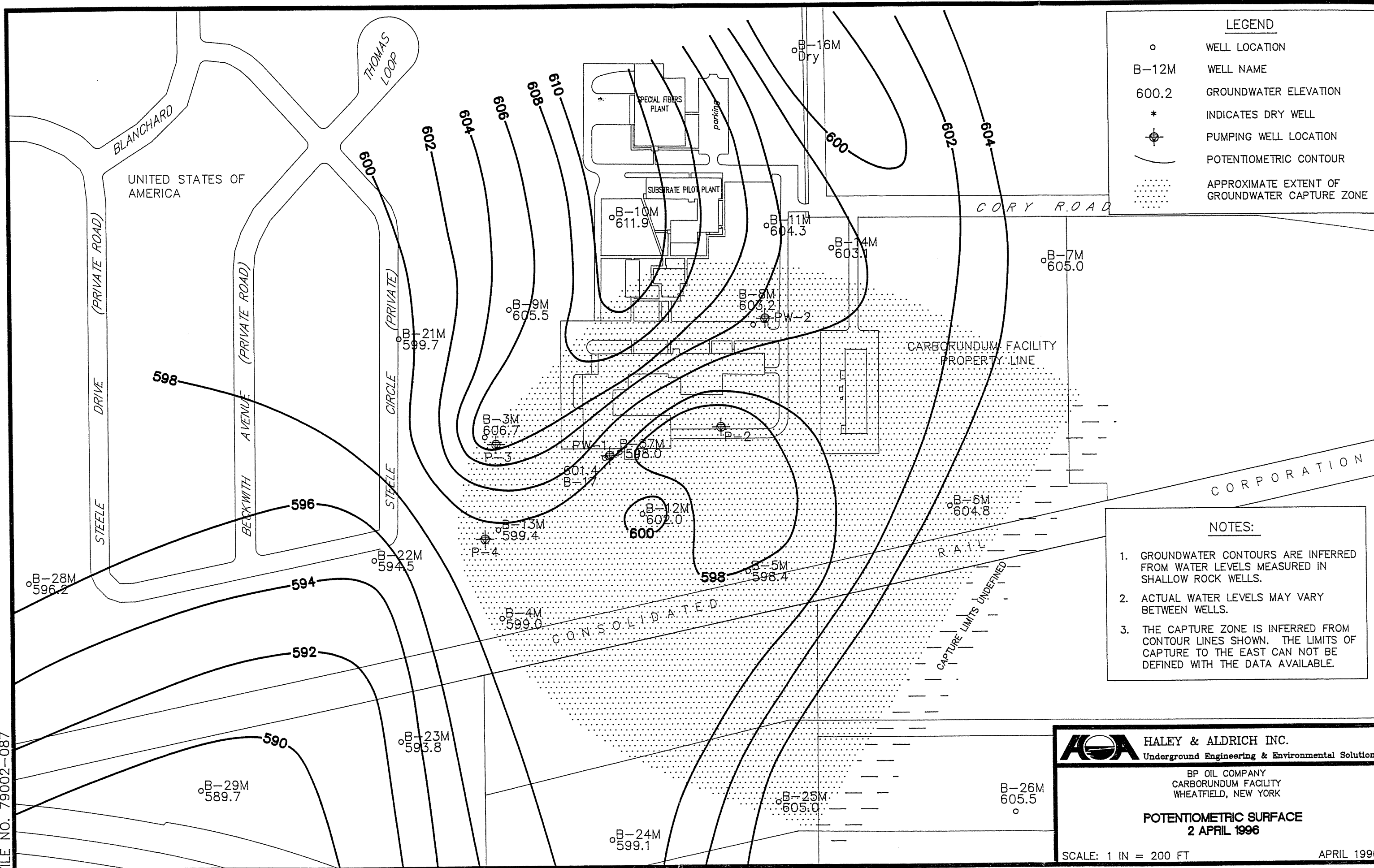
HALEY & ALDRICH INC.
 Underground Engineering & Environmental Solutions

BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

POTENTIOMETRIC SURFACE
 6 MARCH 1996

SCALE: 1 IN = 200 FT
 MARCH 1996

FILE NO. 79002-087



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

AGA HALEY & ALDRICH INC.
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BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

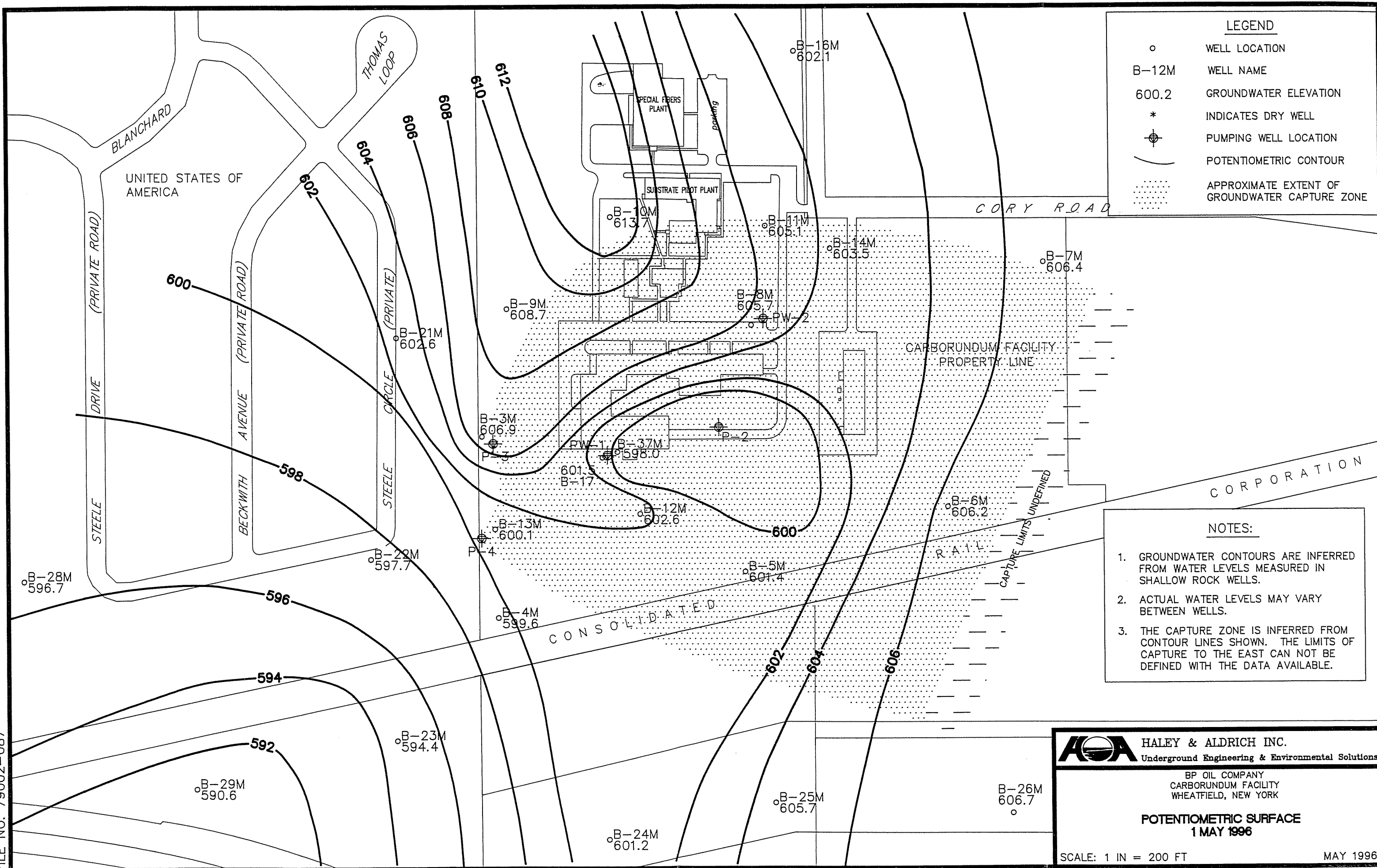
POTENTIOMETRIC SURFACE
2 APRIL 1996

SCALE: 1 IN = 200 FT

APRIL 1996

FIGURE 7

FILE NO. 79002-087



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ▨ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

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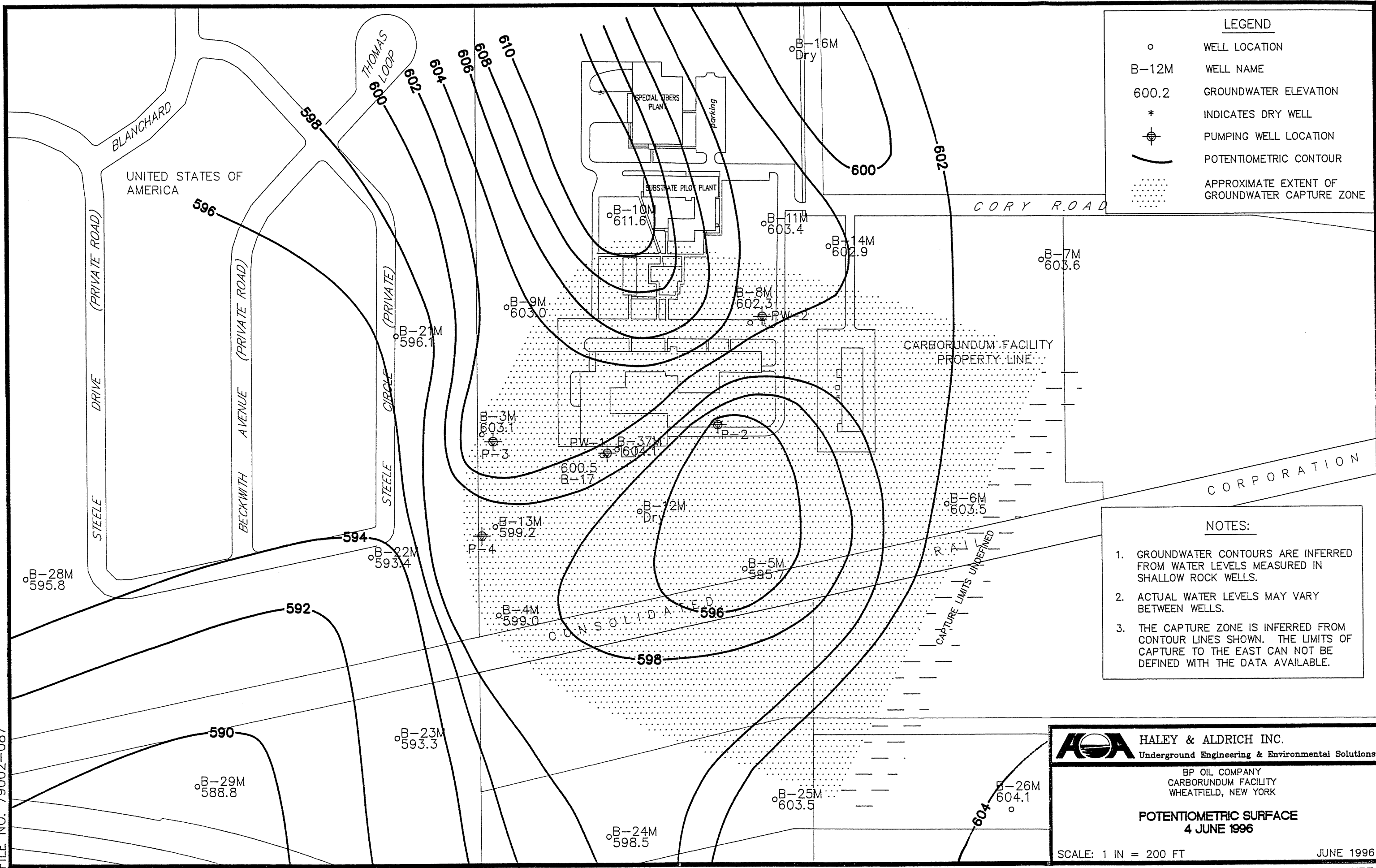
BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

POTENTIOMETRIC SURFACE
1 MAY 1996

SCALE: 1 IN = 200 FT

MAY 1996

FILE NO. 79002-087



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

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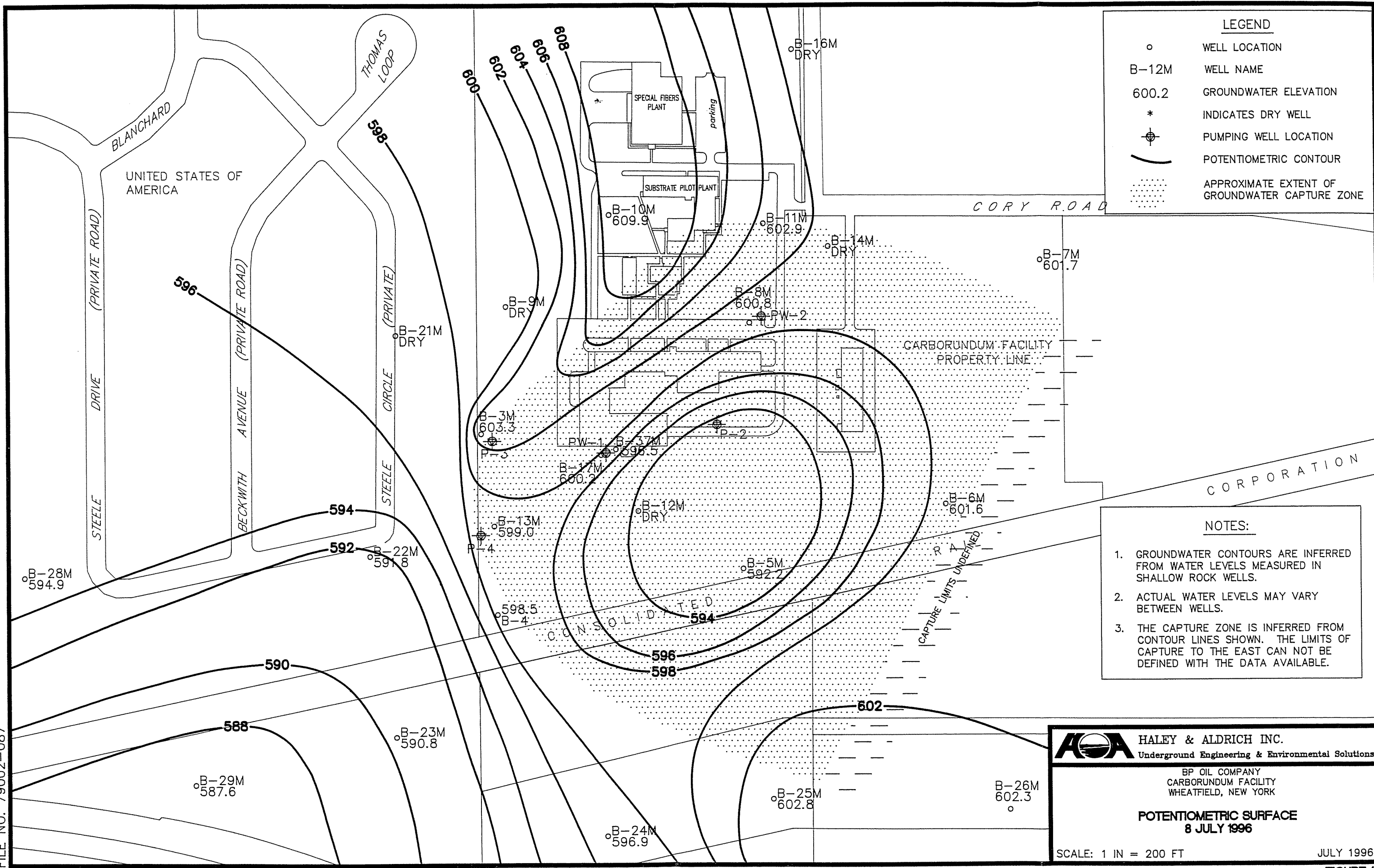
POTENTIOMETRIC SURFACE
4 JUNE 1996

SCALE: 1 IN = 200 FT

JUNE 1996

FIGURE 9

FILE NO. 79002-087



LEGEND	
○	WELL LOCATION
B-12M	WELL NAME
600.2	GROUNDWATER ELEVATION
*	INDICATES DRY WELL
⊕	PUMPING WELL LOCATION
—	POTENTIOMETRIC CONTOUR
⋯	APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

- NOTES:**
1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
 2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
 3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

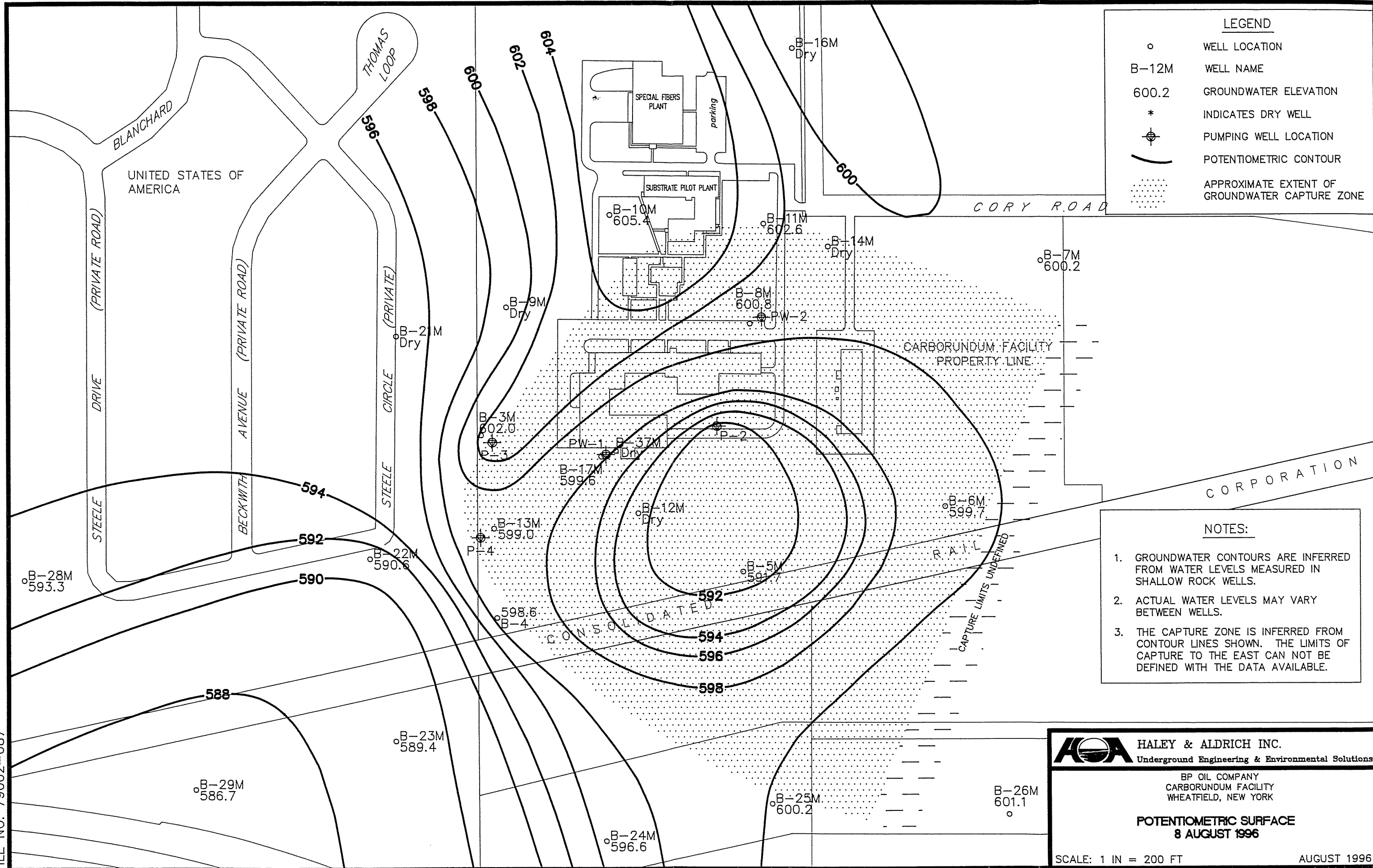
HALEY & ALDRICH INC.
 Underground Engineering & Environmental Solutions

BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

POTENTIOMETRIC SURFACE
8 JULY 1996

SCALE: 1 IN = 200 FT

FILE NO. 79002-087



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

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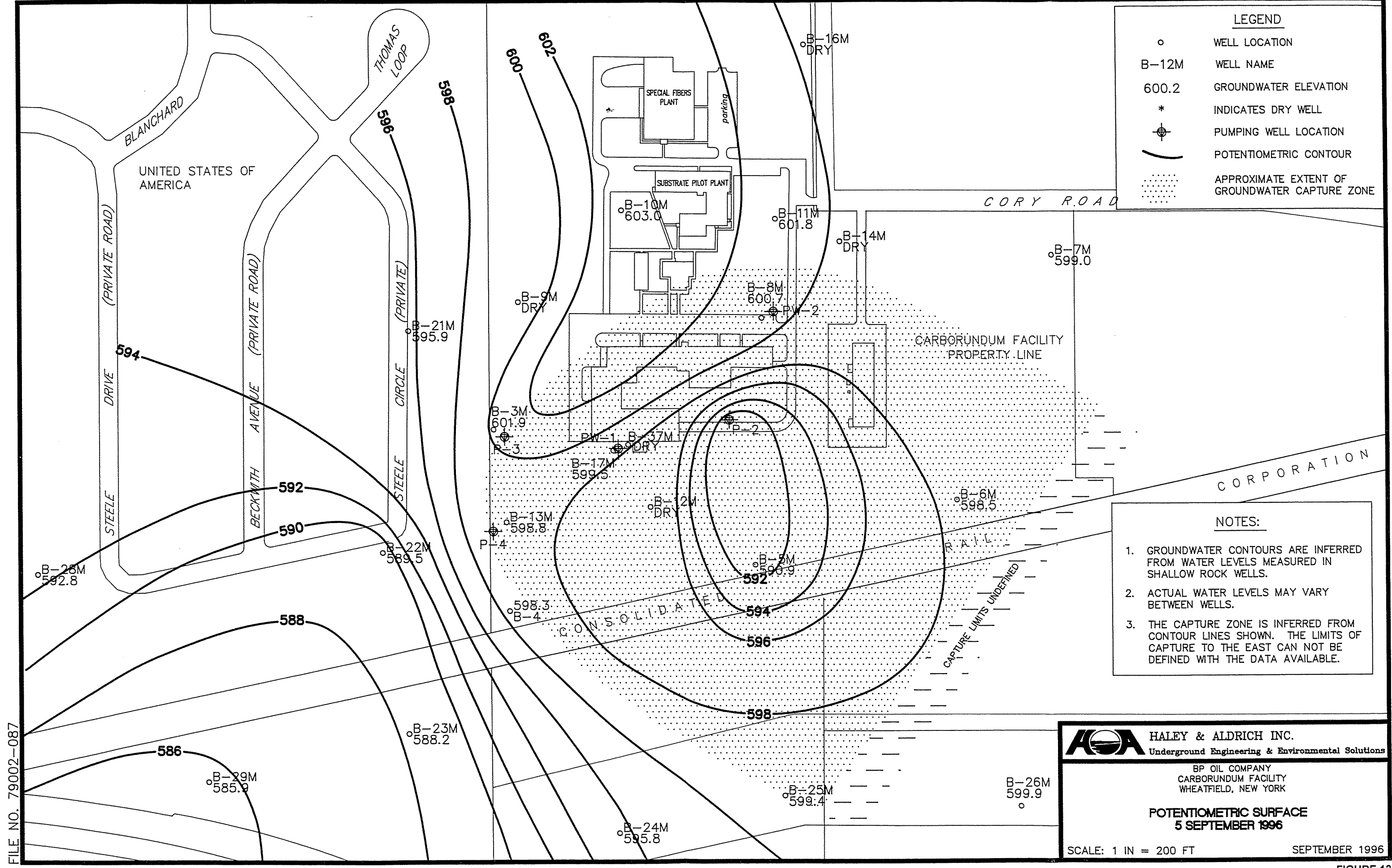
BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

POTENTIOMETRIC SURFACE
 8 AUGUST 1996

SCALE: 1 IN = 200 FT

AUGUST 1996

FIGURE 11



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ▨ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

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 WHEATFIELD, NEW YORK

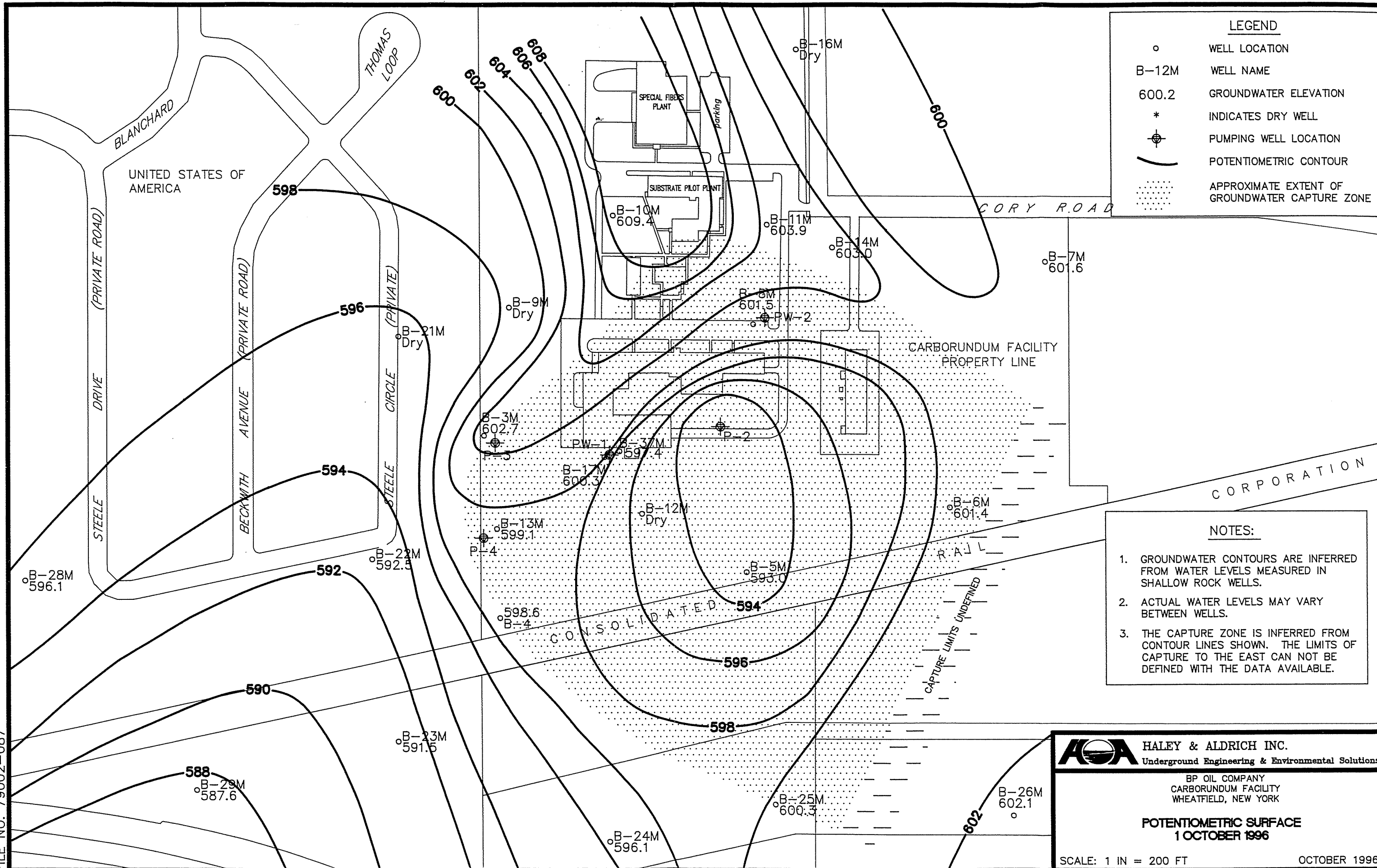
**POTENTIOMETRIC SURFACE
 5 SEPTEMBER 1996**

SCALE: 1 IN = 200 FT SEPTEMBER 1996

FILE NO. 79002-087

FIGURE 12

FILE NO. 79002-087



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

HALEY & ALDRICH INC.
 Underground Engineering & Environmental Solutions

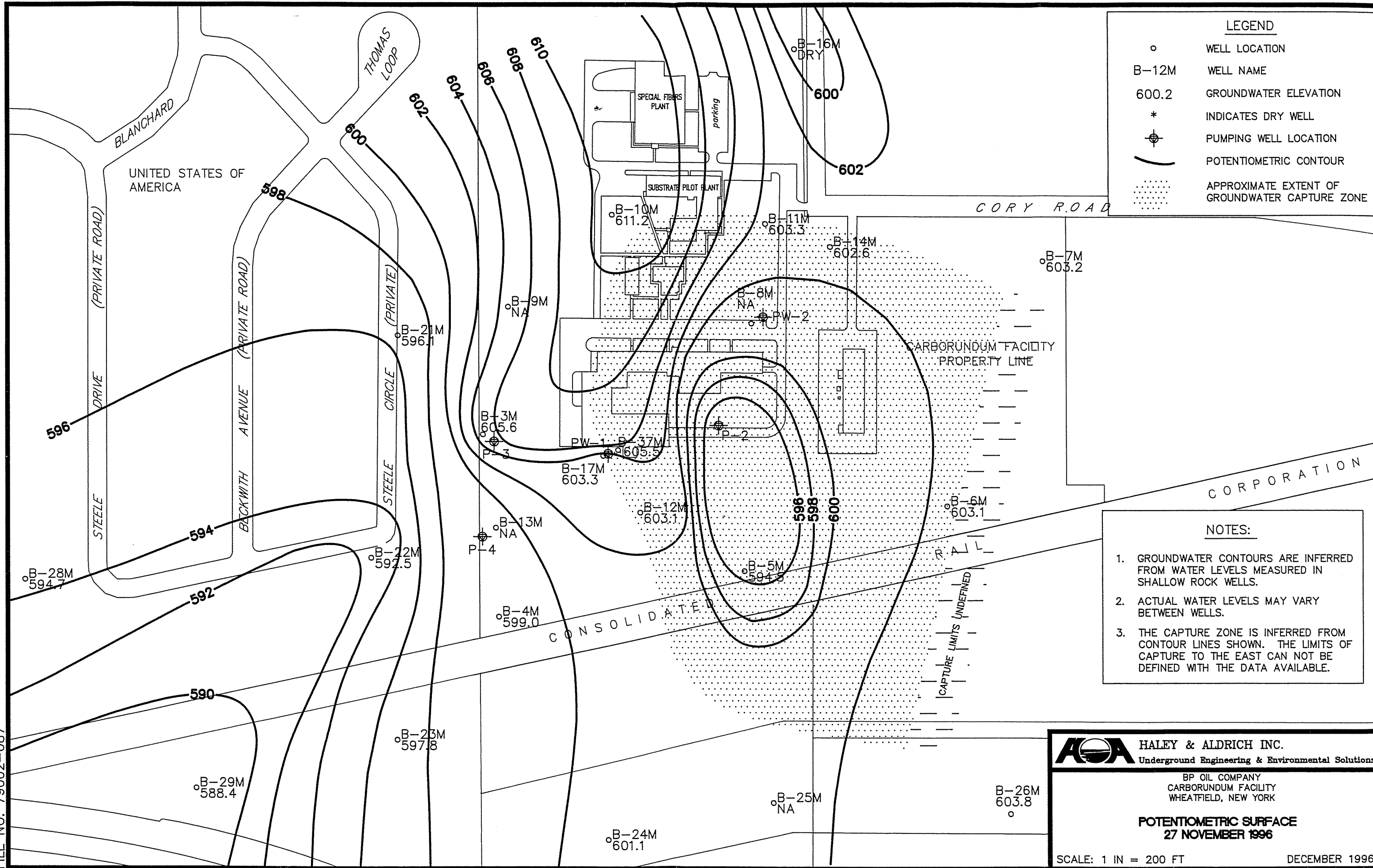
BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

POTENTIOMETRIC SURFACE
1 OCTOBER 1996

SCALE: 1 IN = 200 FT OCTOBER 1996

FIGURE 13

FILE NO. 79002-087



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

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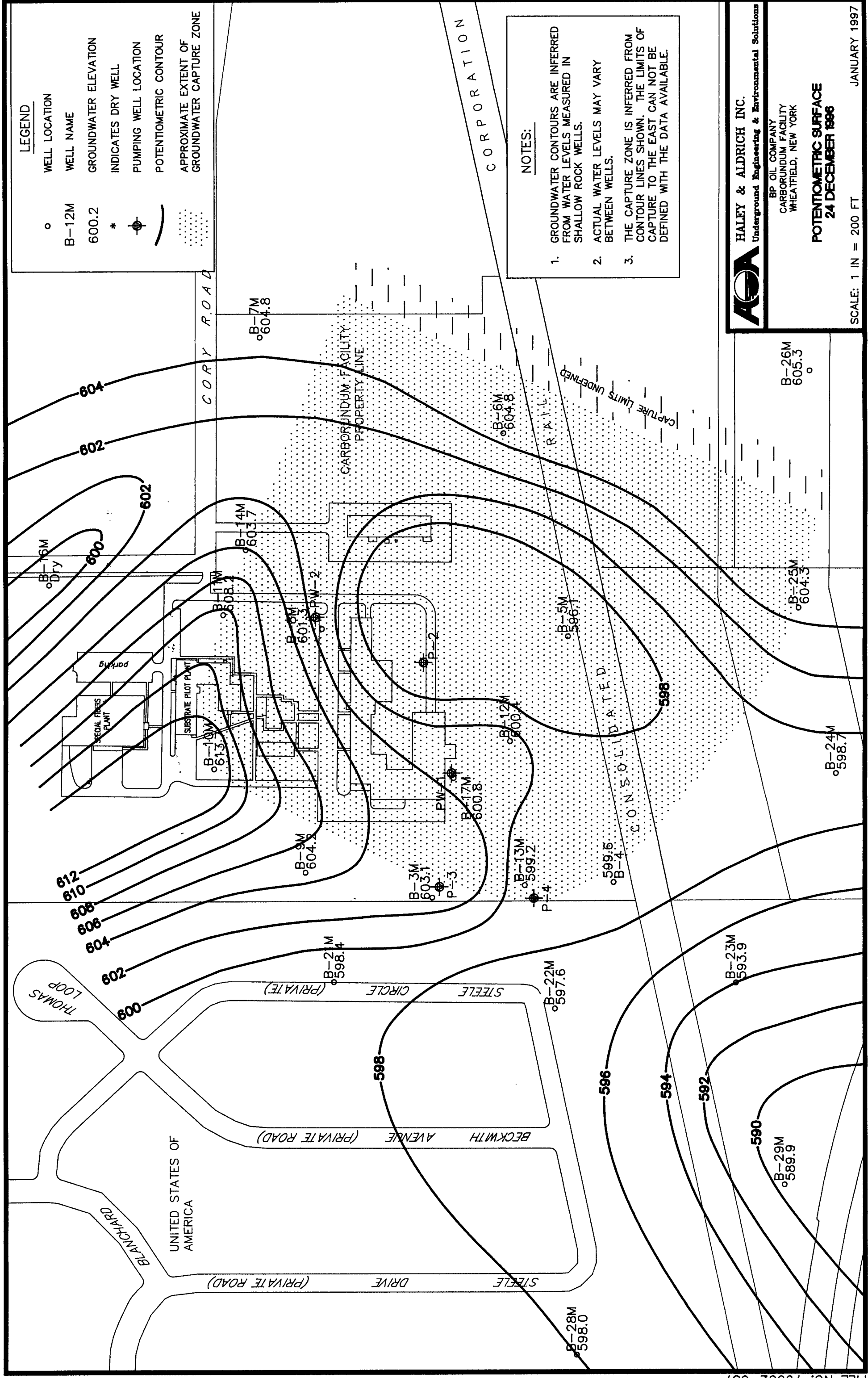
BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

POTENTIOMETRIC SURFACE
27 NOVEMBER 1996

SCALE: 1 IN = 200 FT

DECEMBER 1996

FIGURE 14



LEGEND

- WELL LOCATION
- B-12M WELL NAME
- 600.2 GROUNDWATER ELEVATION
- * INDICATES DRY WELL
- ⊕ PUMPING WELL LOCATION
- POTENTIOMETRIC CONTOUR
- ⋯ APPROXIMATE EXTENT OF GROUNDWATER CAPTURE ZONE

NOTES:

1. GROUNDWATER CONTOURS ARE INFERRED FROM WATER LEVELS MEASURED IN SHALLOW ROCK WELLS.
2. ACTUAL WATER LEVELS MAY VARY BETWEEN WELLS.
3. THE CAPTURE ZONE IS INFERRED FROM CONTOUR LINES SHOWN. THE LIMITS OF CAPTURE TO THE EAST CAN NOT BE DEFINED WITH THE DATA AVAILABLE.

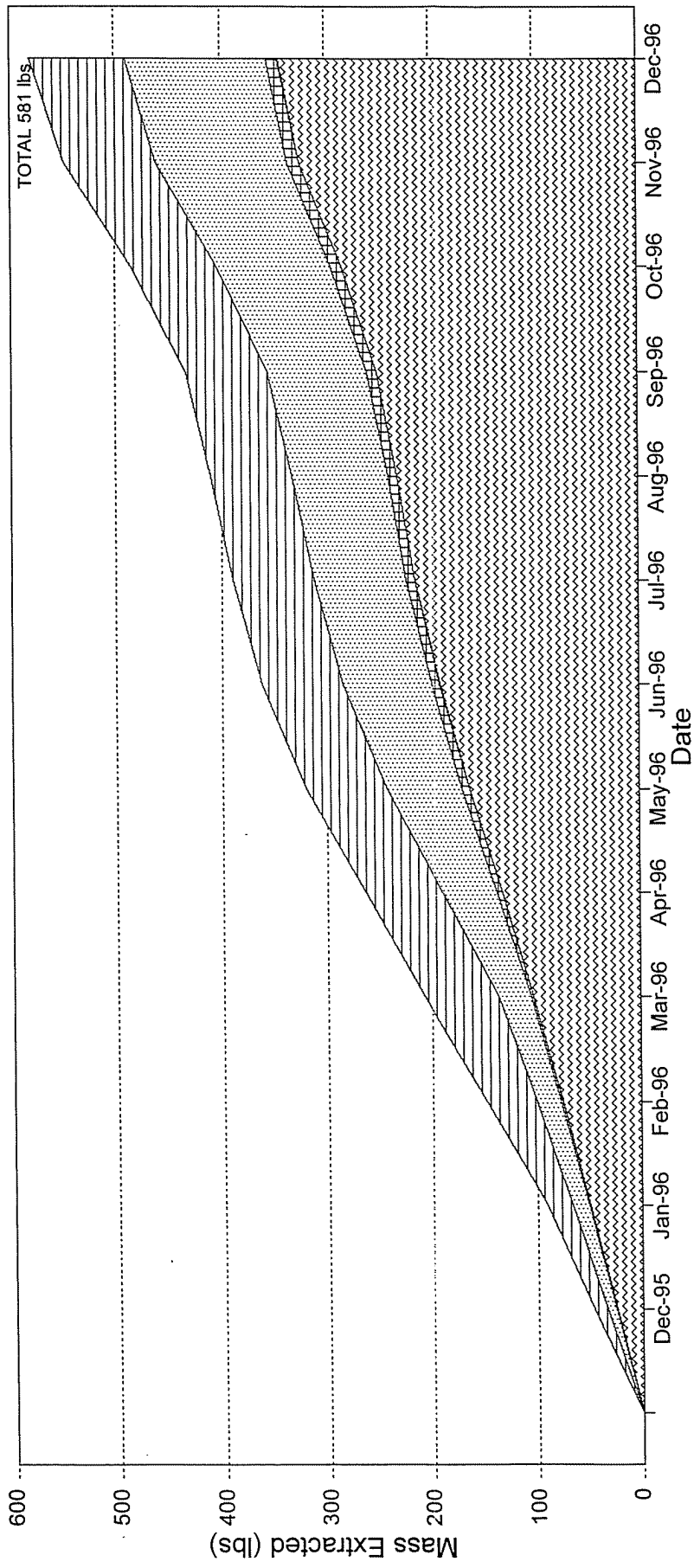
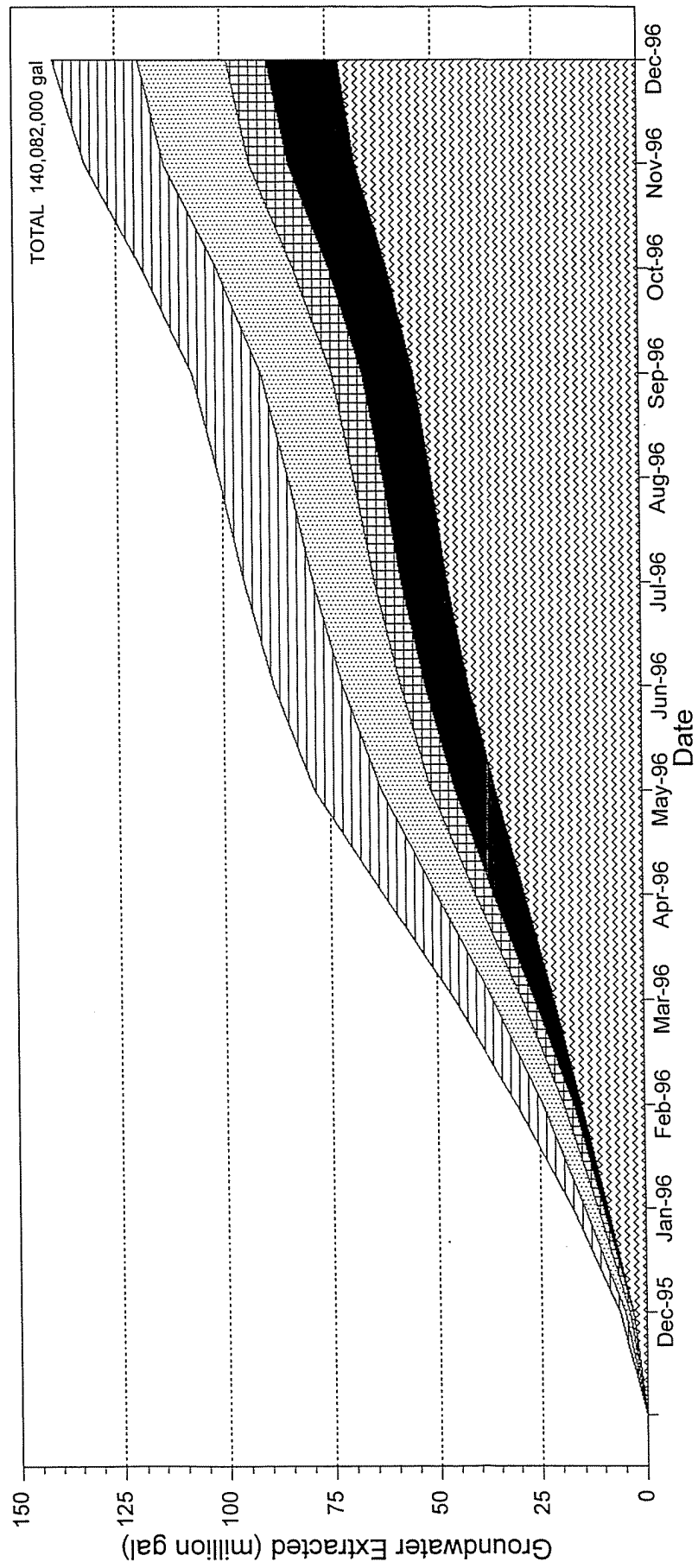
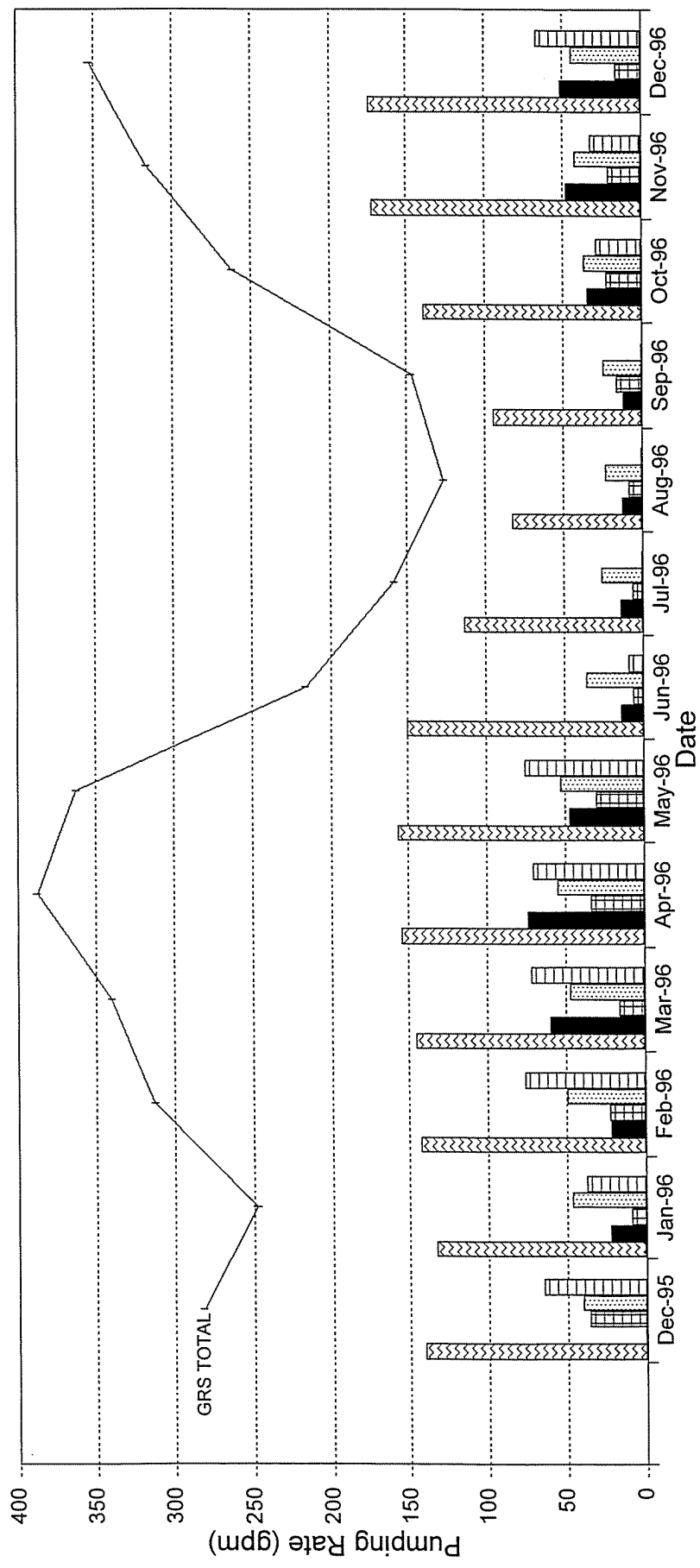
AEA
 Underground Engineering & Environmental Solutions

HALEY & ALDRICH INC.
 BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

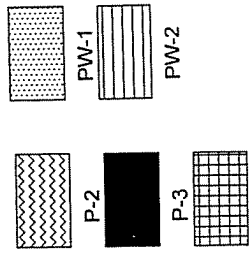
POTENTIOMETRIC SURFACE
 24 DECEMBER 1996

SCALE: 1 IN = 200 FT

JANUARY 1997



LEGEND:



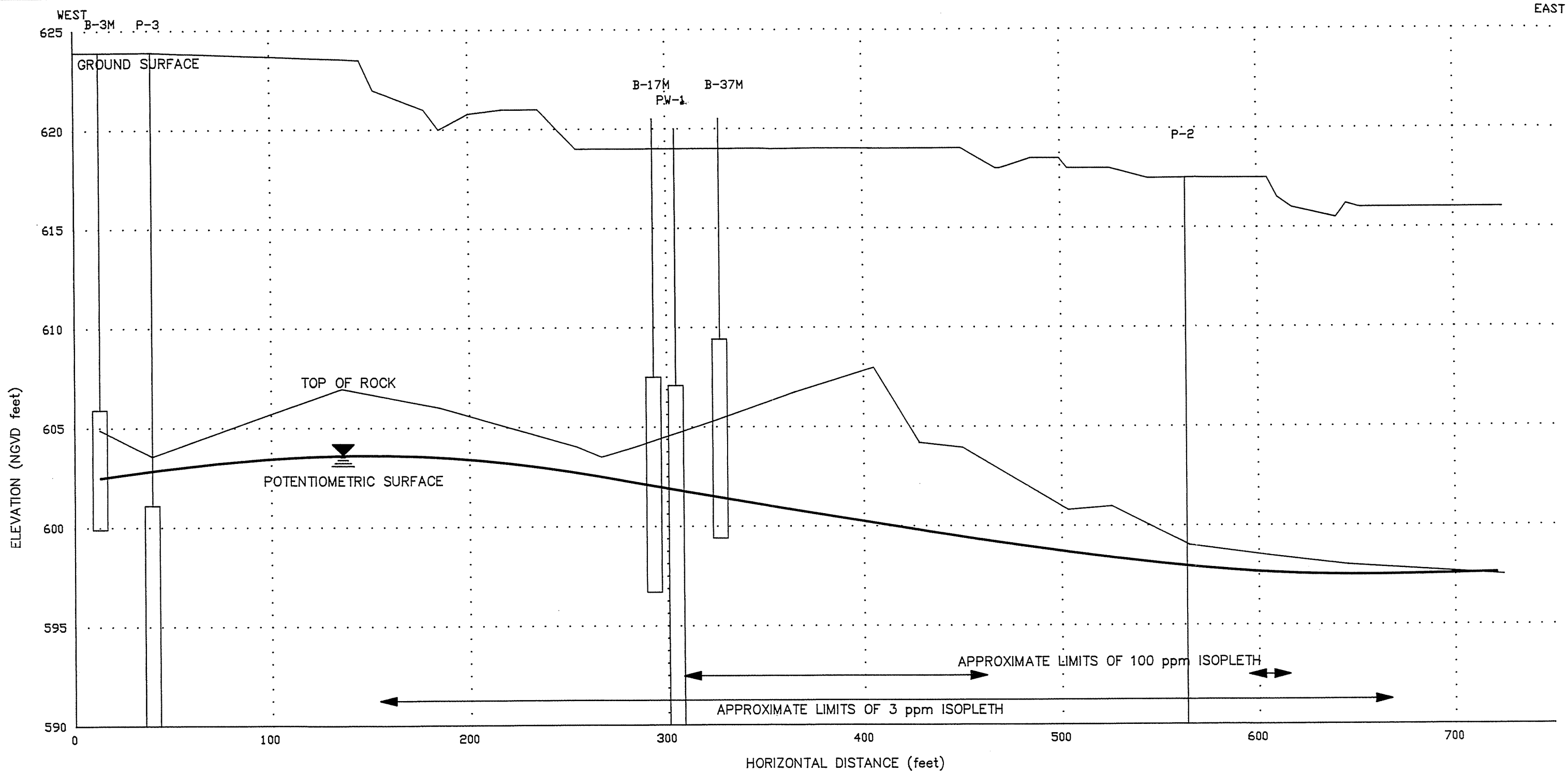
Notes:

1. Totals represent a running cumulative of all pumping wells.
2. Totals are for current period (12/15/95 to 12/15/96) only.



HALEY & ALDRICH INC.
 Geotechnical Engineers & Environmental Consultants
 BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

**GROUNDWATER RECOVERY SYSTEM
 PERFORMANCE SUMMARY**



NOTES:

1. APPROXIMATE LOCATION OF CROSS-SECTION IS SHOWN IN FIGURE 34.
2. GROUND SURFACE IS APPROXIMATE AND IS BASED ON SURFACE ELEVATIONS OF VEW, AIW, PZ, AND MONITORING & PUMPING WELLS.
3. TOP OF ROCK IS APPROXIMATE AND IS BASED ON VEW, AIW, PZ, AND GRID BORING AUGER REFUSAL, AND MONITORING & PUMPING WELL TOP OF ROCK INFORMATION.
4. APPROXIMATE LIMITS OF THE 3 ppm & 100 ppm ISOPLETHS ARE BASED ON REVISED LIMITS OF CONTAMINATION SHOWN IN FIGURE 34.
5. POTENTIOMETRIC SURFACE IS APPROXIMATE AND IS BASED ON MONITORING WELL WATER LEVELS AND POTENTIOMETRIC SURFACE OF 24 DECEMBER 1996 SHOWN IN FIGURE 15.

LEGEND:

FILE NO. 79002-064

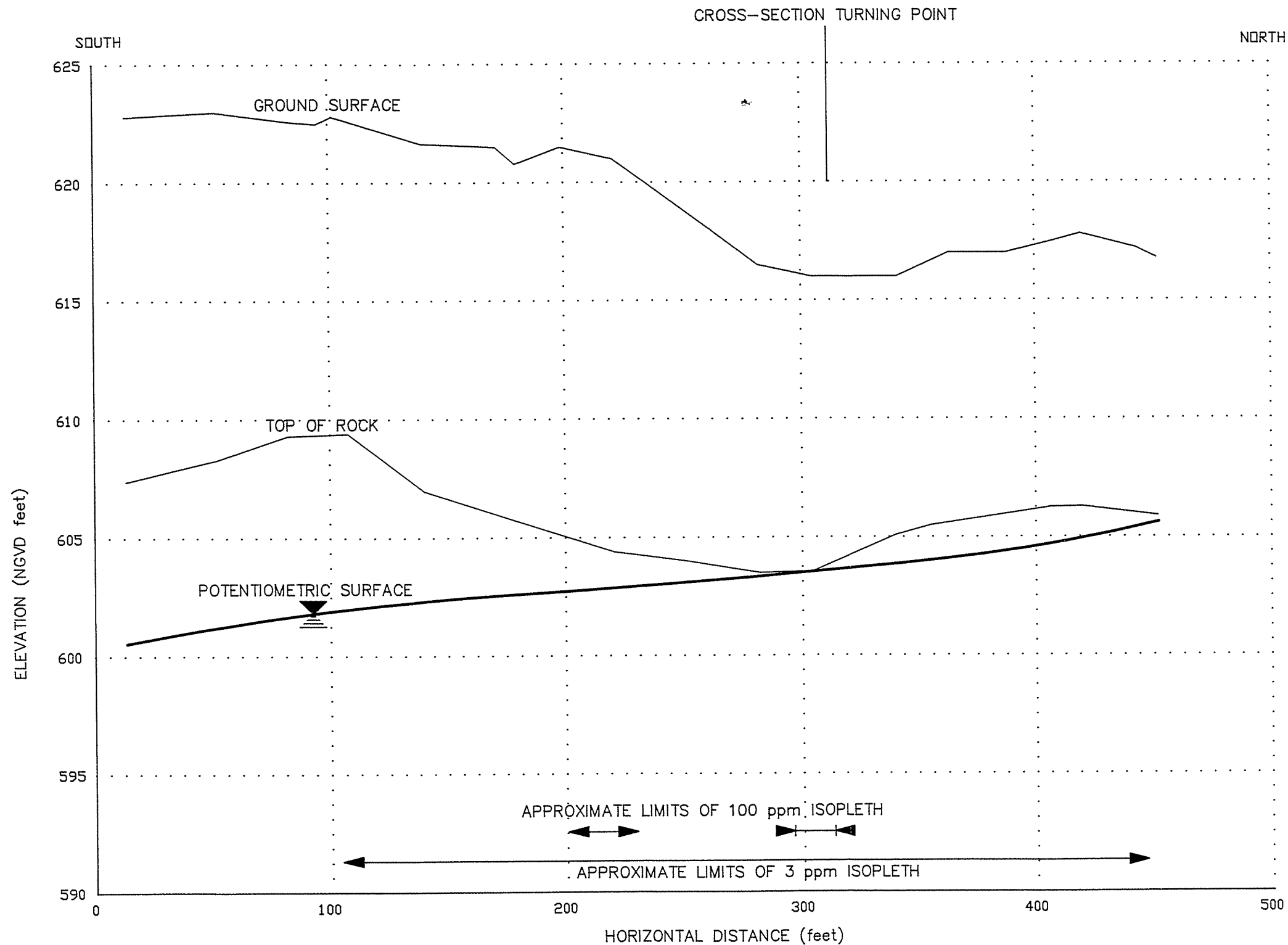
HALEY & ALDRICH INC.
 Geotechnical Engineers & Environmental Consultants

BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

CROSS-SECTION A POTENTIOMETRIC SURFACE
 24 DECEMBER 1996

SCALE: VERT. 1" = 5'; HORIZ. 1" = 50' JANUARY 1997

FIGURE 17



NOTES:

1. APPROXIMATE LOCATION OF CROSS-SECTION IS SHOWN IN FIGURE 34.
2. GROUND SURFACE IS APPROXIMATE AND IS BASED ON SURFACE ELEVATIONS OF VEW, AIW, PZ, AND MONITORING & PUMPING WELLS.
3. TOP OF ROCK IS APPROXIMATE AND IS BASED ON VEW, AIW, PZ, AND GRID BORING AUGER REFUSAL, AND MONITORING & PUMPING WELL TOP OF ROCK INFORMATION.
4. APPROXIMATE LIMITS OF THE 3 ppm & 100 ppm ISOPLETHS ARE BASED ON REVISED LIMITS OF CONTAMINATION SHOWN IN FIGURE 34.
5. POTENTIOMETRIC SURFACE IS APPROXIMATE AND IS BASED ON MONITORING WELL WATER LEVELS AND POTENTIOMETRIC SURFACE OF 24 DECEMBER 1996 SHOWN IN FIGURE 15.

FILE NO. 79002-064

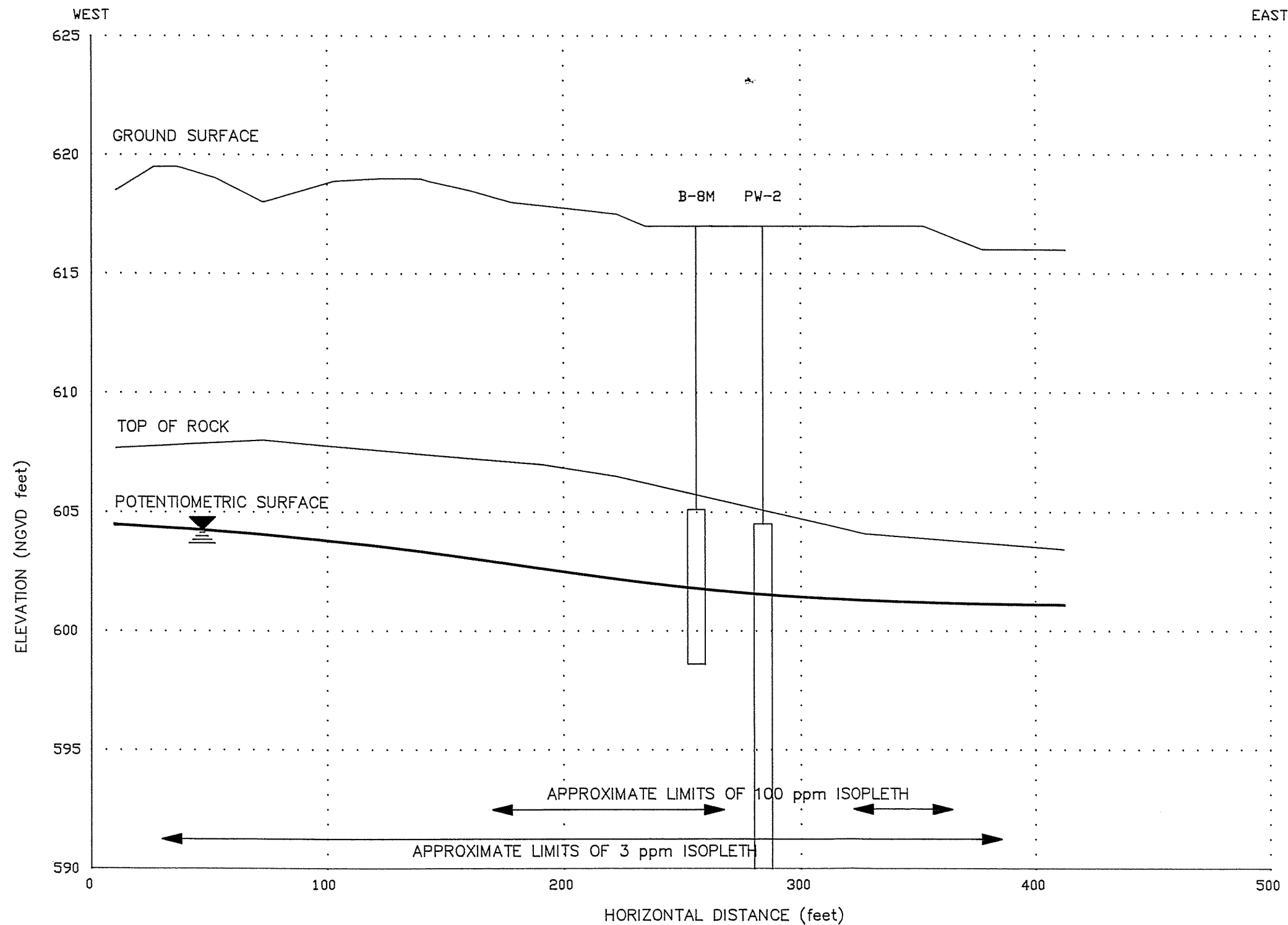
HALEY & ALDRICH INC.
 Geotechnical Engineers & Environmental Consultants

BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

CROSS-SECTION B POTENTIOMETRIC SURFACE
 24 DECEMBER 1996

SCALE: VERT. 1" = 5'; HORIZ. 1" = 50'


JANUARY 1997

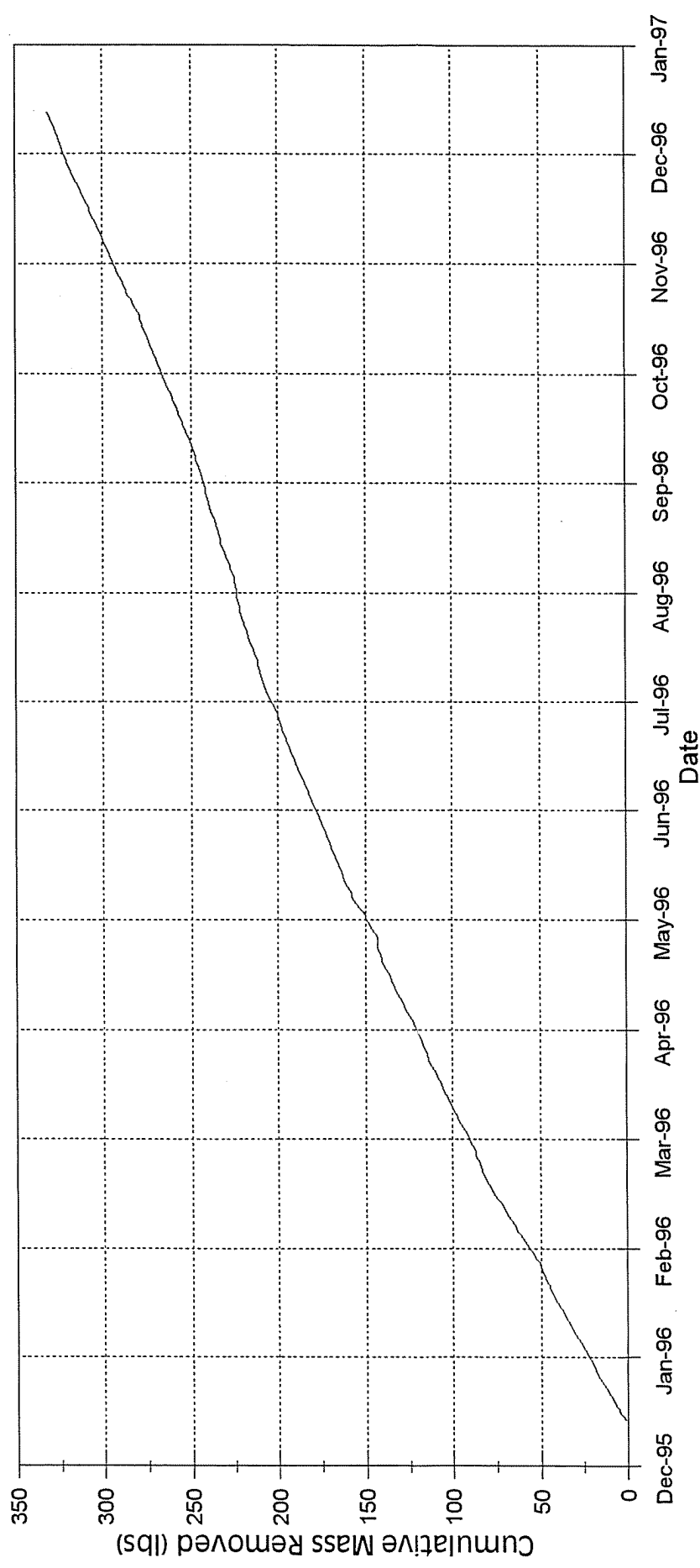
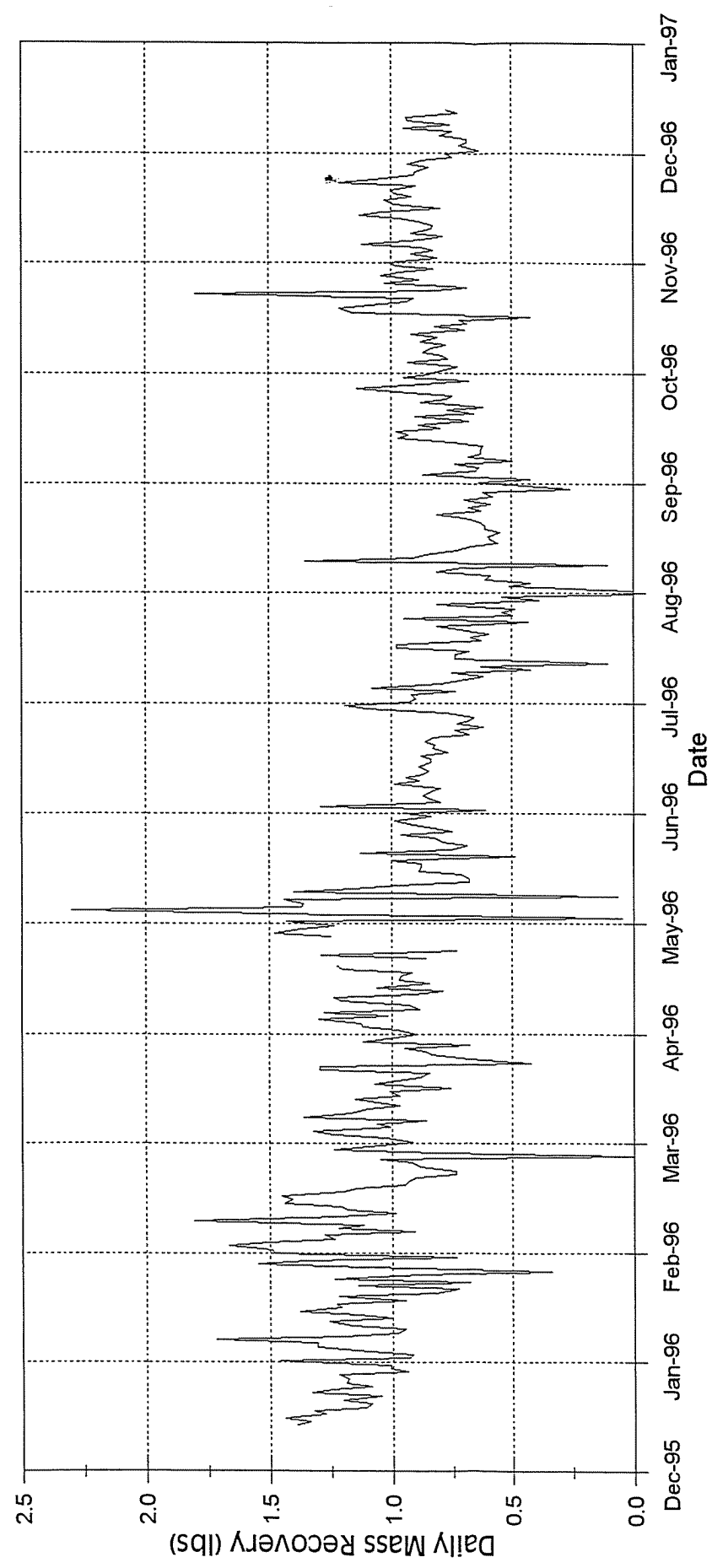
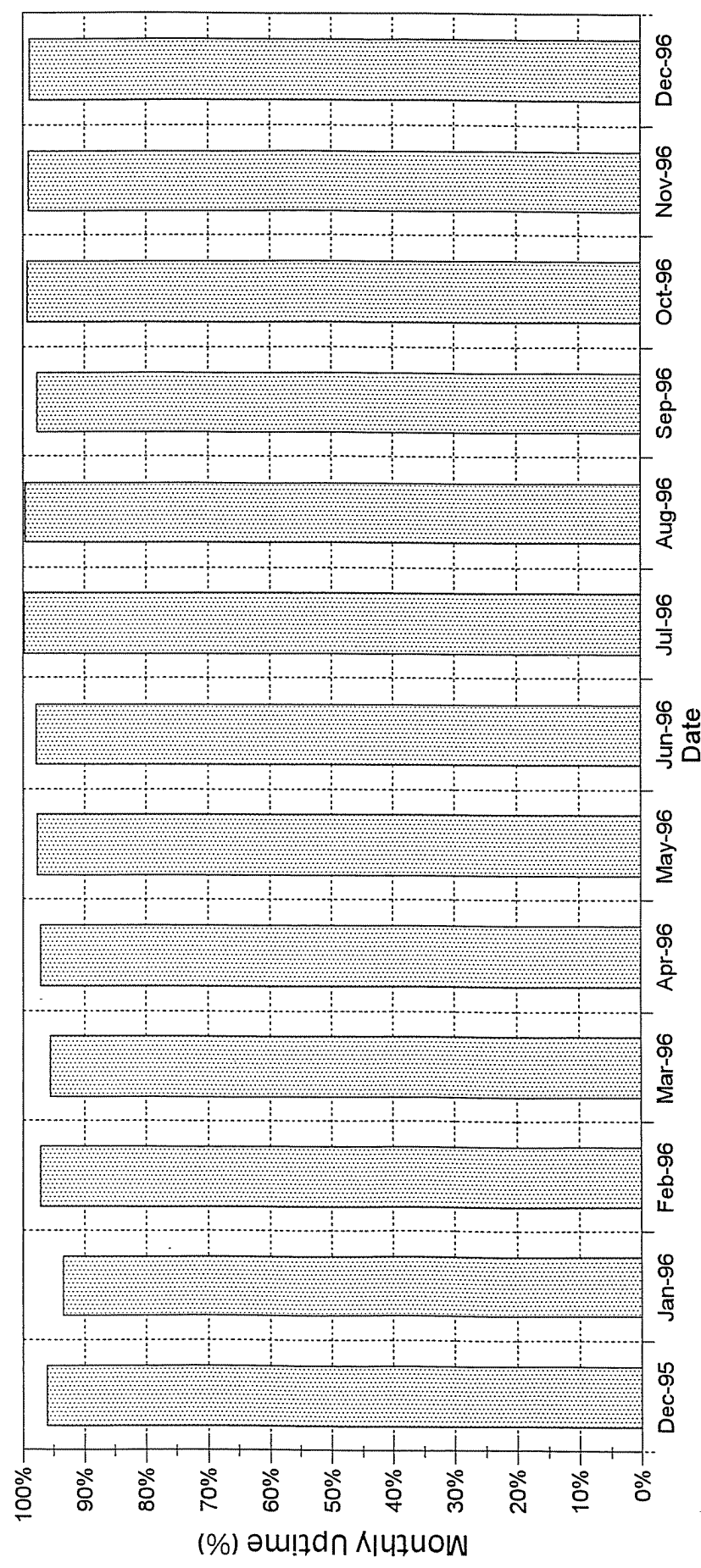


NOTES:

1. APPROXIMATE LOCATION OF CROSS-SECTION IS SHOWN IN FIGURE 34.
2. GROUND SURFACE IS APPROXIMATE AND IS BASED ON SURFACE ELEVATIONS OF VEW, AIW, PZ, AND MONITORING & PUMPING WELLS.
3. TOP OF ROCK IS APPROXIMATE AND IS BASED ON VEW, AIW, PZ, AND GRID BORING AUGER REFUSAL, AND MONITORING & PUMPING WELL TOP OF ROCK INFORMATION.
4. APPROXIMATE LIMITS OF THE 3 ppm & 100 ppm ISOPLETHS ARE BASED ON REVISED LIMITS OF CONTAMINATION SHOWN IN FIGURE 34.
5. POTENTIOMETRIC SURFACE IS APPROXIMATE AND IS BASED ON MONITORING WELL WATER LEVELS AND POTENTIOMETRIC SURFACE OF 24 DECEMBER 1996 SHOWN IN FIGURE 15.

FILE NO. 79002-064

	HALEY & ALDRICH INC. Geotechnical Engineers & Environmental Consultants
	BP OIL COMPANY CARBORUNDUM FACILITY WHEATFIELD, NEW YORK
CROSS-SECTION C POTENTIOMETRIC SURFACE 24 DECEMBER 1996	
SCALE: VERT. 1" = 5'; HORIZ. 1" = 50'	
JANUARY 1997	



NOTES:

1. DAILY MASS RECOVERY AND CUMULATIVE MASS REMOVED IS CALCULATED FROM MEASURED FLOW RATES AND VOC ANALYZER CONCENTRATIONS.

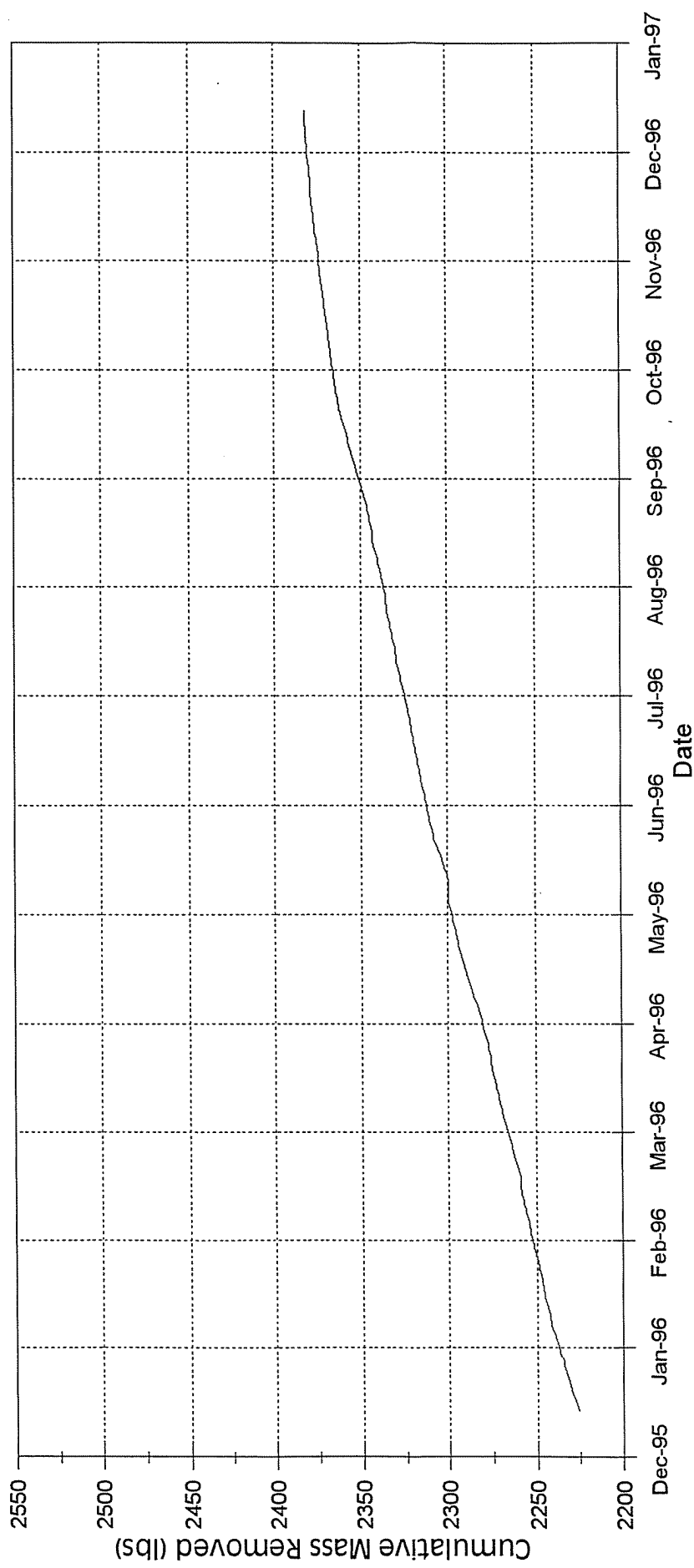
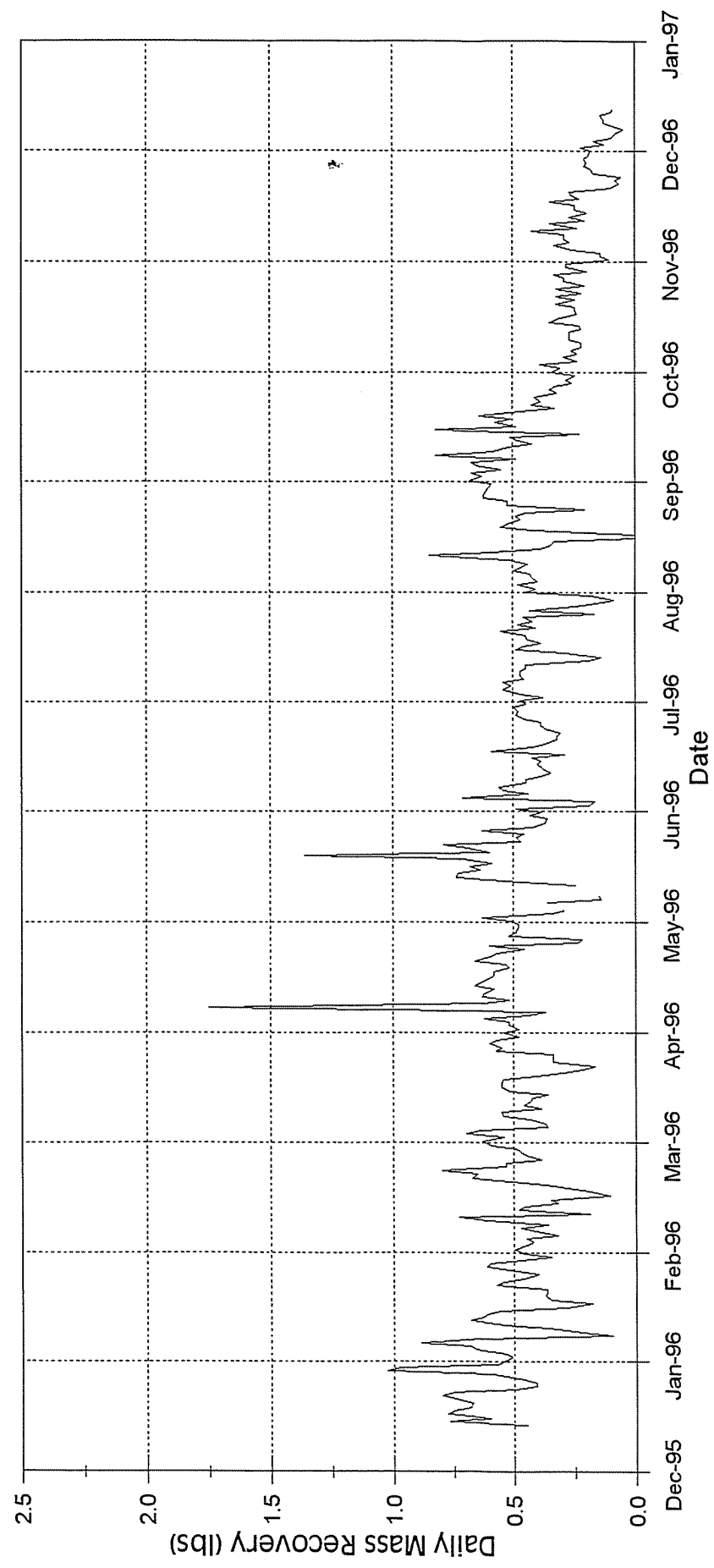
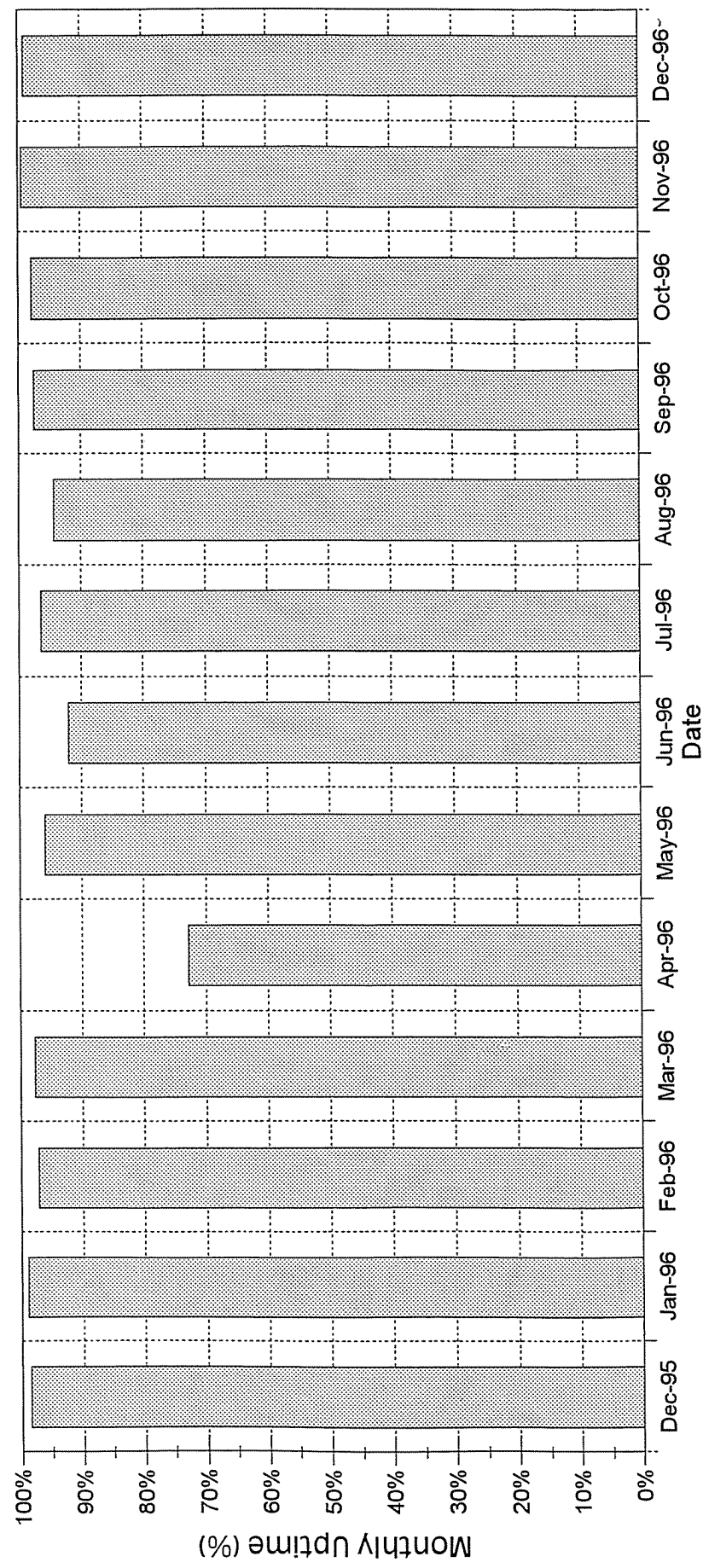
2. GRAPHS REPRESENT CURRENT PERIOD ONLY (12/15/95 TO 12/15/96).



HALEY & ALDRICH INC.
Geotechnical Engineers & Environmental Consultants

BP OIL COMPANY
CARBORUNDUM FACILITY
WHEATFIELD, NEW YORK

GROUNDWATER TREATMENT SYSTEM
PERFORMANCE SUMMARY



NOTES:

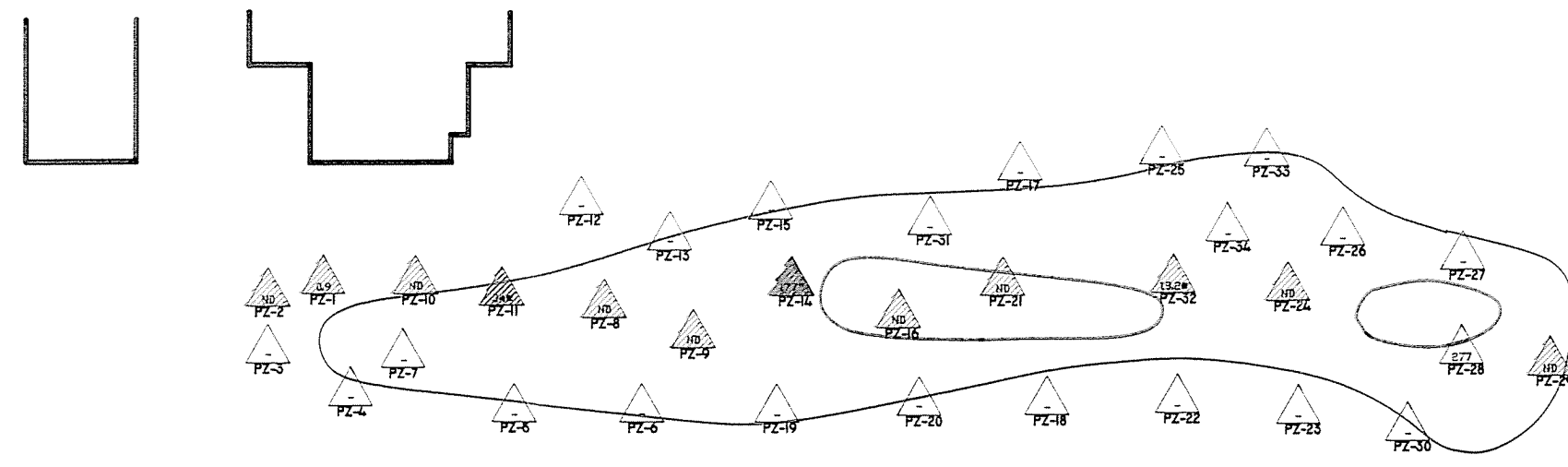
1. DAILY MASS RECOVERY AND CUMULATIVE MASS REMOVED IS CALCULATED FROM MEASURED FLOW RATES AND VOC ANALYZER CONCENTRATIONS.
2. GRAPHS REPRESENT CURRENT PERIOD ONLY (12/15/95 TO 12/15/96).



HALEY & ALDRICH INC.
 Geotechnical Engineers & Environmental Consultants

BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

**SOIL REMEDIATION SYSTEM
 PERFORMANCE SUMMARY**

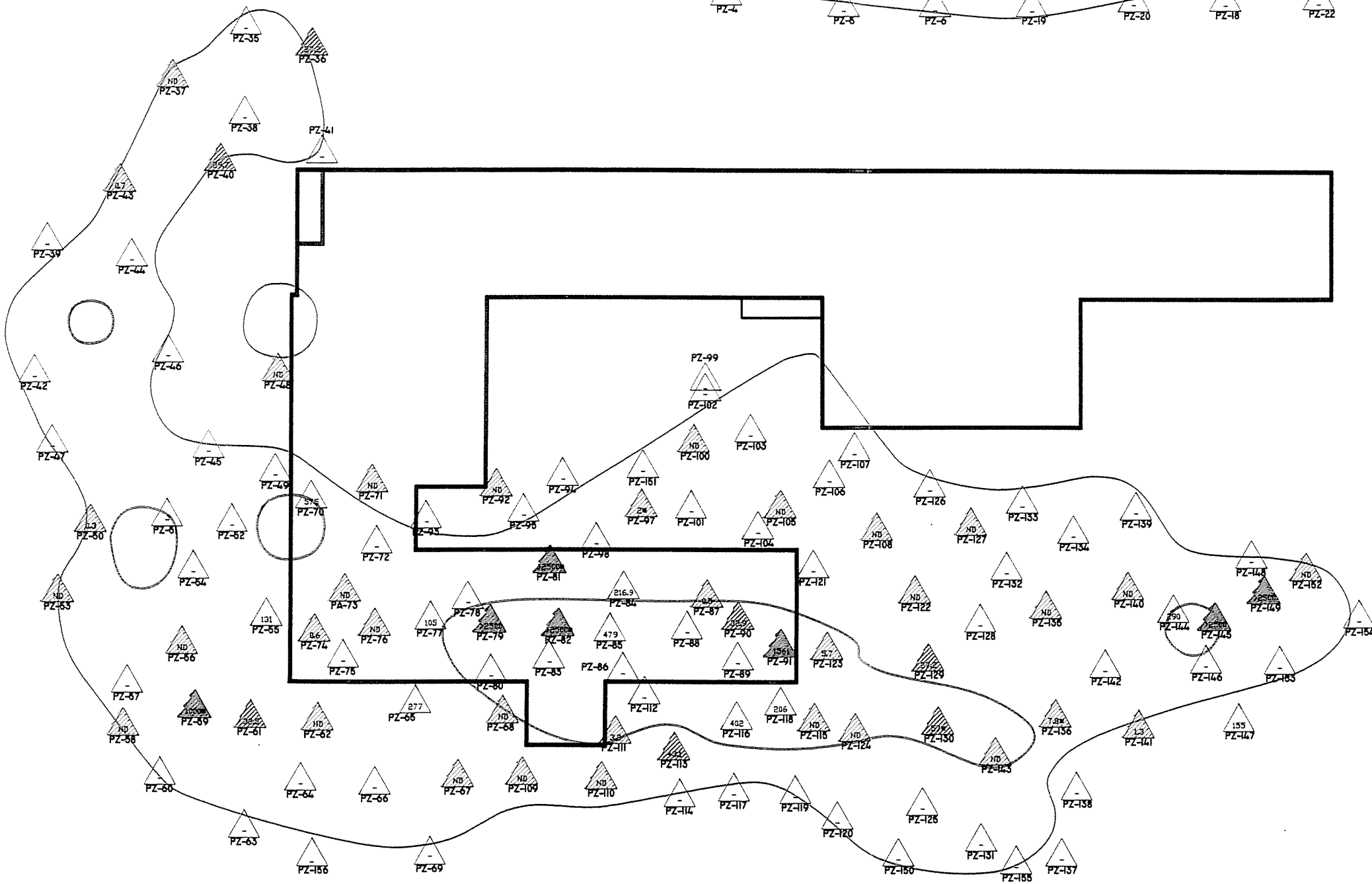


LEGEND:

- PIEZOMETER: NOT SAMPLED
- PIEZOMETER: ND TO 19 ppmV
- PIEZOMETER: 20 to 99 ppmV
- PIEZOMETER: 100 to 999 ppmV
- PIEZOMETER: 1000+ ppmV
- VAPOR READINGS
- APPROXIMATE LIMITS OF 3 ppm SOIL CONCENTRATION ISOPLETH
- APPROXIMATE LIMITS OF 100 ppm SOIL CONCENTRATION ISOPLETH

NOTES:

1. VAPOR READINGS OBTAINED BY HALEY & ALDRICH ON 18 JULY 1996 WITH A MICROTIP PID.
2. VAPOR READINGS REPRESENT MAXIMUM READING OBTAINED AT EACH PIEZOMETER.
3. SOIL CONCENTRATION ISOPLETHS BASED ON SOIL ANALYTICAL DATA (GRID BORINGS, VEWS, LEACHFIELD).



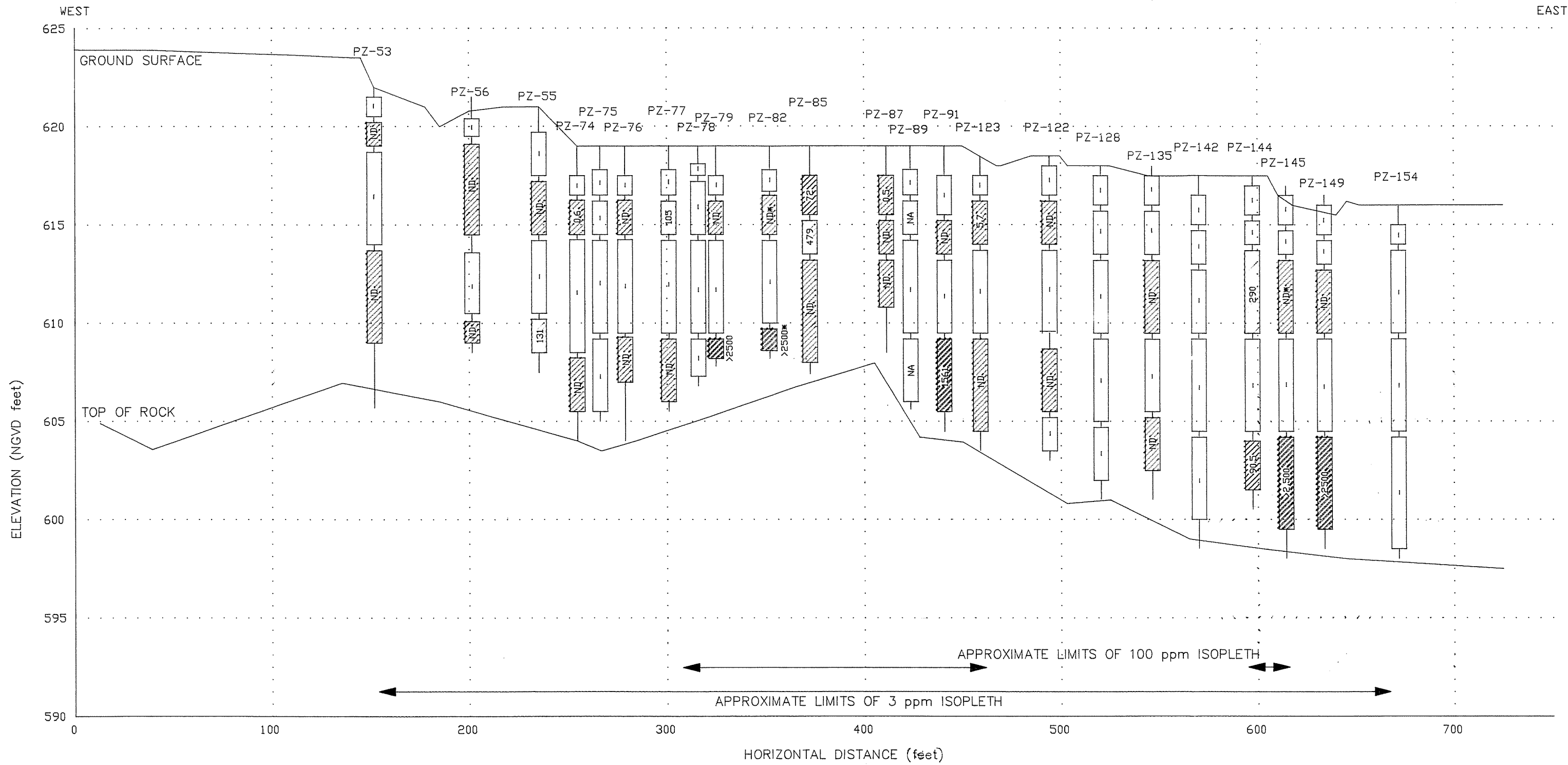
HALEY & ALDRICH INC.
Geotechnical Engineers & Environmental Consultants

BP OIL COMPANY
CARBORUNDUM FACILITY
WHEATFIELD, NEW YORK
**PIEZOMETER VAPOR READINGS
JULY 1996**

SCALE: 1 IN = 50 FT

JULY 1996

FIGURE 22



- NOTES:
1. APPROXIMATE LOCATION OF CROSS-SECTION IS SHOWN IN FIGURE 34.
 2. GROUND SURFACE IS APPROXIMATE AND IS BASED ON SURFACE ELEVATIONS OF VEW, AIW, PZ, AND MONITORING & PUMPING WELLS.
 3. TOP OF ROCK IS APPROXIMATE AND IS BASED ON VEW, AIW, PZ, AND GRID BORING AUGER REFUSAL, AND MONITORING & PUMPING WELL TOP OF ROCK INFORMATION.
 4. APPROXIMATE LIMITS OF THE 3 ppm & 100 ppm ISOPLETHS ARE BASED ON REVISED LIMITS OF CONTAMINATION SHOWN IN FIGURE 34.
 5. SOIL VAPOR READINGS OBTAINED FROM SELECTED PIEZOMETERS BY HALEY & ALDRICH ON 18 JULY 1996 WITH A MICROTIP PID. NA INDICATES PORT COULD NOT BE SAMPLED DUE TO WATER. A VALUE OF >2500 ppmV INDICATES SOIL VAPOR ABOVE PID LIMIT. A * INDICATES WATER VAPOR INTERFERENCE SUSPECTED, BUT READING OBTAINED.

- LEGEND:
- PIEZOMETER SOIL VAPOR READINGS (TOTAL VOC'S)
 - VAPOR READING: ND TO 19 ppmV
 - VAPOR READING: 20 ppmV TO 99 ppmV
 - VAPOR READING: 100 ppmV TO 999 ppmV
 - VAPOR READING: ABOVE 1000 ppmV

HALEY & ALDRICH INC.
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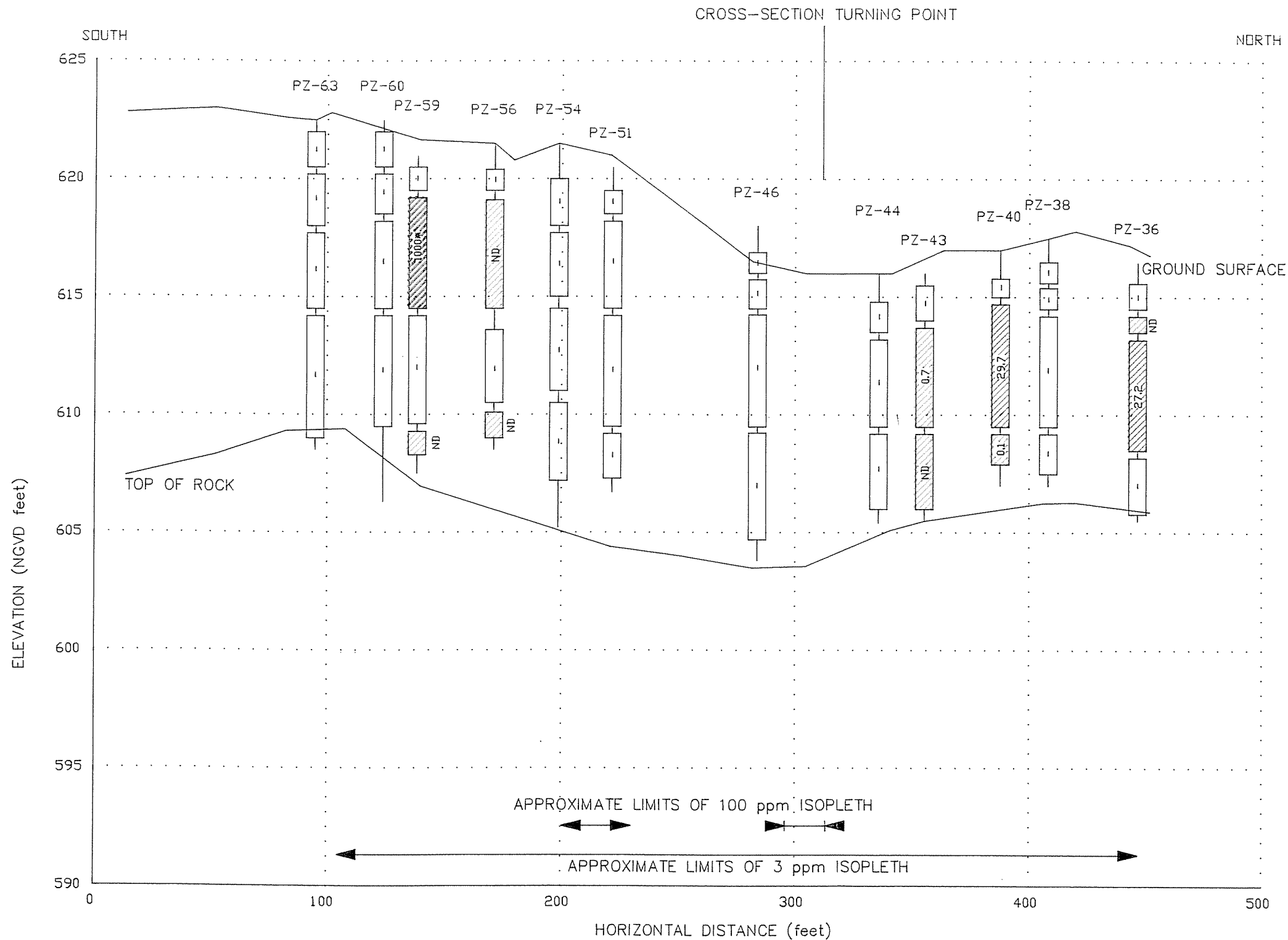
**CROSS-SECTION A PIEZOMETER VAPOR READINGS
 JULY 1996**

SCALE: VERT. 1" = 5'; HORIZ. 1" = 50'

JULY 1996

FILE NO. 79002-087

FIGURE 23



LEGEND:

- PIEZOMETER SOIL VAPOR READINGS (TOTAL VOC'S)
- VAPOR READING: ND TO 19 ppmV
- VAPOR READING: 20 ppmV TO 99 ppmV
- VAPOR READING: 100 ppmV TO 999 ppmV
- VAPOR READING: ABOVE 1000 ppmV

NOTES:

1. APPROXIMATE LOCATION OF CROSS-SECTION IS SHOWN IN FIGURE 34.
2. GROUND SURFACE IS APPROXIMATE AND IS BASED ON SURFACE ELEVATIONS OF VEW, AIW, PZ, AND MONITORING & PUMPING WELLS.
3. TOP OF ROCK IS APPROXIMATE AND IS BASED ON VEW, AIW, PZ, AND GRID BORING AUGER REFUSAL, AND MONITORING & PUMPING WELL TOP OF ROCK INFORMATION.
4. APPROXIMATE LIMITS OF THE 3 ppm & 100 ppm ISOPLETHS ARE BASED ON REVISED LIMITS OF CONTAMINATION SHOWN IN FIGURE 34.
5. SOIL VAPOR READINGS OBTAINED FROM SELECTED PIEZOMETERS BY HALEY & ALDRICH ON 18 JULY 1996 WITH A MICROTIP PID. NA INDICATES PORT COULD NOT BE SAMPLED DUE TO WATER. A VALUE OF > 2500 ppmV INDICATES SOIL VAPOR ABOVE PID LIMIT. A * INDICATES WATER VAPOR INTERFERENCE SUSPECTED, BUT READING OBTAINED.

FILE NO. 79002-064

HALEY & ALDRICH INC.
 Geotechnical Engineers & Environmental Consultants

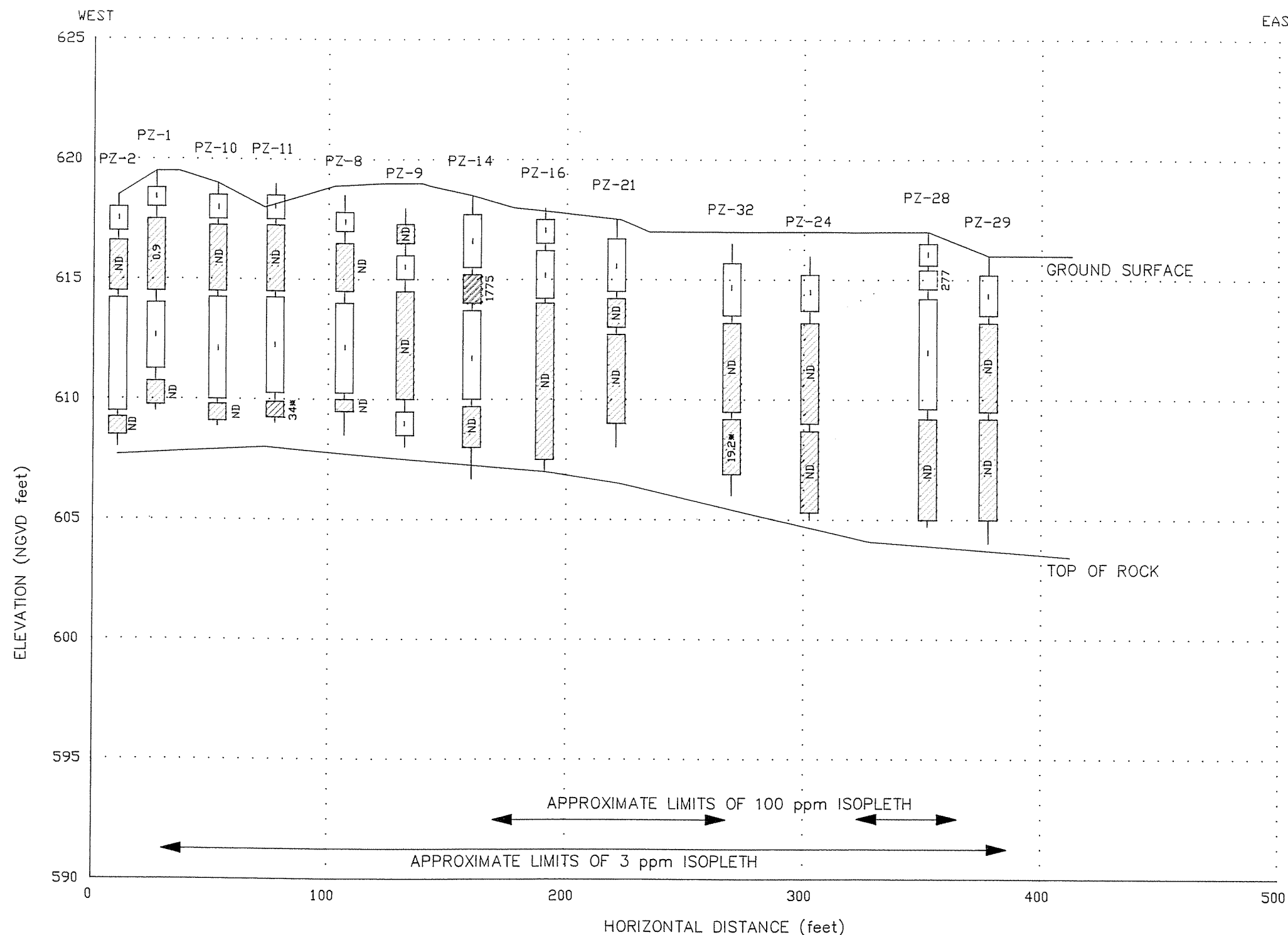
BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

CROSS-SECTION B PIEZOMETER VAPOR READINGS
 JULY 1996

SCALE: VERT. 1" = 5'; HORIZ. 1" = 50'

JULY 1996

FIGURE 24



LEGEND:

- PIEZOMETER SOIL VAPOR READINGS (TOTAL VOC'S)
- VAPOR READING: ND TO 19 ppmV
- VAPOR READING: 20 ppmV TO 99 ppmV
- VAPOR READING: 100 ppmV TO 999 ppmV
- VAPOR READING: ABOVE 1000 ppmV

NOTES:

1. APPROXIMATE LOCATION OF CROSS-SECTION IS SHOWN IN FIGURE 34.
2. GROUND SURFACE IS APPROXIMATE AND IS BASED ON SURFACE ELEVATIONS OF VE, AIW, PZ, AND MONITORING & PUMPING WELLS.
3. TOP OF ROCK IS APPROXIMATE AND IS BASED ON VE, AIW, PZ, AND GRID BORING AUGER REFUSAL, AND MONITORING & PUMPING WELL TOP OF ROCK INFORMATION.
4. APPROXIMATE LIMITS OF THE 3 ppm & 100 ppm ISOPLETHS ARE BASED ON REVISED LIMITS OF CONTAMINATION SHOWN IN FIGURE 34.
5. SOIL VAPOR READINGS OBTAINED FROM SELECTED PIEZOMETERS BY HALEY & ALDRICH ON 18 JULY 1996 WITH A MICROTIP PID. NA INDICATES PORT COULD NOT BE SAMPLED DUE TO WATER. A VALUE OF >2500 ppmV INDICATES SOIL VAPOR ABOVE PID LIMIT. A * INDICATES WATER VAPOR INTERFERENCE SUSPECTED, BUT READING OBTAINED.

HALEY & ALDRICH INC.
Geotechnical Engineers & Environmental Consultants

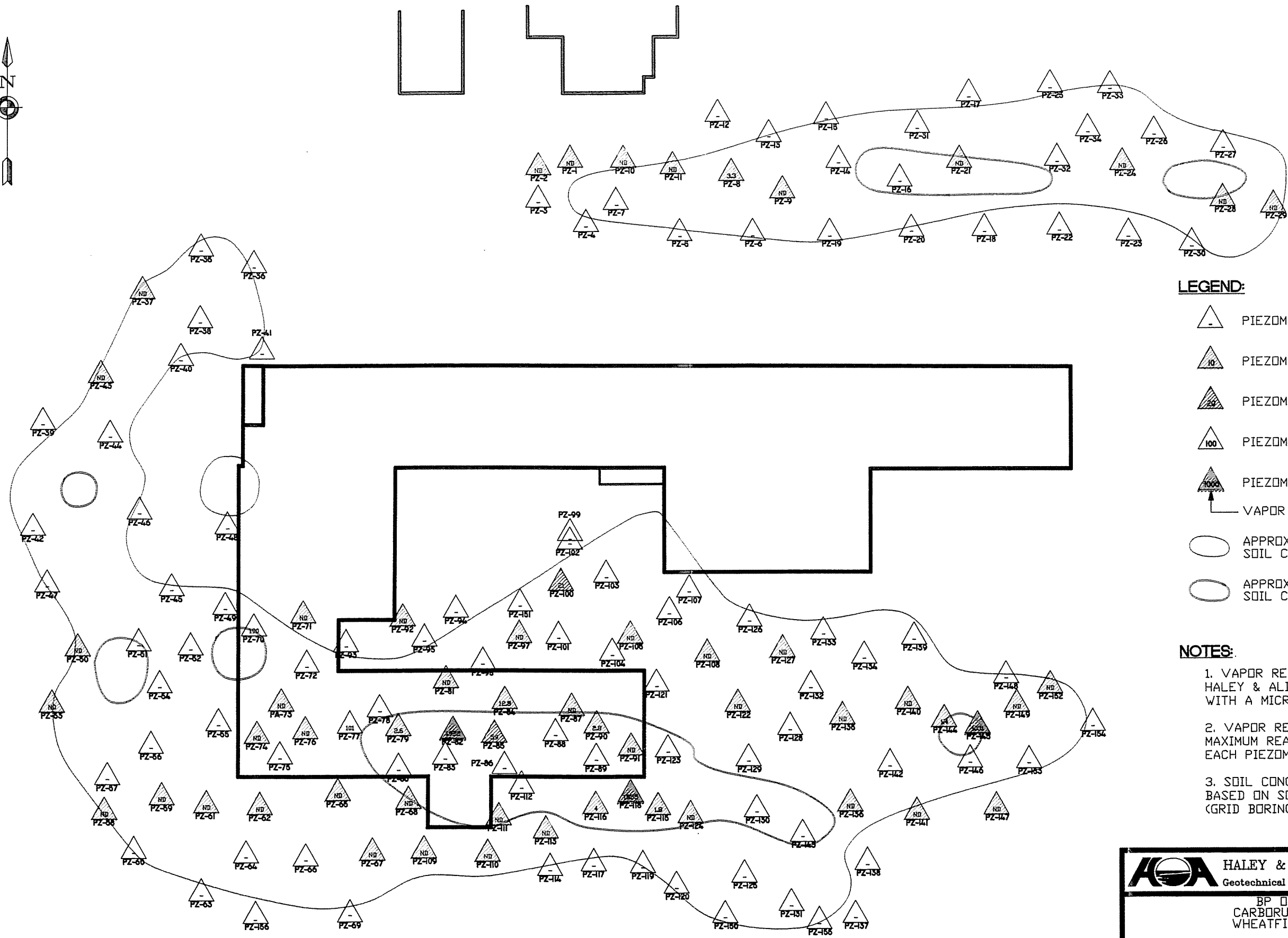
BP OIL COMPANY
CARBORUNDUM FACILITY
WHEATFIELD, NEW YORK

**CROSS-SECTION C POTENTIOMETRIC SURFACE
JULY 1996**

SCALE: VERT. 1" = 5'; HORIZ. 1" = 50'

JULY 1996

FILE NO. 79002-064



LEGEND:

- PIEZOMETER: NOT SAMPLED
- PIEZOMETER: ND TO 19 ppmV
- PIEZOMETER: 20 to 99 ppmV
- PIEZOMETER: 100 to 999 ppmV
- PIEZOMETER: 1000+ ppmV
- VAPOR READINGS
- APPROXIMATE LIMITS OF 3 ppm SOIL CONCENTRATION ISOPLETH
- APPROXIMATE LIMITS OF 100 ppm SOIL CONCENTRATION ISOPLETH

NOTES:

1. VAPOR READINGS OBTAINED BY HALEY & ALDRICH ON 25 NOVEMBER 1996 WITH A MICROTIP PID.
2. VAPOR READINGS REPRESENT MAXIMUM READING OBTAINED AT EACH PIEZOMETER.
3. SOIL CONCENTRATION ISOPLETHS BASED ON SOIL ANALYTICAL DATA (GRID BORINGS, VEWS, LEACHFIELD).

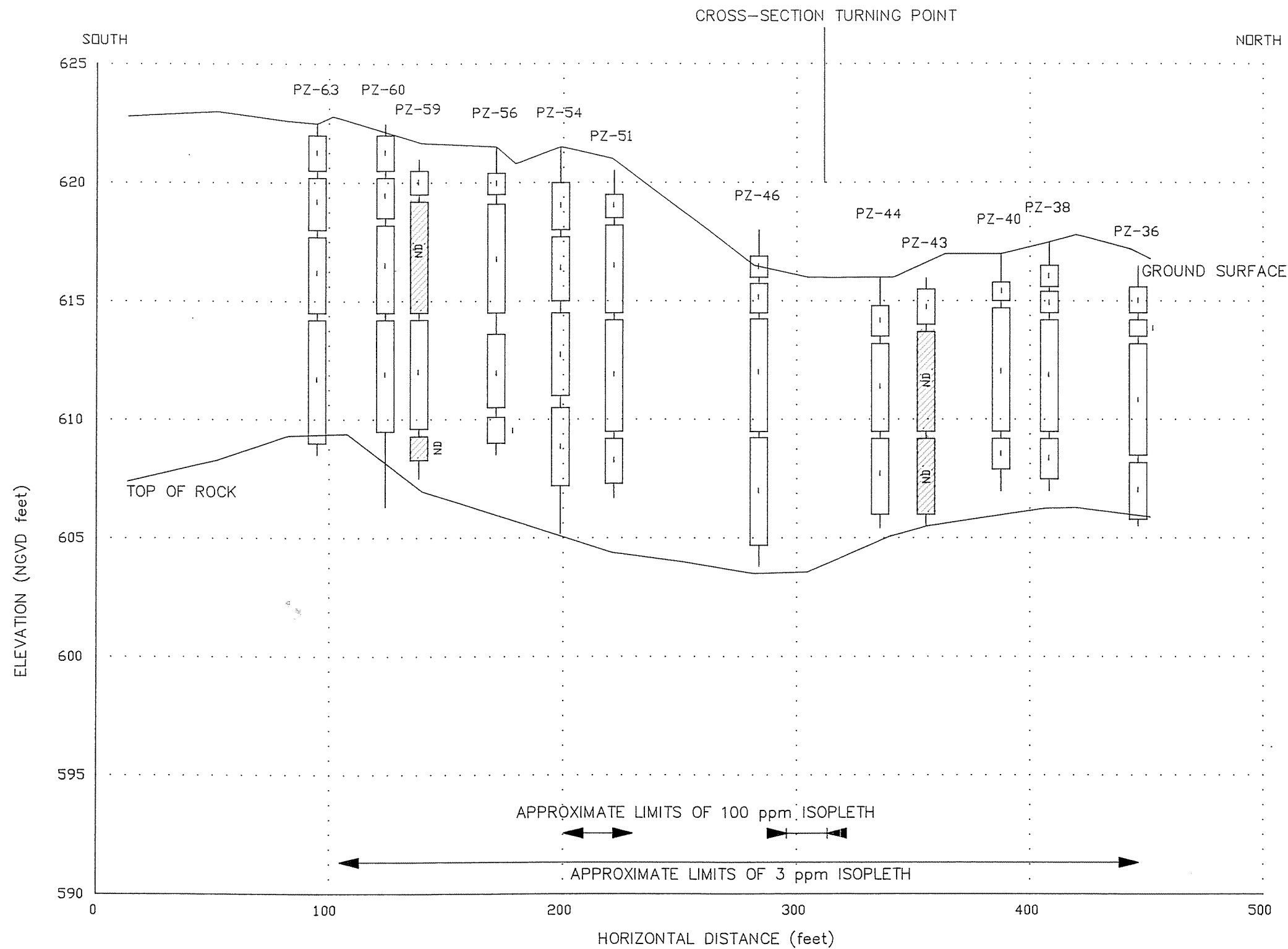
HALEY & ALDRICH INC.
Geotechnical Engineers & Environmental Consultants

BP OIL COMPANY
CARBORUNDUM FACILITY
WHEATFIELD, NEW YORK
**PIEZOMETER VAPOR READINGS
NOVEMBER 1996**

SCALE: 1 IN = 50 FT

DECEMBER 1996

FIGURE 26



LEGEND:

- PIEZOMETER SOIL VAPOR READINGS (TOTAL VOC'S)
- VAPOR READING: ND TO 19 ppmV
- VAPOR READING: 20 ppmV TO 99 ppmV
- VAPOR READING: 100 ppmV TO 999 ppmV
- VAPOR READING: ABOVE 1000 ppmV

NOTES:

1. APPROXIMATE LOCATION OF CROSS-SECTION IS SHOWN IN FIGURE 6.
2. GROUND SURFACE IS APPROXIMATE AND IS BASED ON SURFACE ELEVATIONS OF VEW, AIW, PZ, AND MONITORING & PUMPING WELLS.
3. TOP OF ROCK IS APPROXIMATE AND IS BASED ON VEW, AIW, PZ, AND GRID BORING AUGER REFUSAL, AND MONITORING & PUMPING WELL TOP OF ROCK INFORMATION.
4. APPROXIMATE LIMITS OF THE 3 ppm & 100 ppm ISOPLETHS ARE BASED ON REVISED LIMITS OF CONTAMINATION SHOWN IN FIGURE 6.
5. SOIL VAPOR READINGS OBTAINED FROM SELECTED PIEZOMETERS BY HALEY & ALDRICH ON 25 NOVEMBER 1996 WITH A MICROTIP PID. NA INDICATES PORT COULD NOT BE SAMPLED DUE TO WATER. A VALUE OF > 2500 ppmV INDICATES SOIL VAPOR ABOVE PID LIMIT. A * INDICATES WATER VAPOR INTERFERENCE SUSPECTED, BUT READING OBTAINED.

FILE NO. 79002-064

HALEY & ALDRICH INC.
Geotechnical Engineers & Environmental Consultants

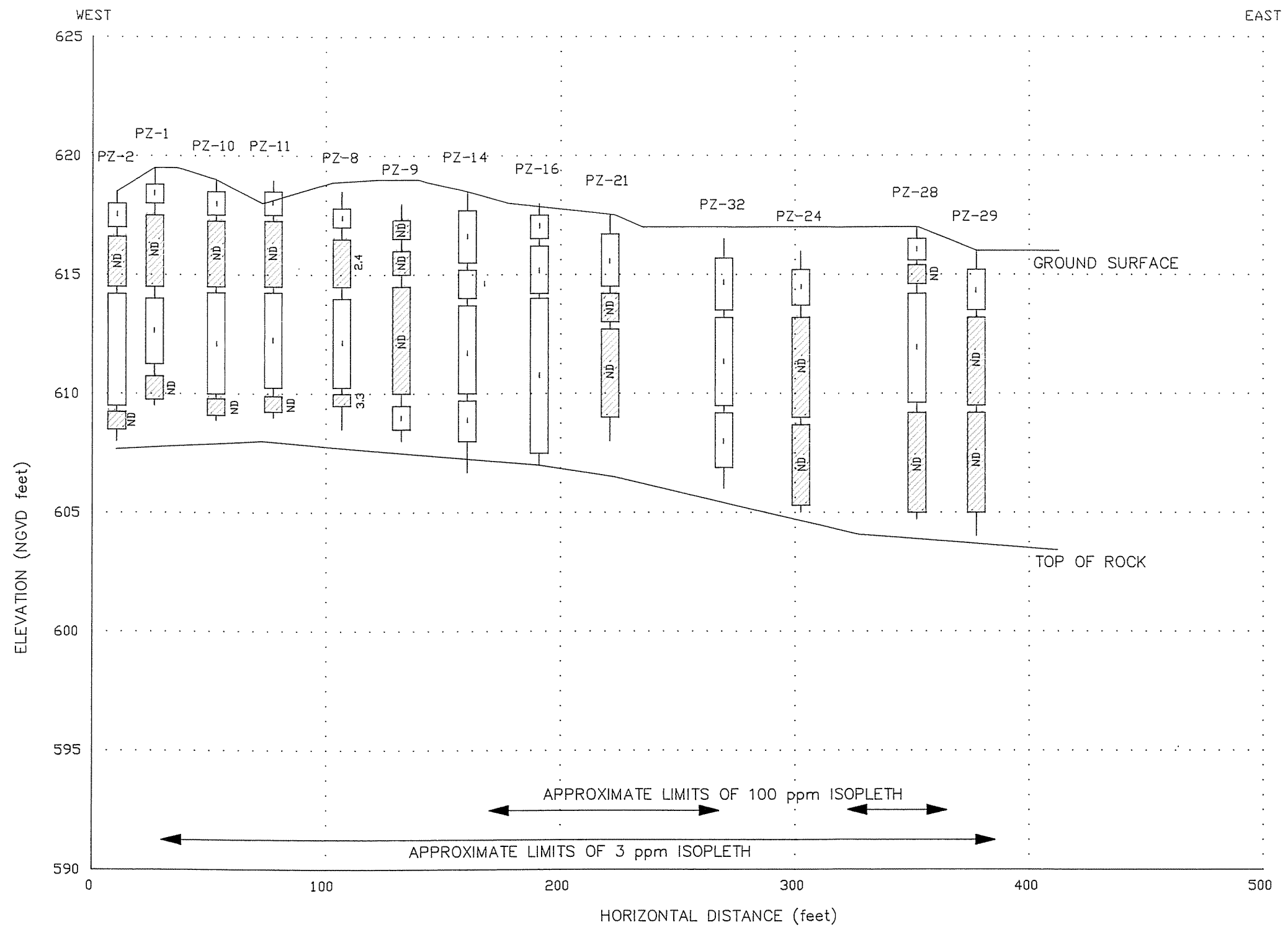
BP OIL COMPANY
CARBORUNDUM FACILITY
WHEATFIELD, NEW YORK

CROSS-SECTION B PIEZOMETER VAPOR READINGS
NOVEMBER 1996

SCALE: VERT. 1" = 5'; HORIZ. 1" = 50'

DECEMBER 1996

FIGURE 28



LEGEND:

PIEZOMETER SOIL VAPOR READINGS (TOTAL VOC'S)

VAPOR READING: ND TO 19 ppmV

VAPOR READING: 20 ppmV TO 99 ppmV

VAPOR READING: 100 ppmV TO 999 ppmV

VAPOR READING: ABOVE 1000 ppmV

NOTES:

1. APPROXIMATE LOCATION OF CROSS-SECTION IS SHOWN IN FIGURE 6.
2. GROUND SURFACE IS APPROXIMATE AND IS BASED ON SURFACE ELEVATIONS OF VEW, AIW, PZ, AND MONITORING & PUMPING WELLS.
3. TOP OF ROCK IS APPROXIMATE AND IS BASED ON VEW, AIW, PZ, AND GRID BORING AUGER REFUSAL, AND MONITORING & PUMPING WELL TOP OF ROCK INFORMATION.
4. APPROXIMATE LIMITS OF THE 3 ppm & 100 ppm ISOPLETHS ARE BASED ON REVISED LIMITS OF CONTAMINATION SHOWN IN FIGURE 6.
5. SOIL VAPOR READINGS OBTAINED FROM SELECTED PIEZOMETERS BY HALEY & ALDRICH ON 25 NOVEMBER 1996 WITH A MICROTIP PID. NA INDICATES PORT COULD NOT BE SAMPLED DUE TO WATER. A VALUE OF >2500 ppmV INDICATES SOIL VAPOR ABOVE PID LIMIT. A * INDICATES WATER VAPOR INTERFERENCE SUSPECTED, BUT READING OBTAINED.

HALEY & ALDRICH INC.
 Geotechnical Engineers & Environmental Consultants

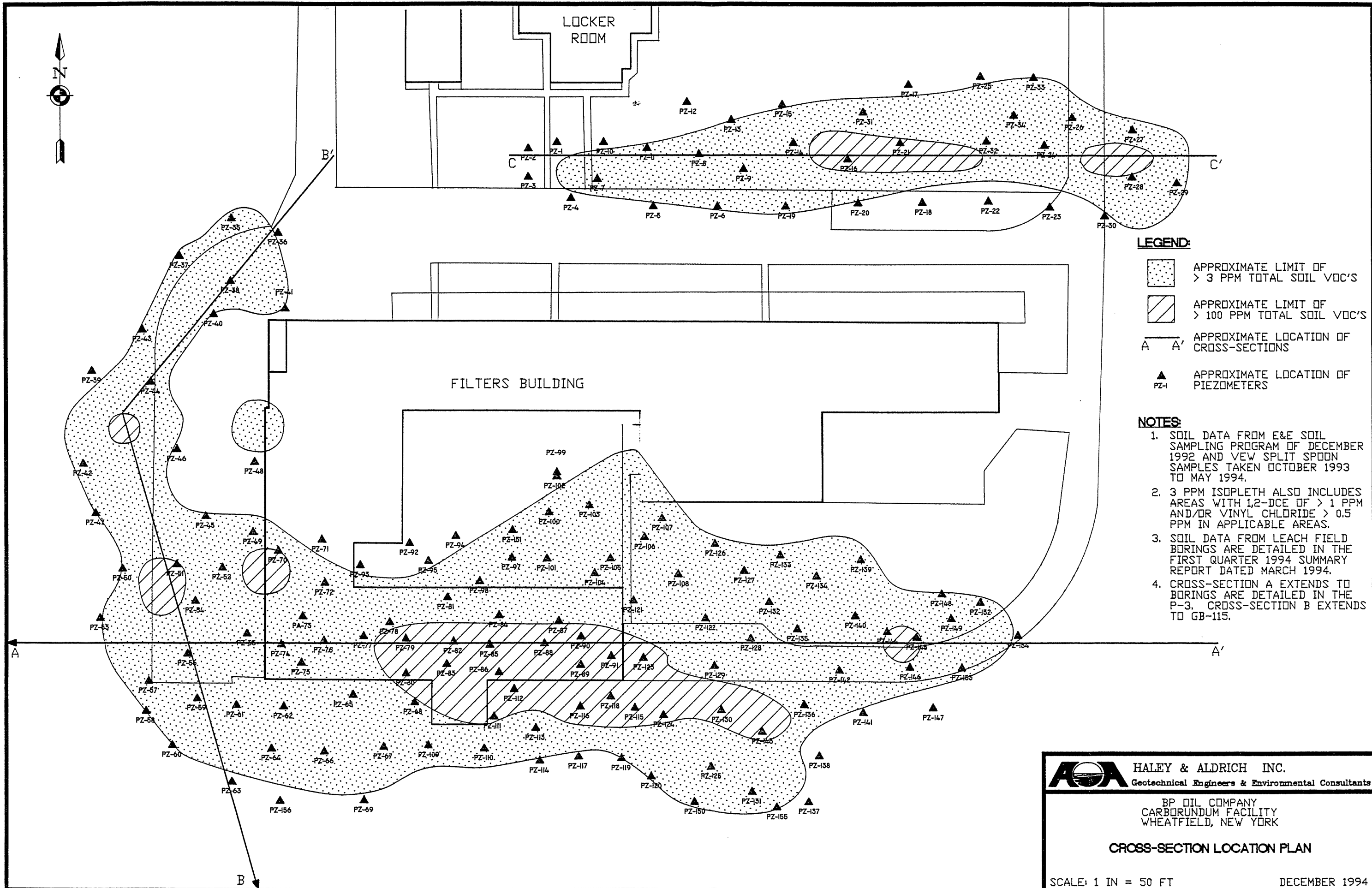
BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

**CROSS-SECTION C POTENTIOMETRIC SURFACE
 NOVEMBER 1996**

SCALE: VERT. 1" = 5'; HORIZ. 1" = 50' DECEMBER 1996

FILE NO. 79002-064

FIGURE 29



- LEGEND:**
- APPROXIMATE LIMIT OF > 3 PPM TOTAL SOIL VOC'S
 - APPROXIMATE LIMIT OF > 100 PPM TOTAL SOIL VOC'S
 - APPROXIMATE LOCATION OF CROSS-SECTIONS
 - APPROXIMATE LOCATION OF PIEZOMETERS

- NOTES:**
1. SOIL DATA FROM E&E SOIL SAMPLING PROGRAM OF DECEMBER 1992 AND VEI SPLIT SPOON SAMPLES TAKEN OCTOBER 1993 TO MAY 1994.
 2. 3 PPM ISOPLETH ALSO INCLUDES AREAS WITH 1,2-DCE OF > 1 PPM AND/OR VINYL CHLORIDE > 0.5 PPM IN APPLICABLE AREAS.
 3. SOIL DATA FROM LEACH FIELD BORINGS ARE DETAILED IN THE FIRST QUARTER 1994 SUMMARY REPORT DATED MARCH 1994.
 4. CROSS-SECTION A EXTENDS TO BORINGS ARE DETAILED IN THE P-3. CROSS-SECTION B EXTENDS TO GB-115.

HALEY & ALDRICH INC.
 Geotechnical Engineers & Environmental Consultants

BP OIL COMPANY
 CARBORUNDUM FACILITY
 WHEATFIELD, NEW YORK

CROSS-SECTION LOCATION PLAN

SCALE: 1 IN = 50 FT DECEMBER 1994

FIGURE 30

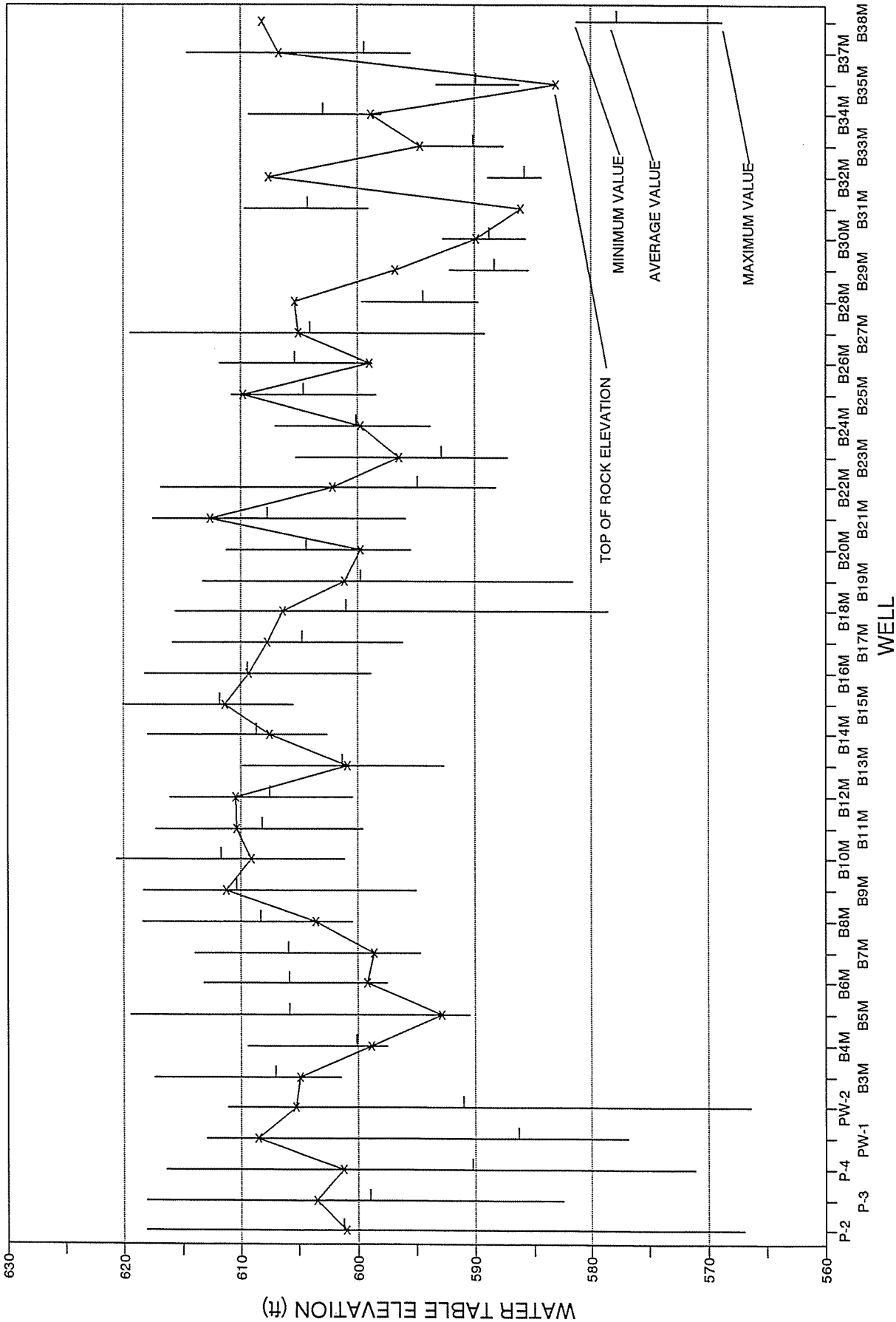
FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

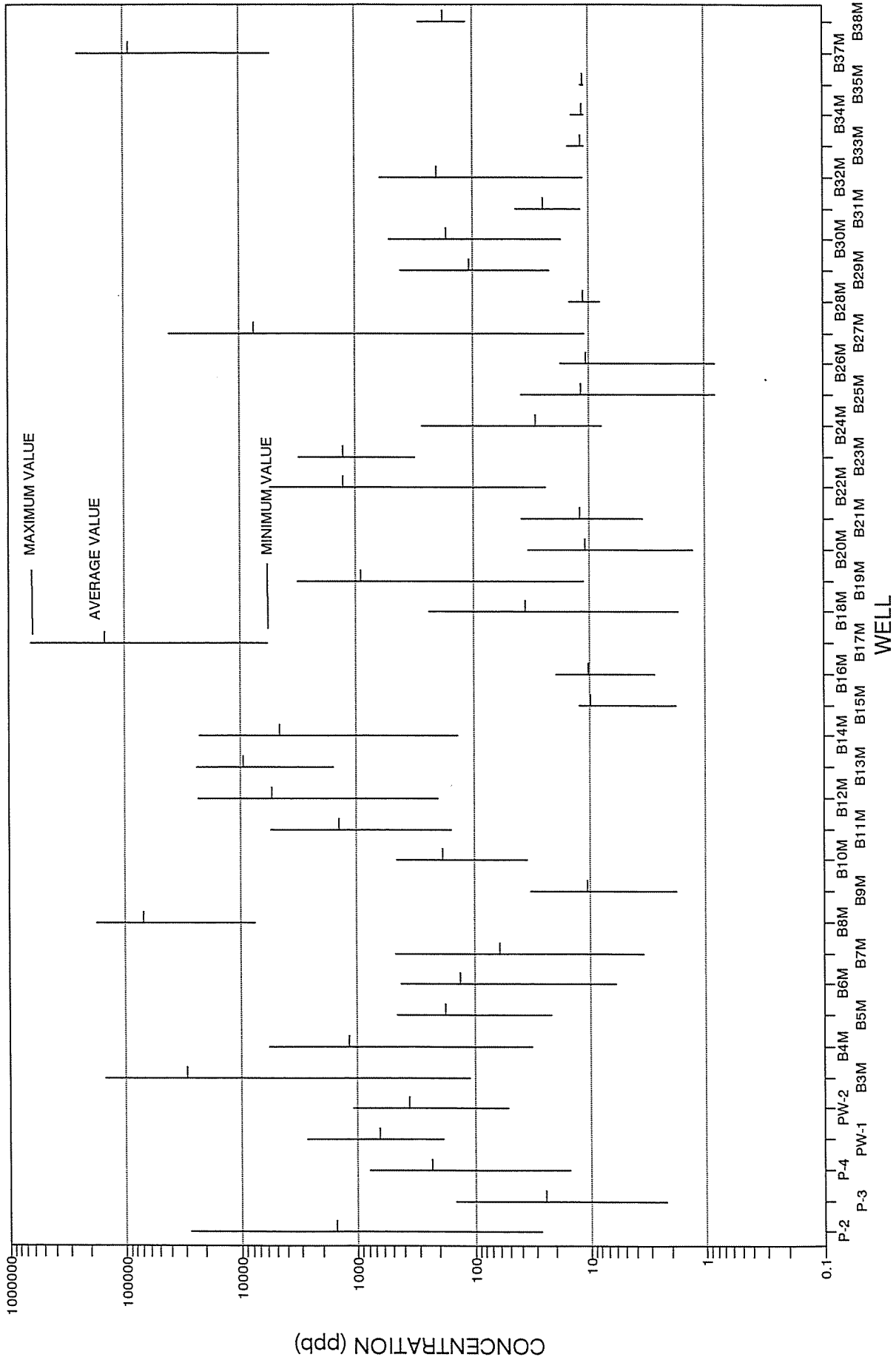
APPENDIX A

Water Levels and Water Quality Database

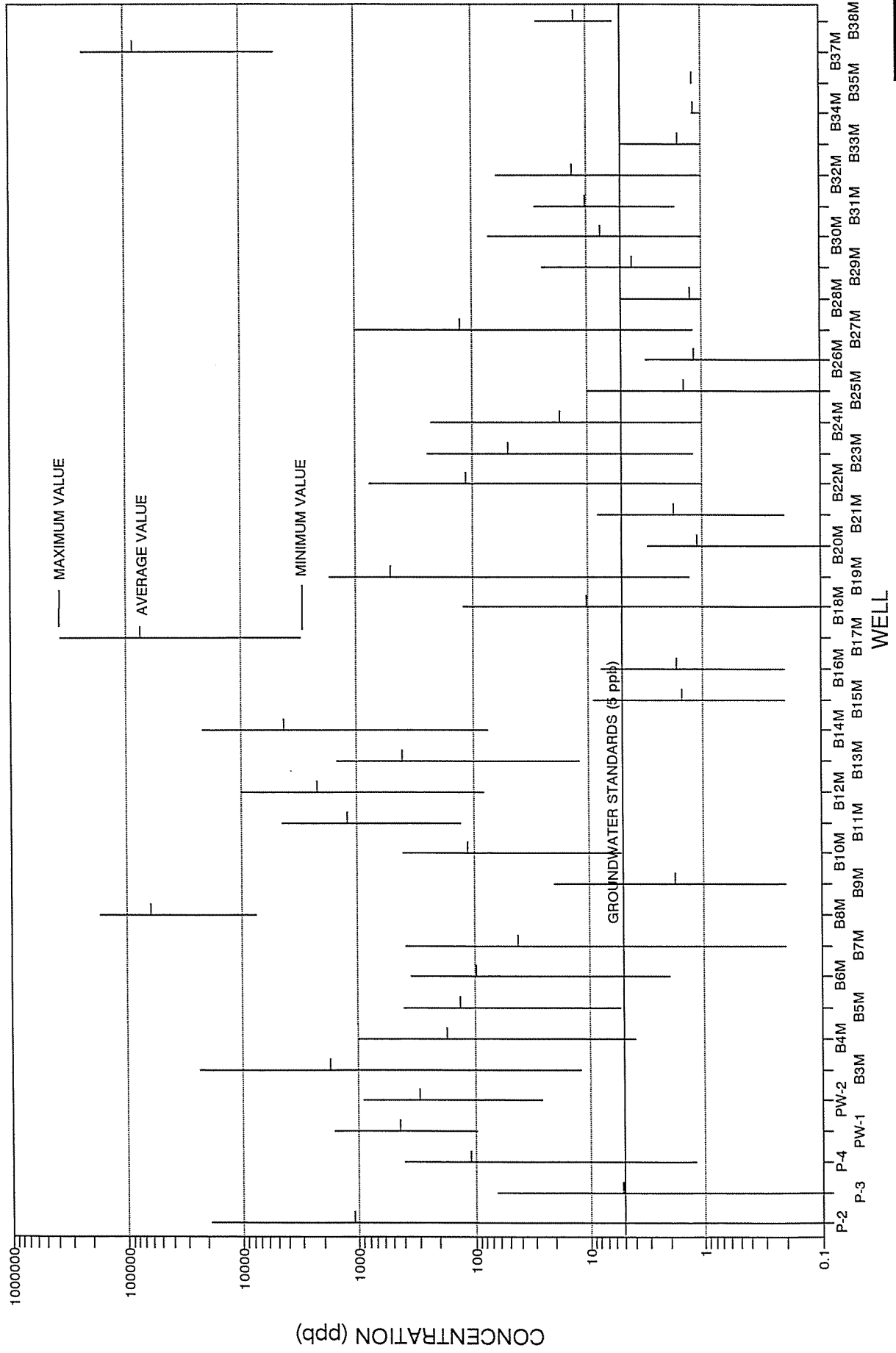
WATER LEVEL STATISTICS



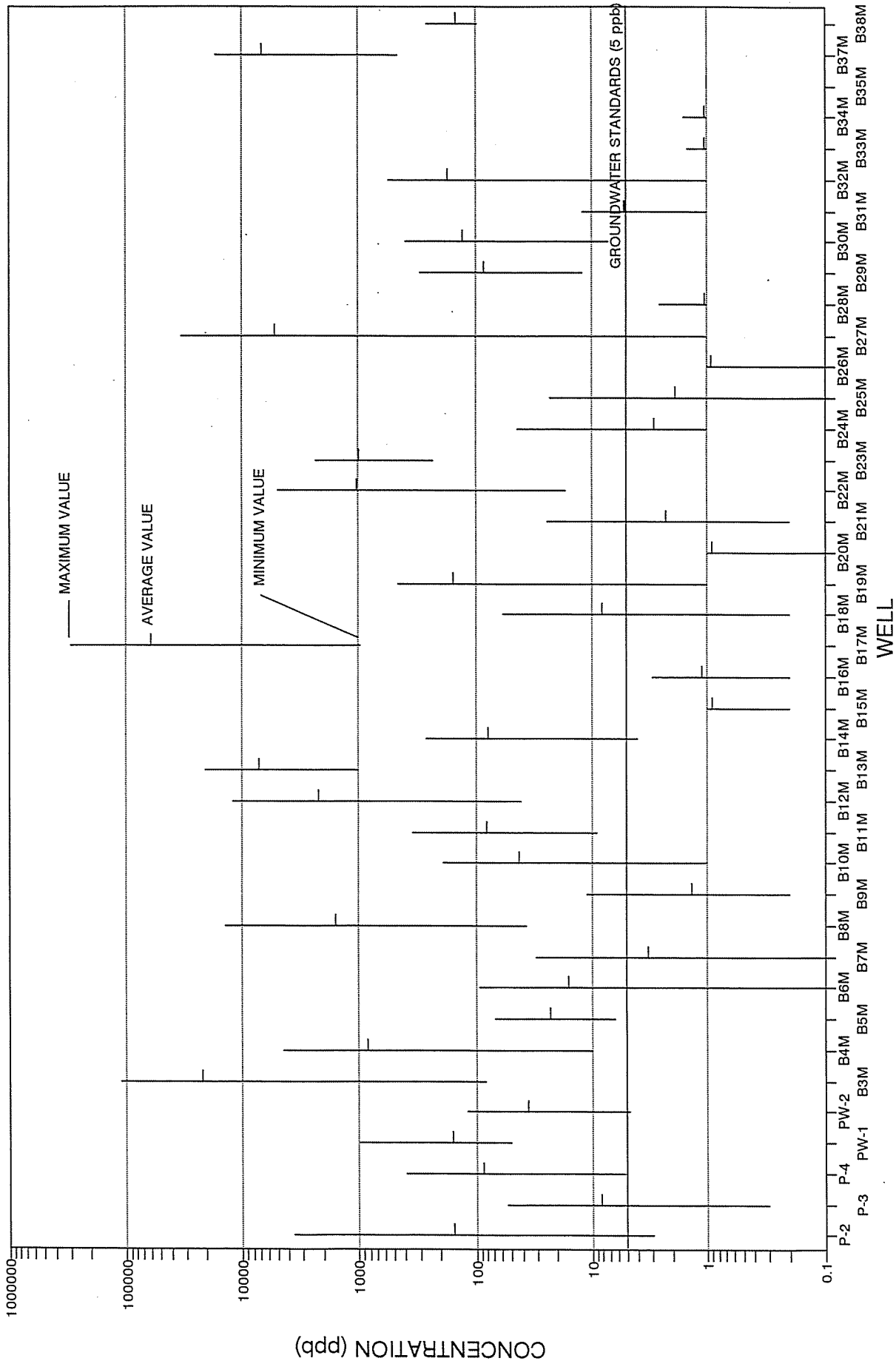
TOTAL VOC CONCENTRATION STATISTICS



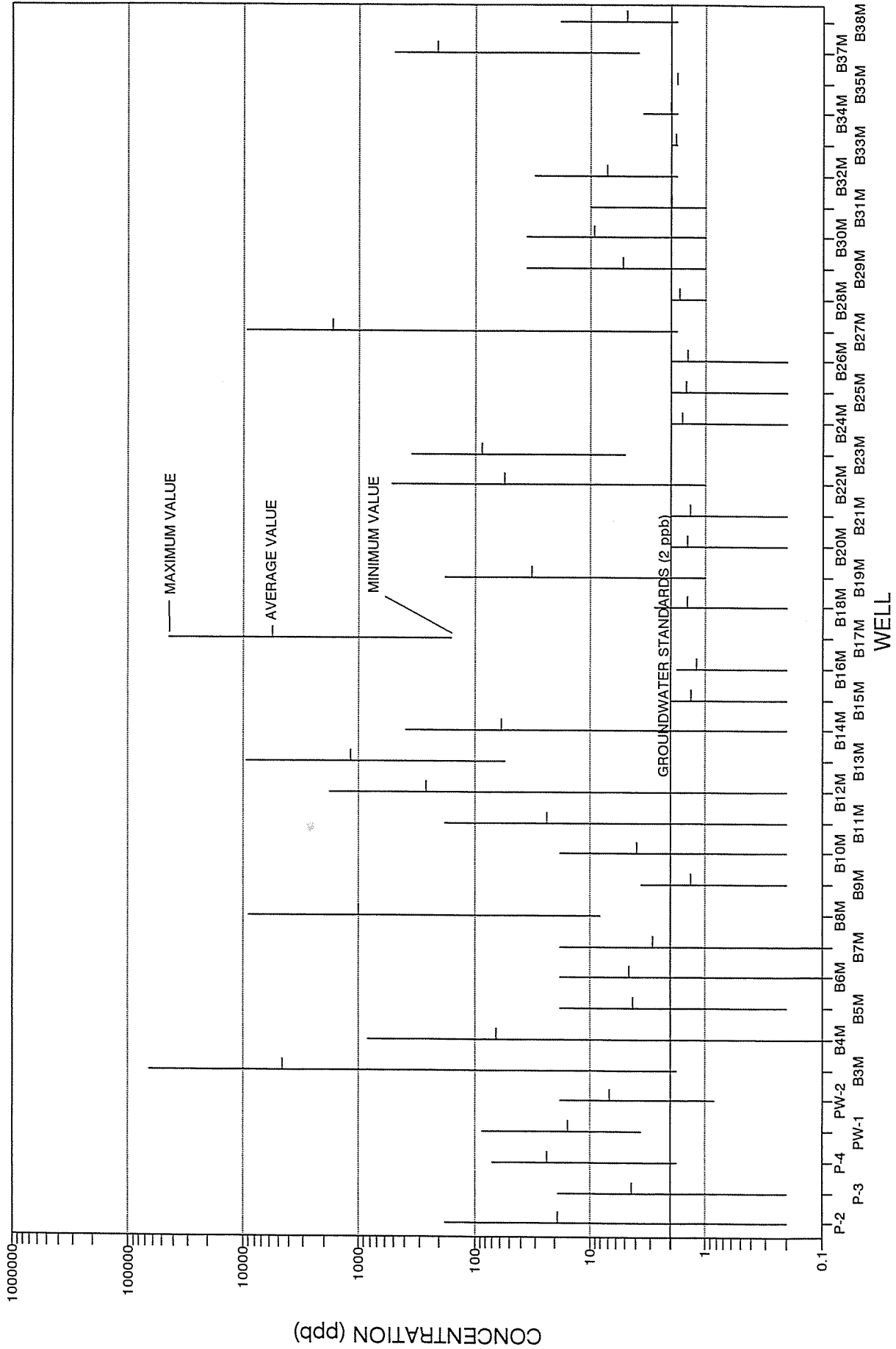
TRICHLOROETHENE STATISTICS



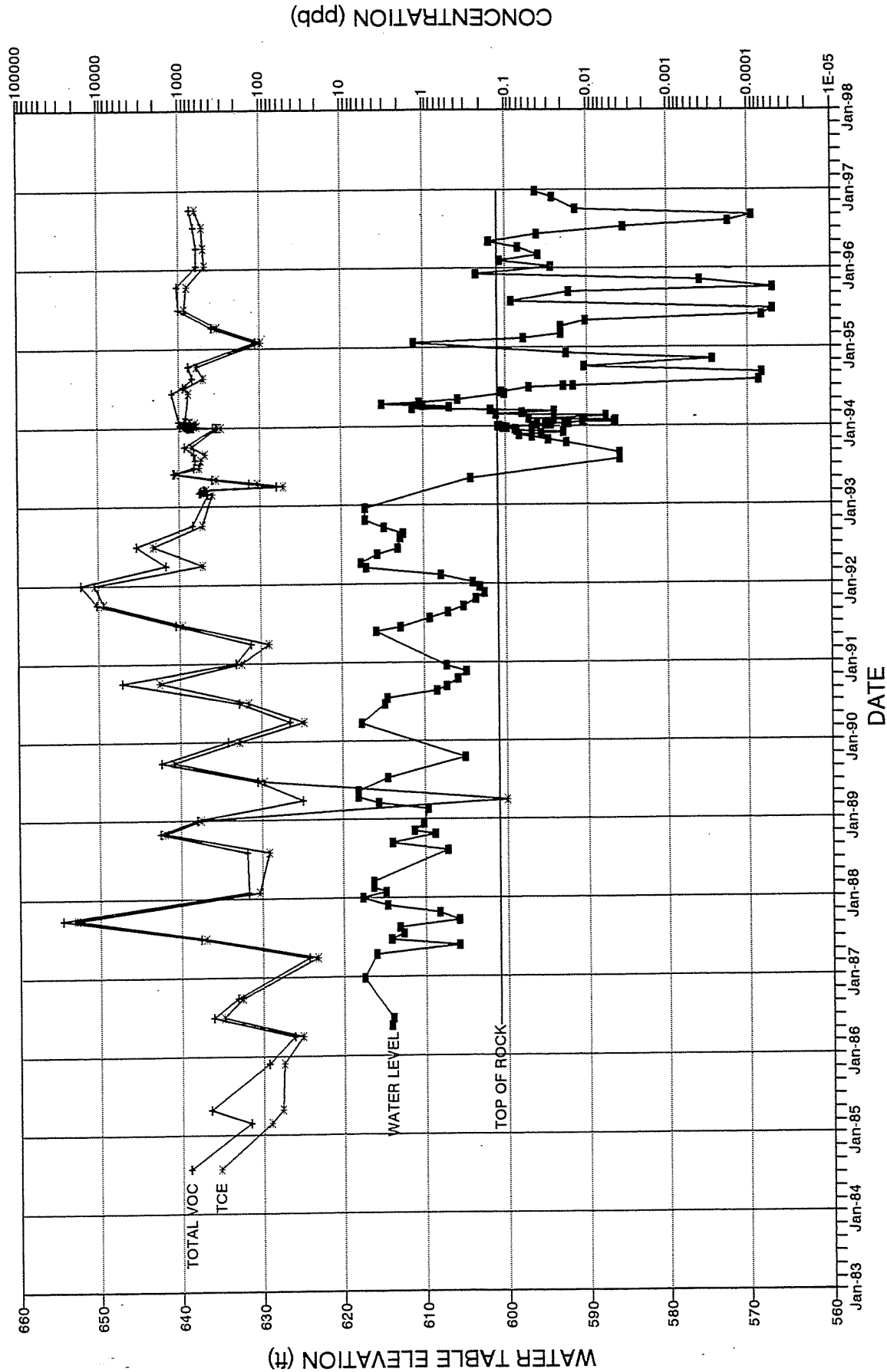
TOTAL-1,2-DICHLOROETHENE STATISTICS



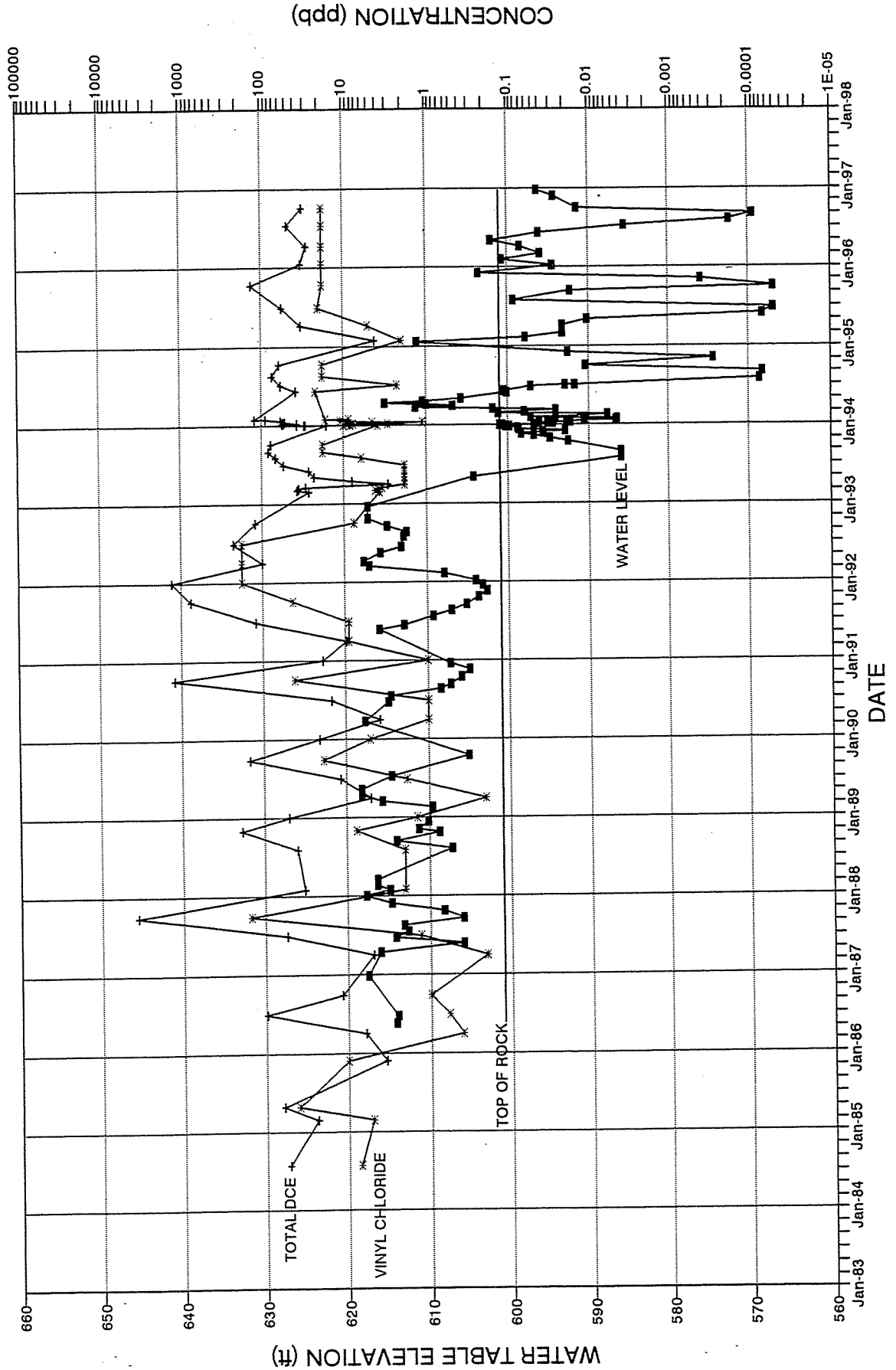
VINYL CHLORIDE STATISTICS



WATER LEVEL & CONTAMINANT CONCENTRATION WELL P-2

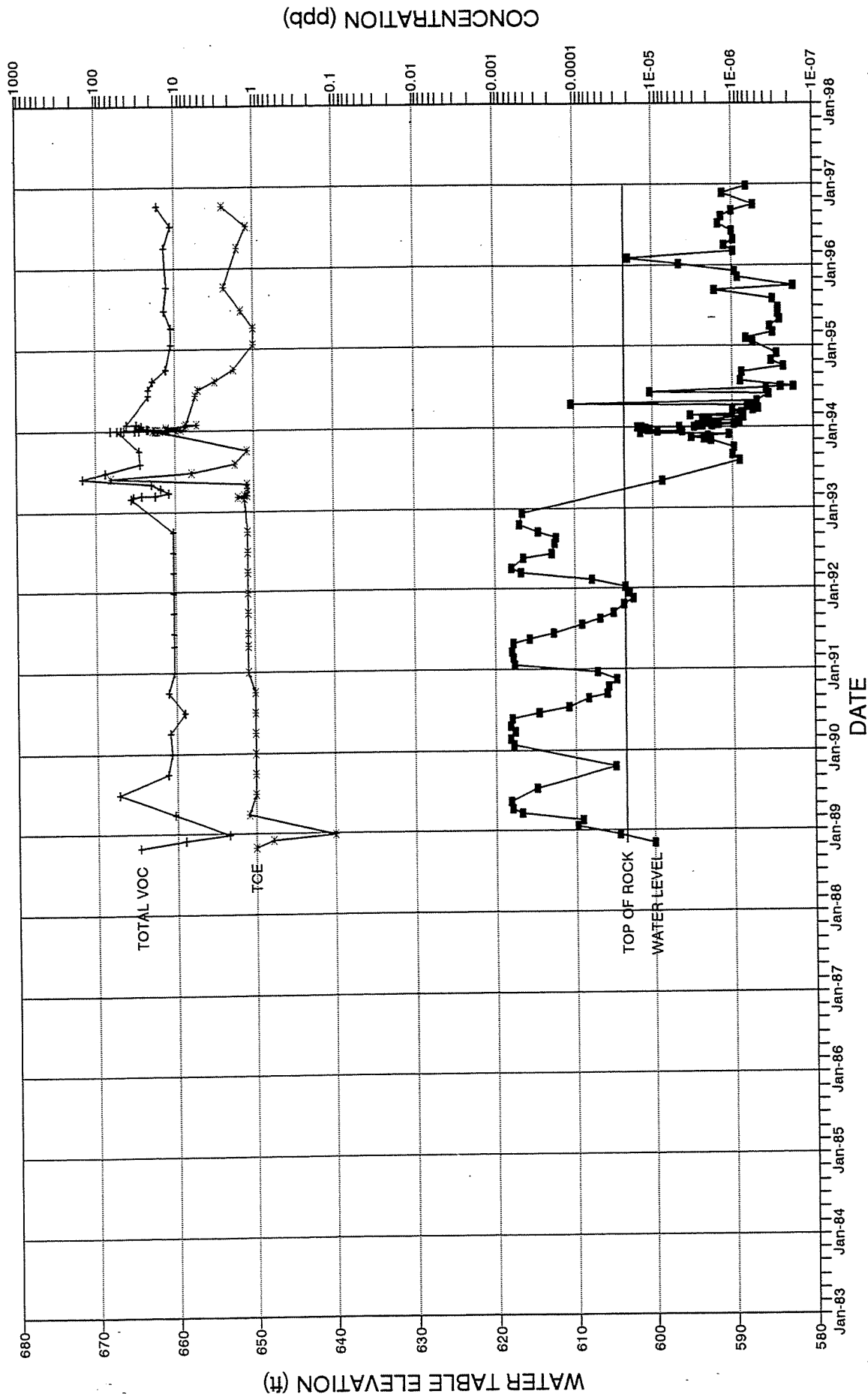


WATER LEVEL & CONTAMINANT CONCENTRATION WELL P-2

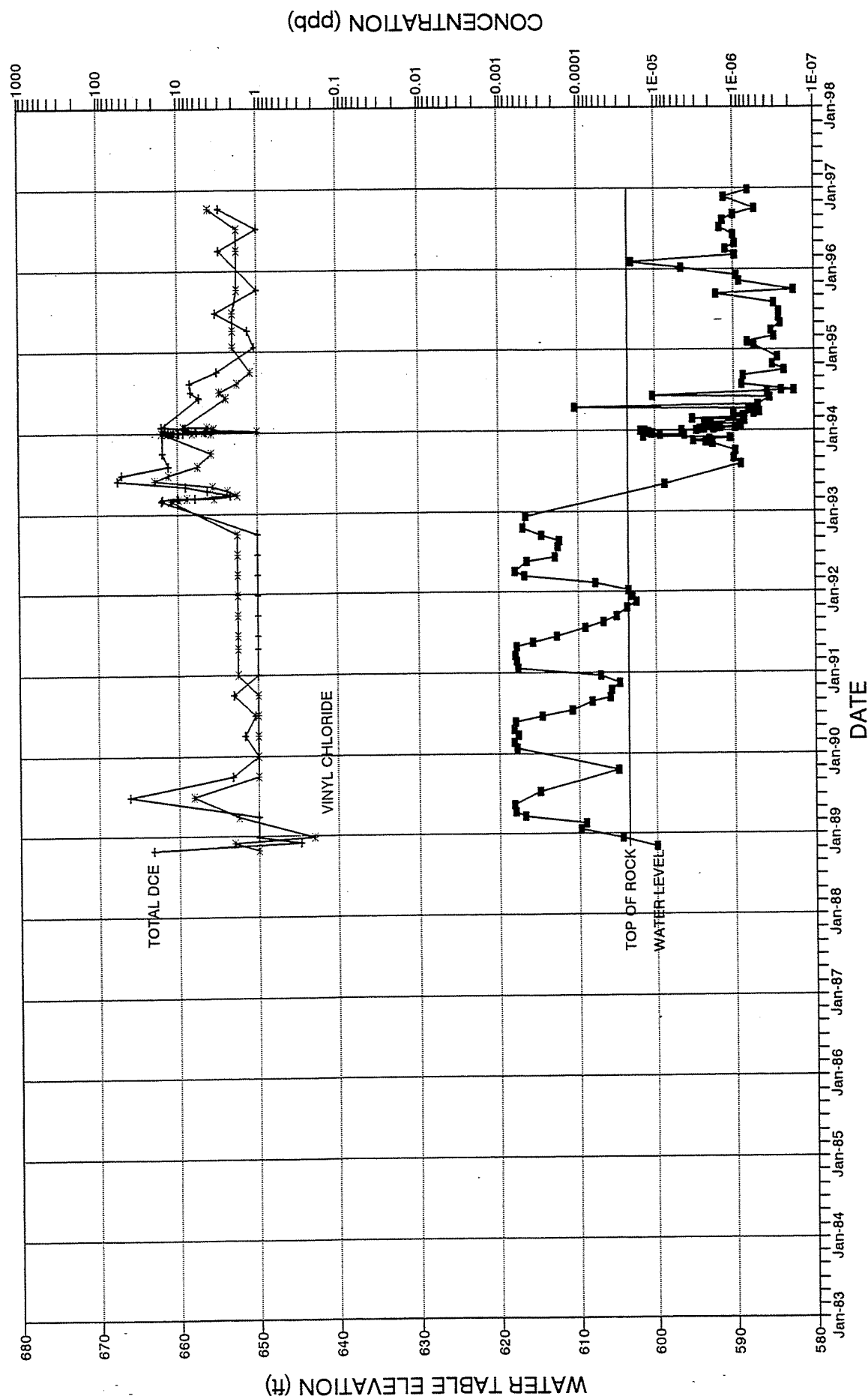


WATER LEVEL & CONTAMINANT CONCENTRATION

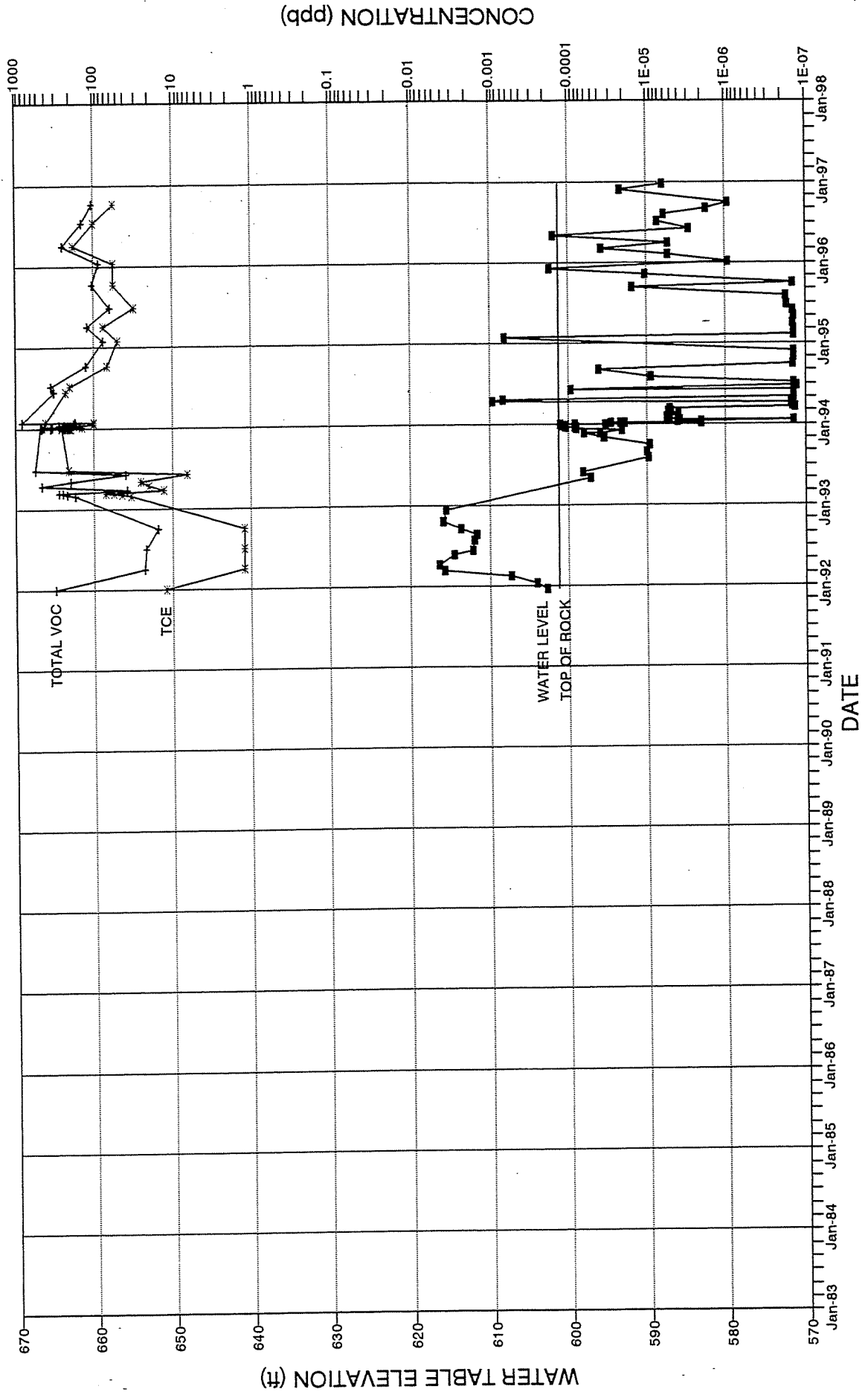
WELL P-3



WATER LEVEL & CONTAMINANT CONCENTRATION WELL P-3

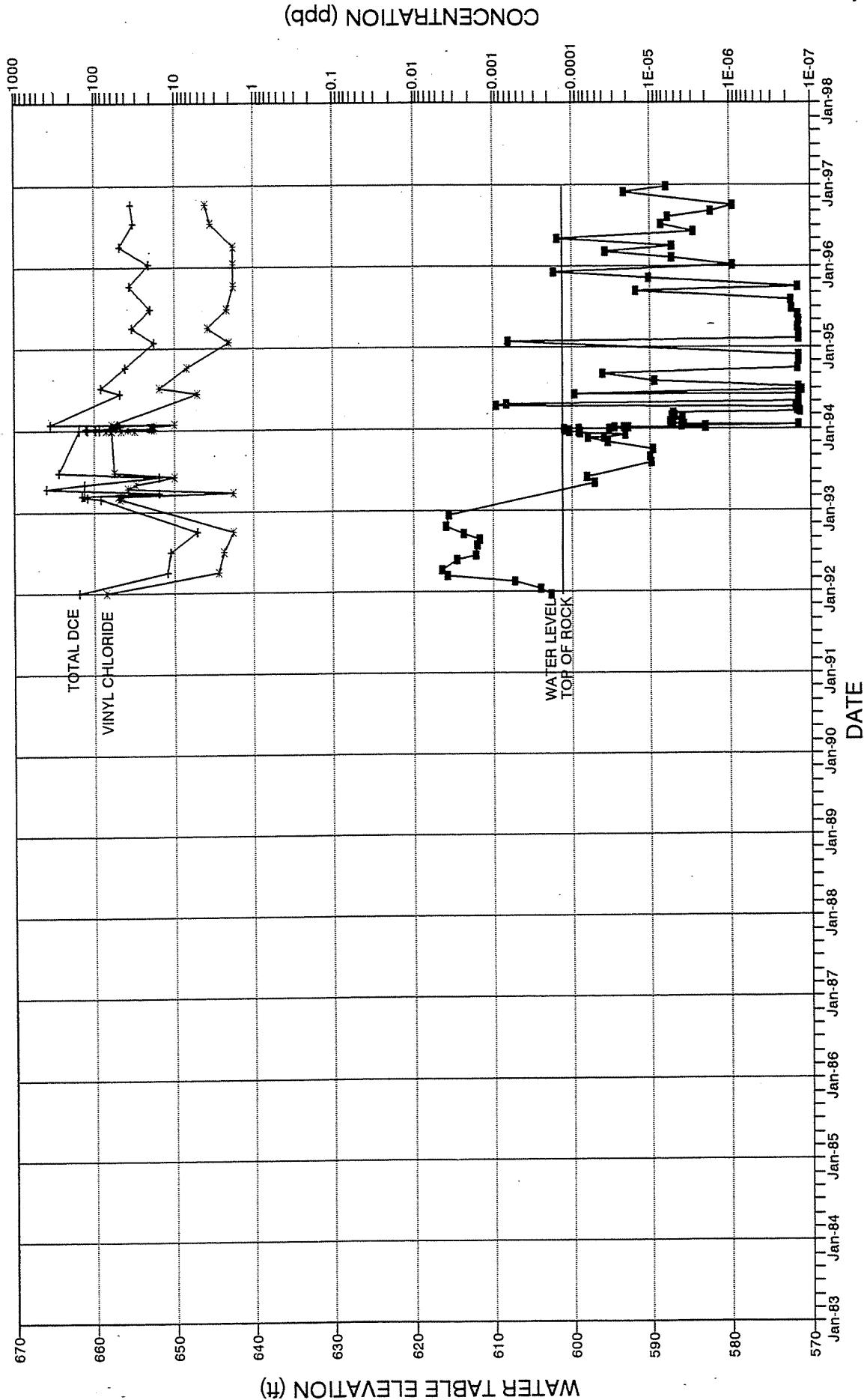


WATER LEVEL & CONTAMINANT CONCENTRATION WELL P-4

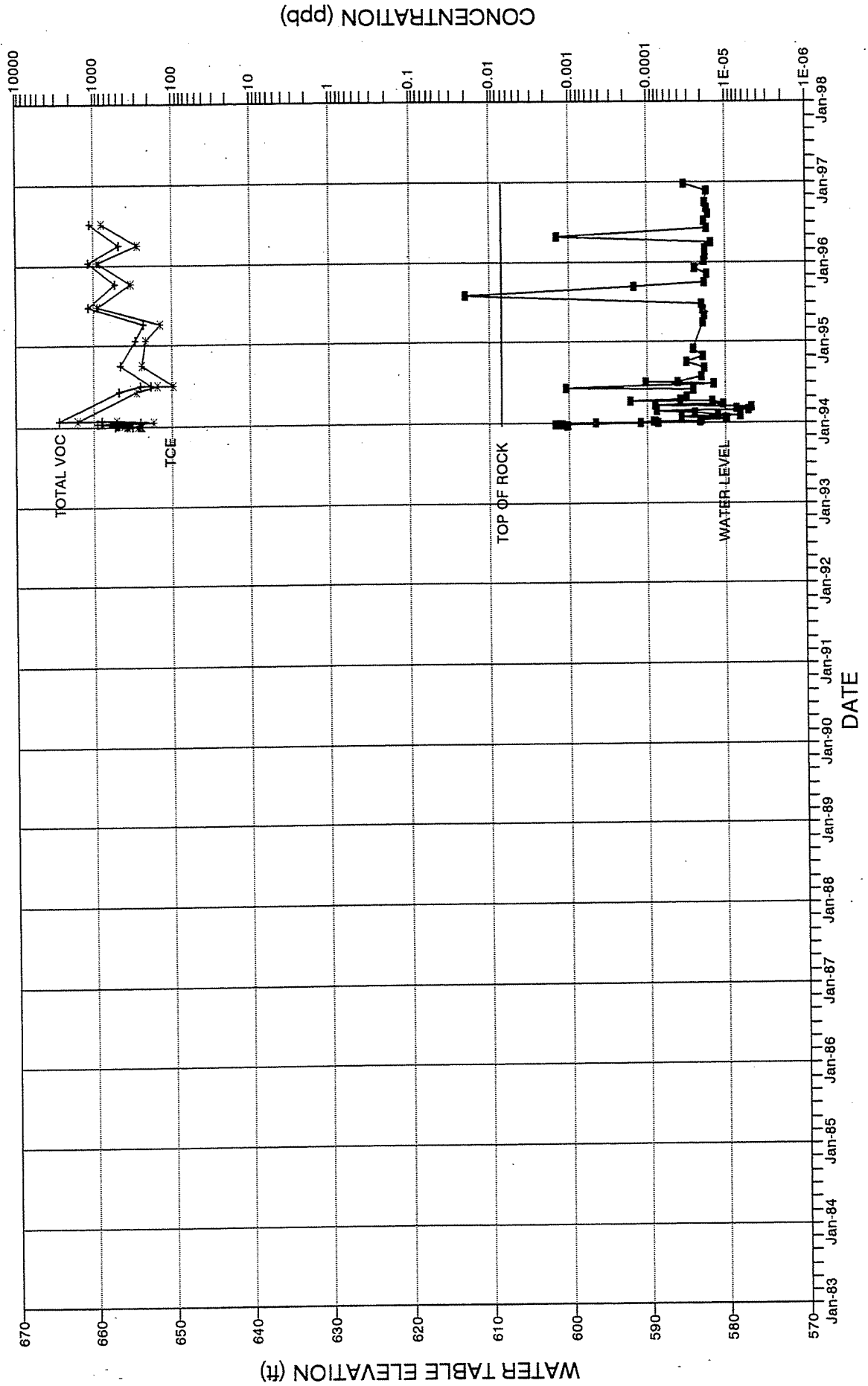


WATER LEVEL & CONTAMINANT CONCENTRATION

WELL P-4

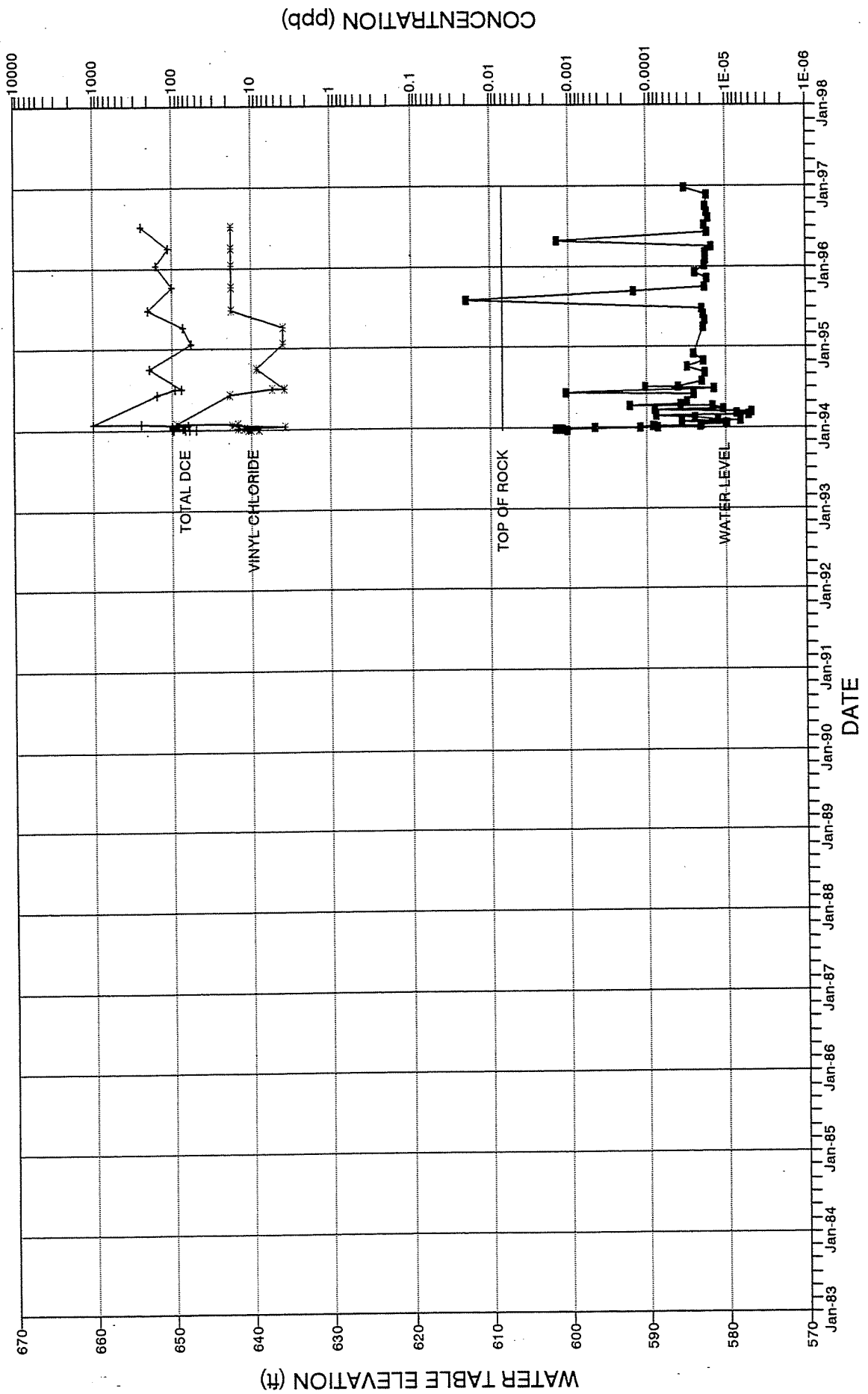


WATER LEVEL & CONTAMINANT CONCENTRATION WELL PW-1



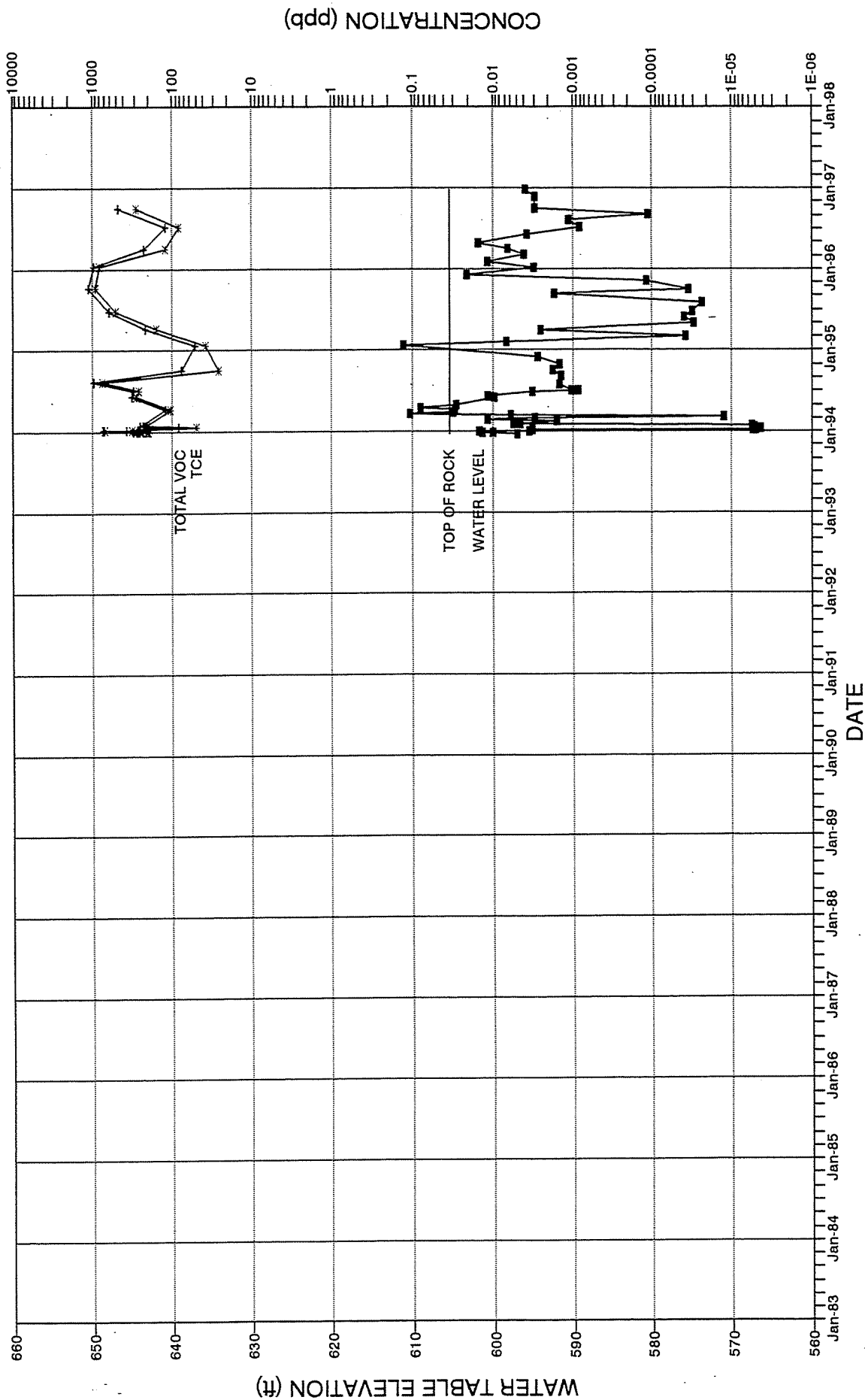
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL PW-1

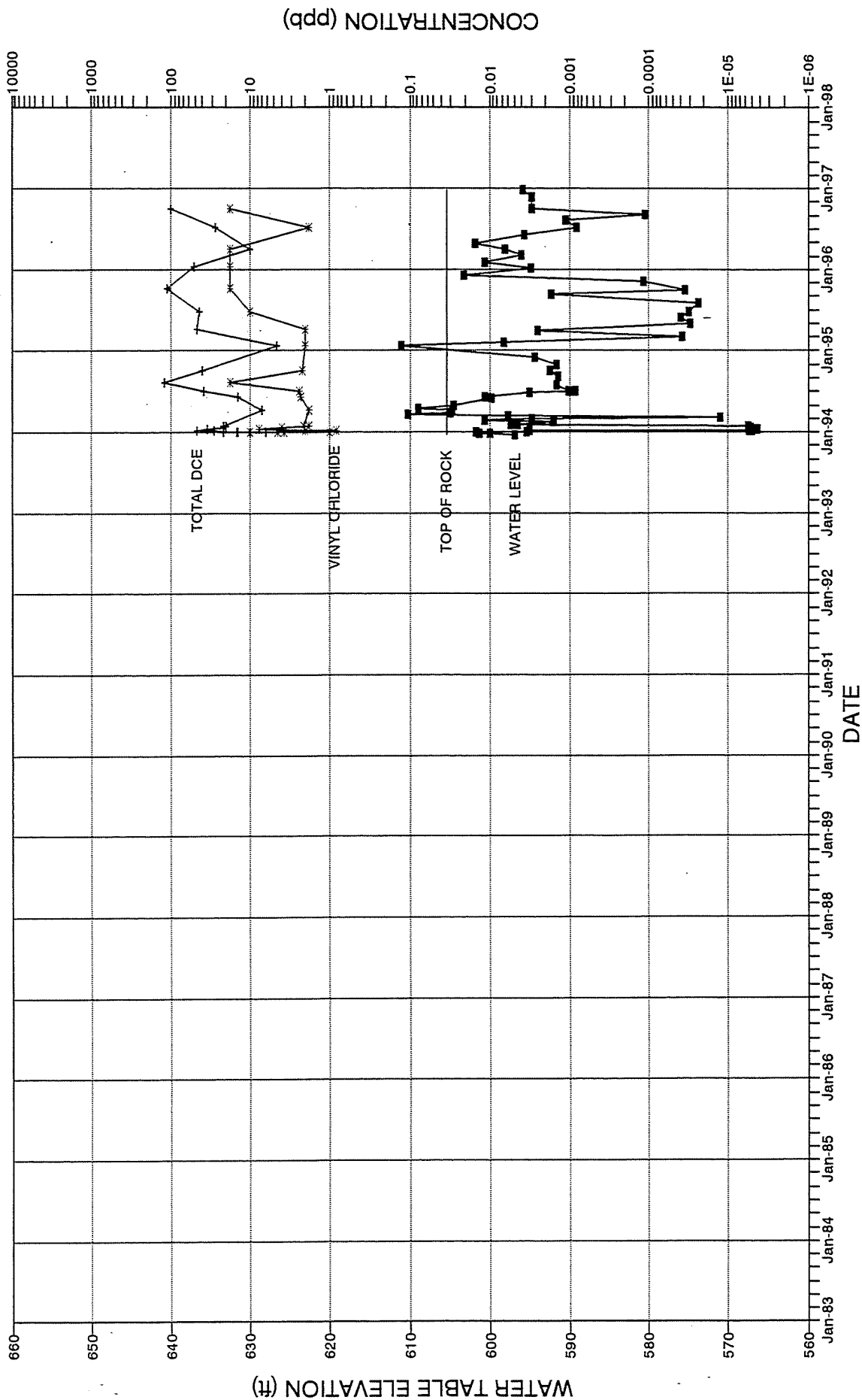


WATER LEVEL & CONTAMINANT CONCENTRATION

WELL PW-2

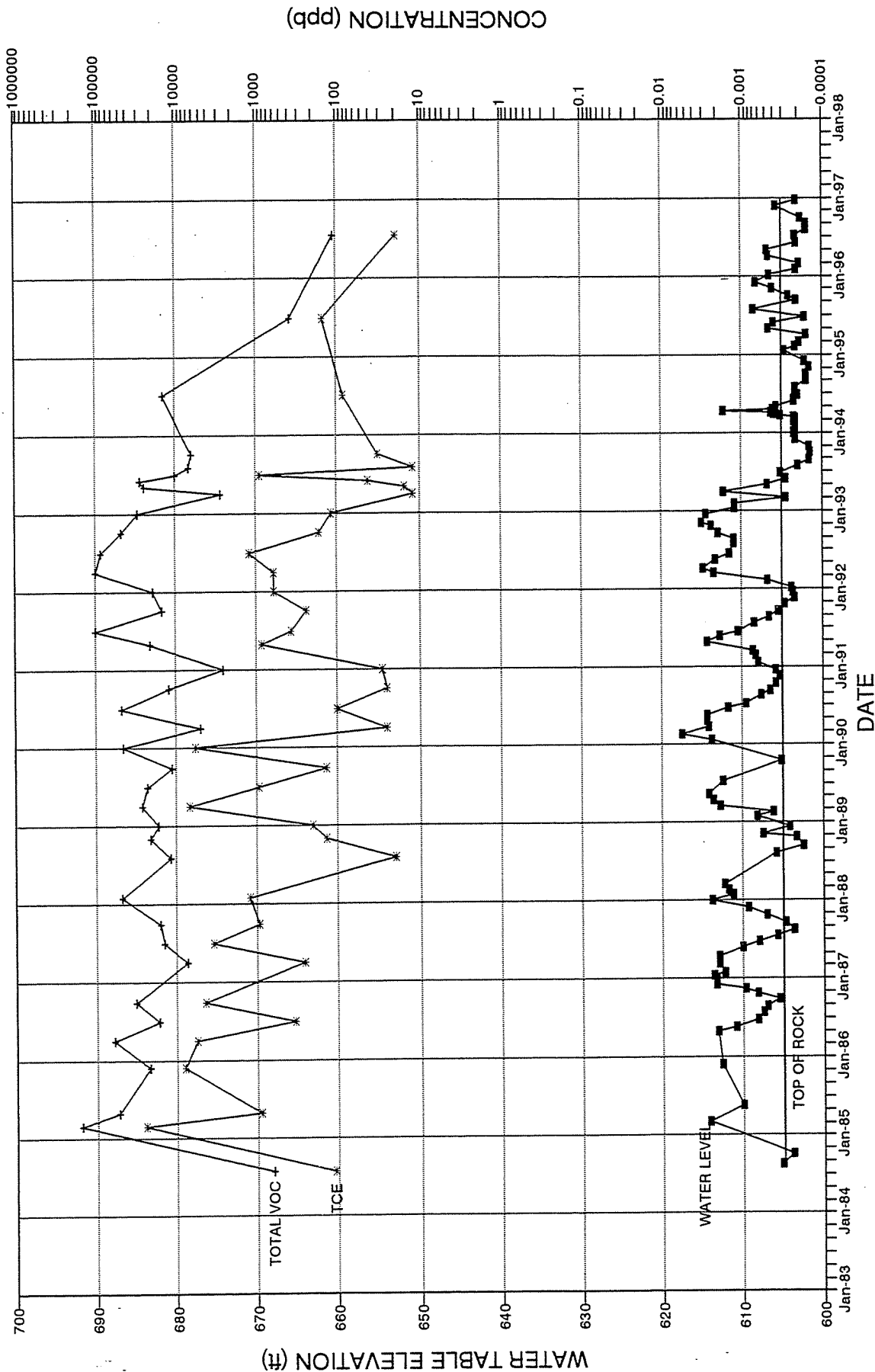


WATER LEVEL & CONTAMINANT CONCENTRATION WELL PW-2



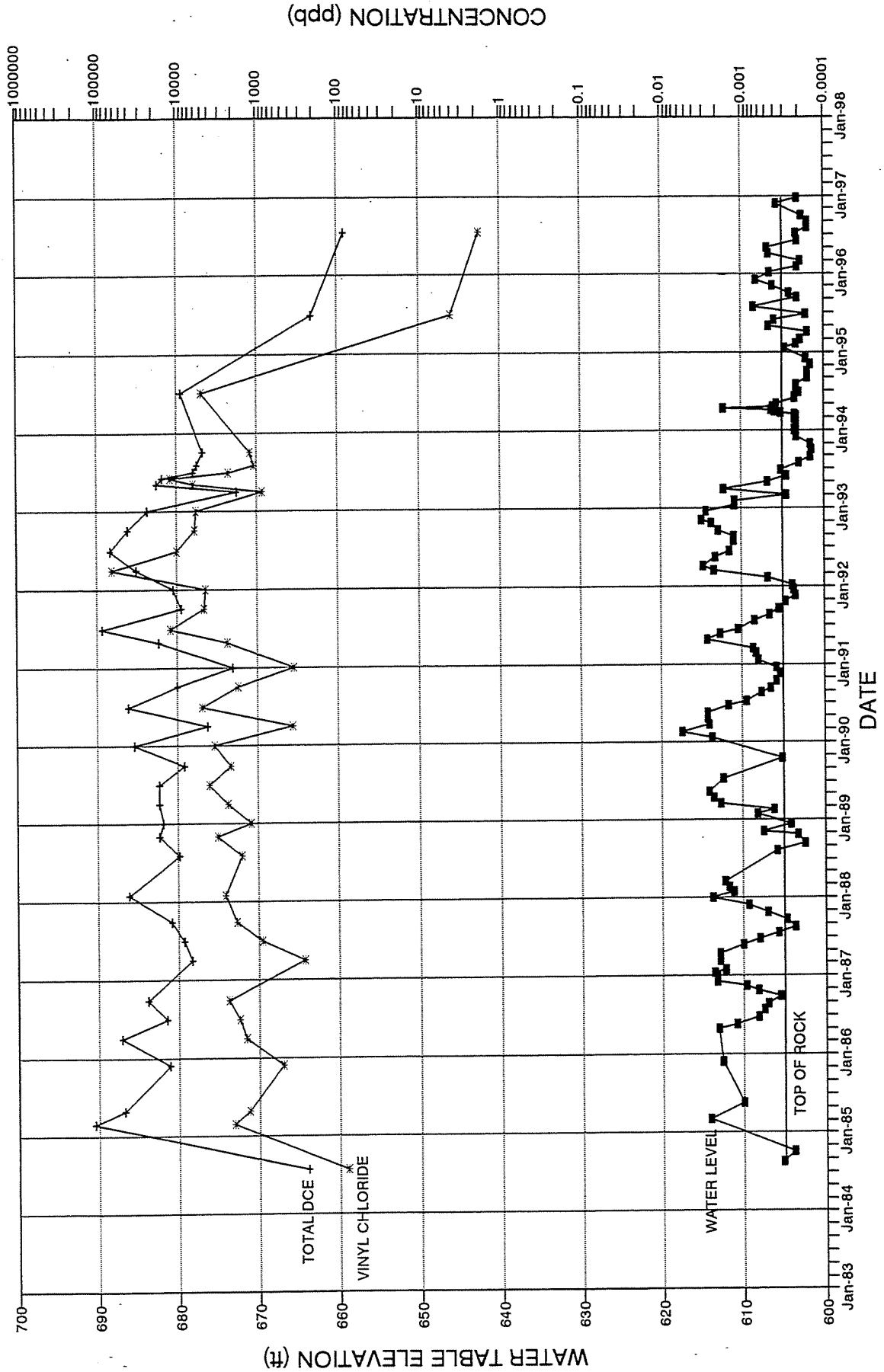
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B3M



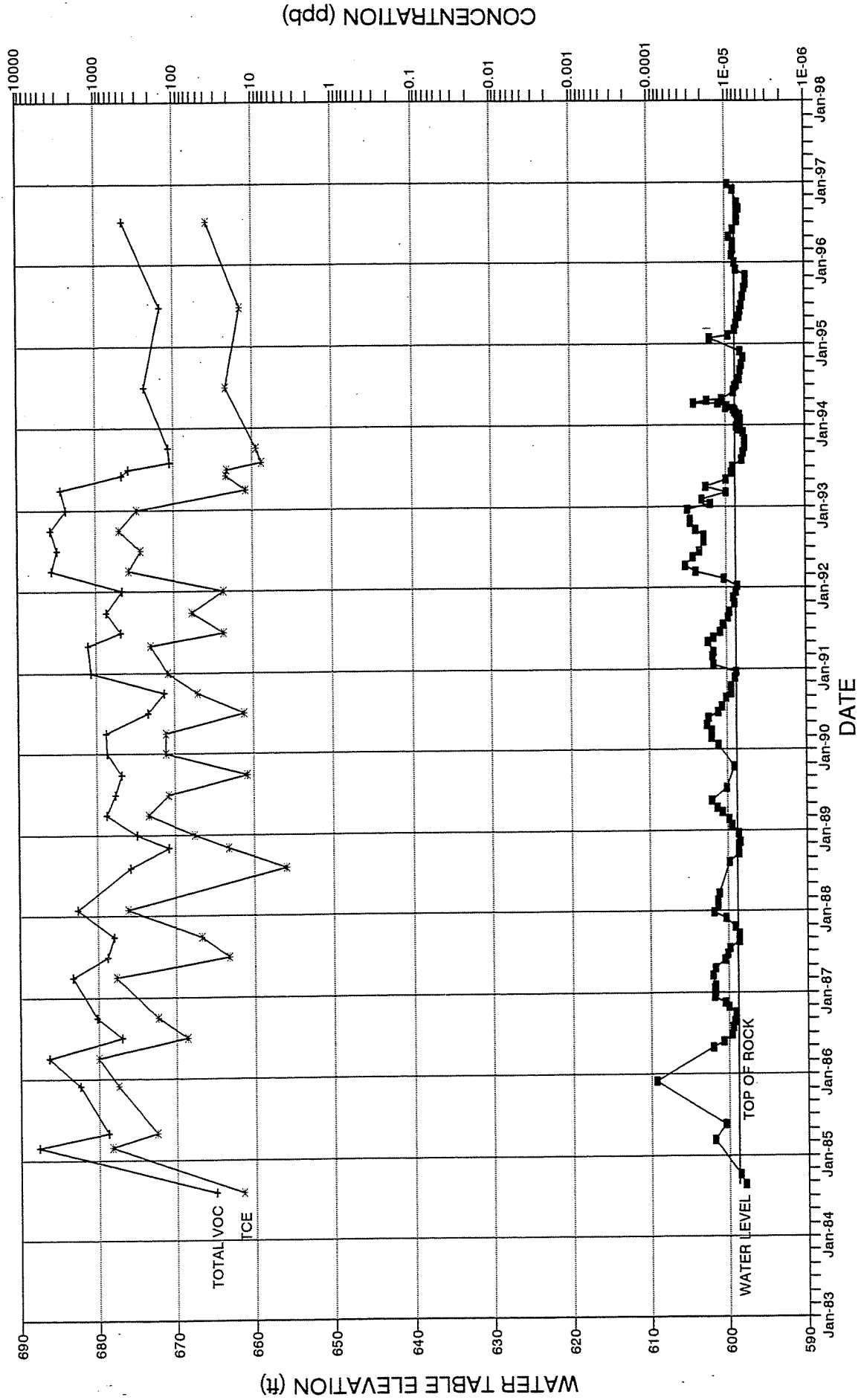
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B3M

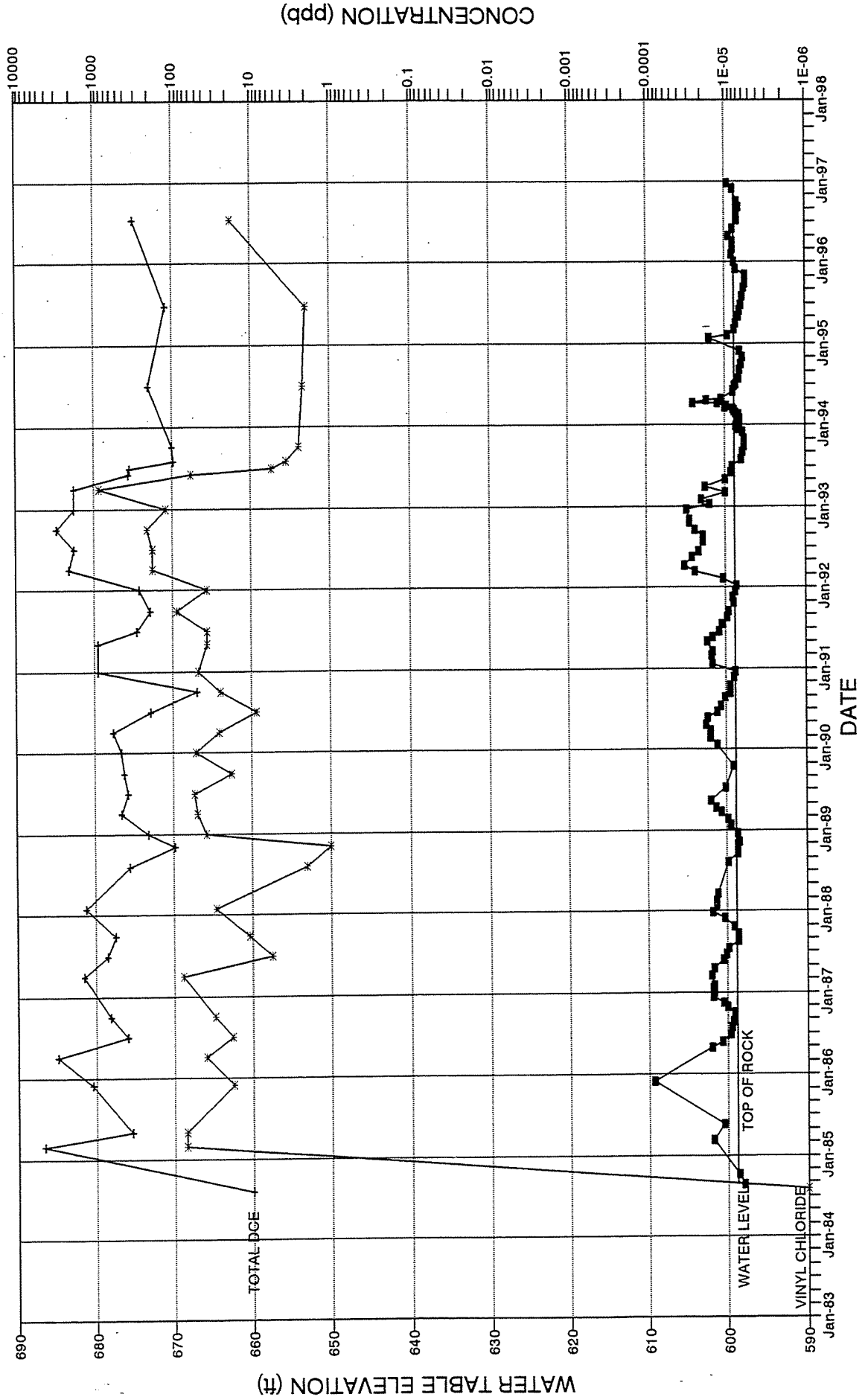


WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B4M

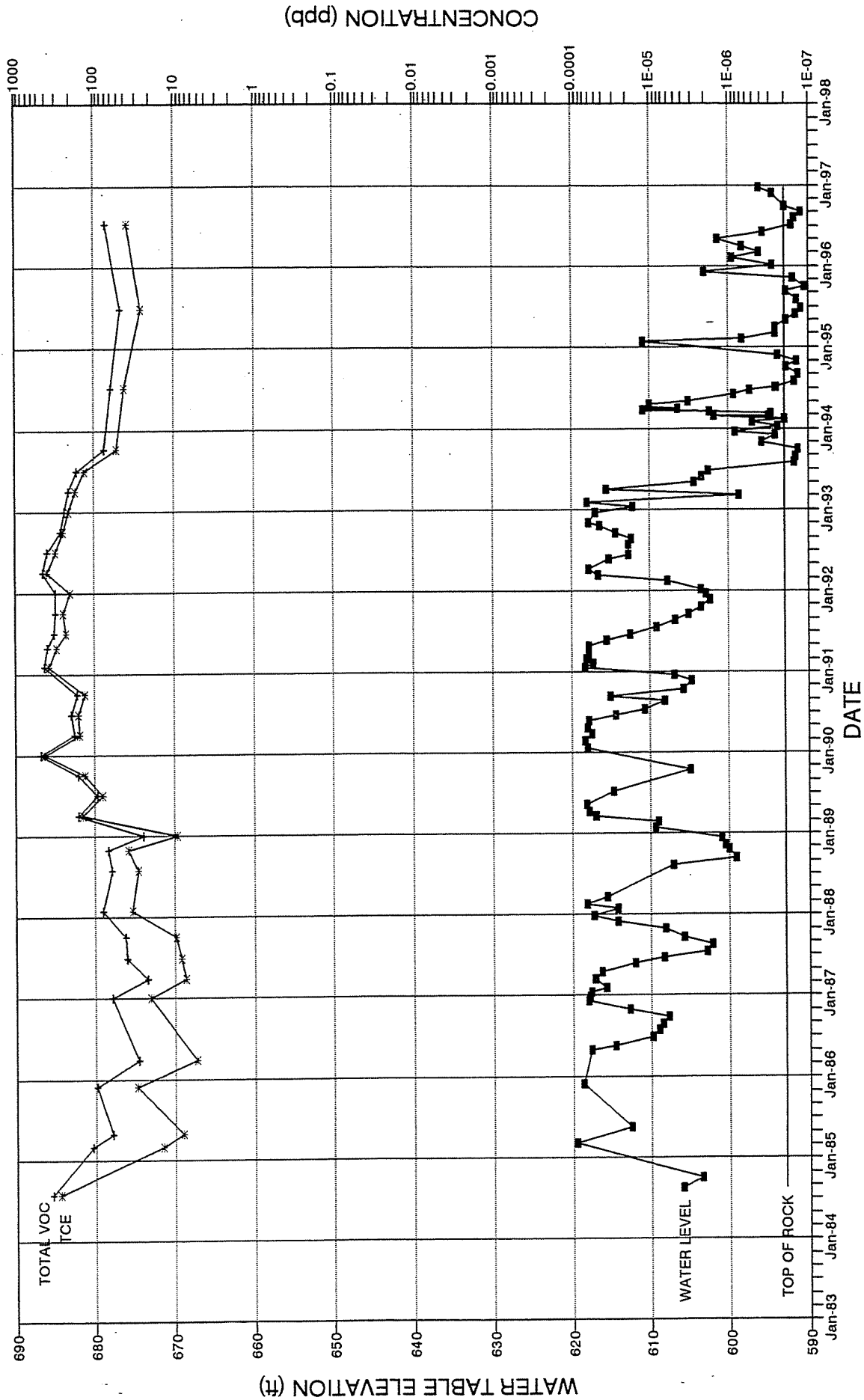


WATER LEVEL & CONTAMINANT CONCENTRATION WELL B4M



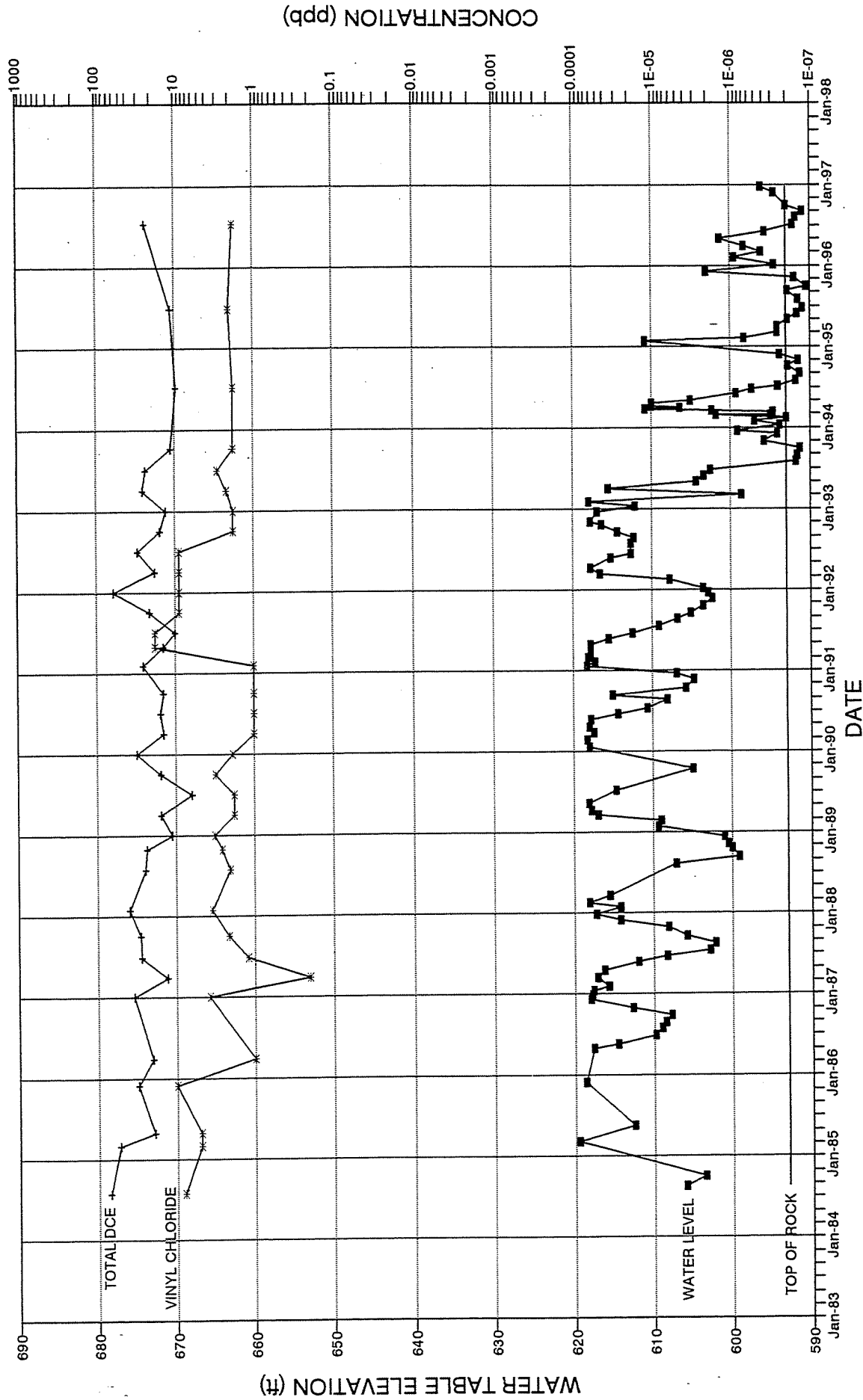
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B5M



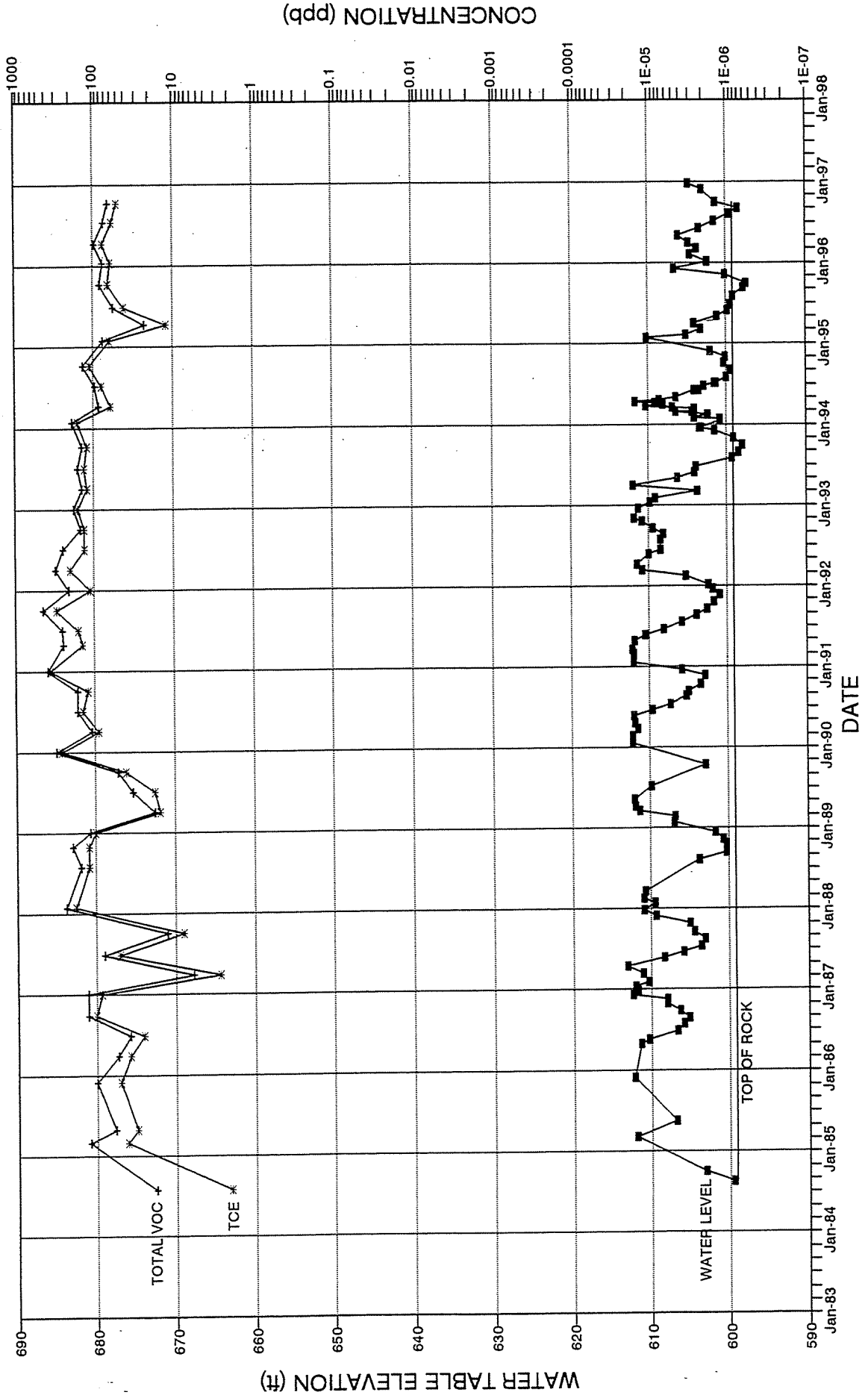
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B5M



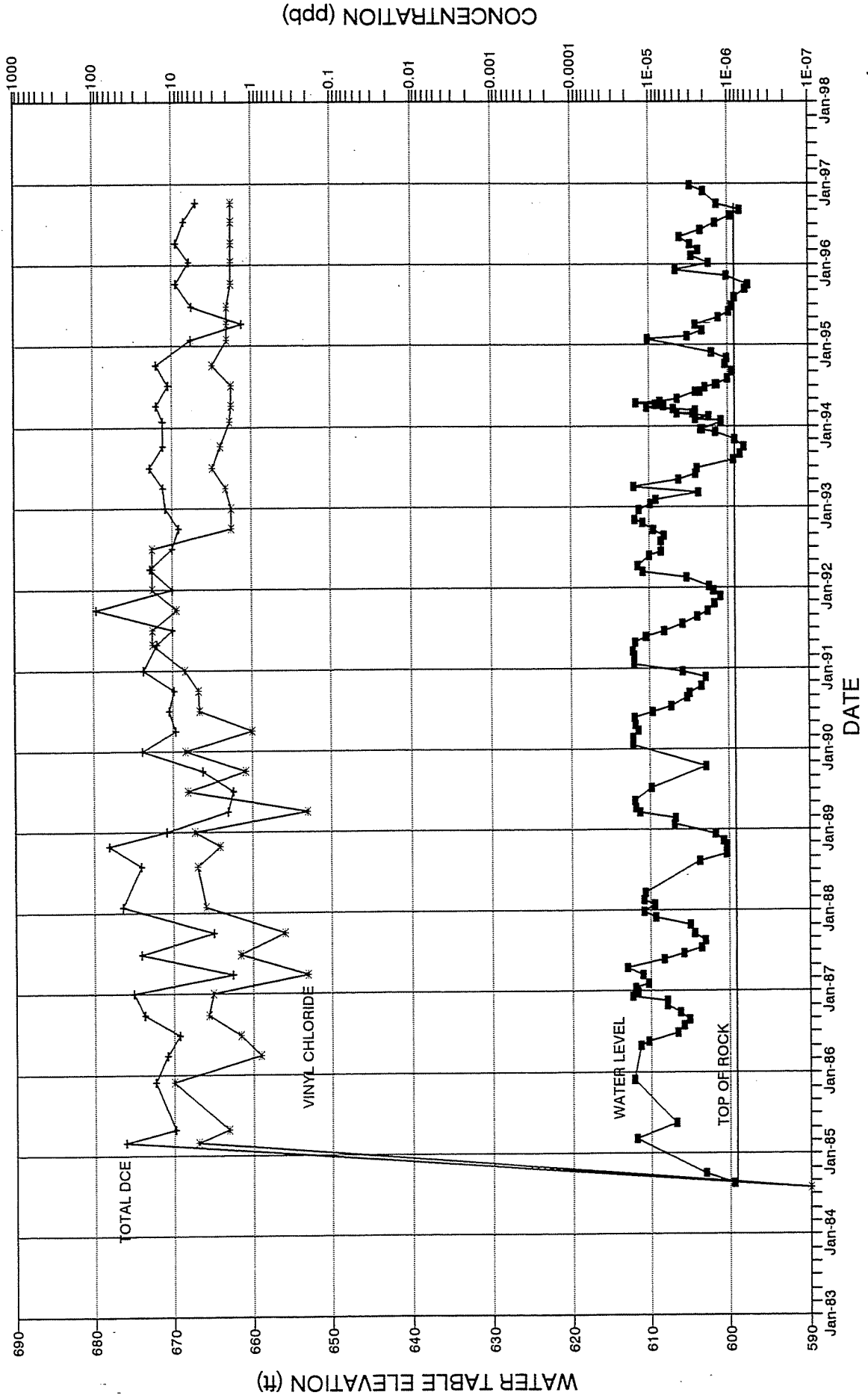
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B6M



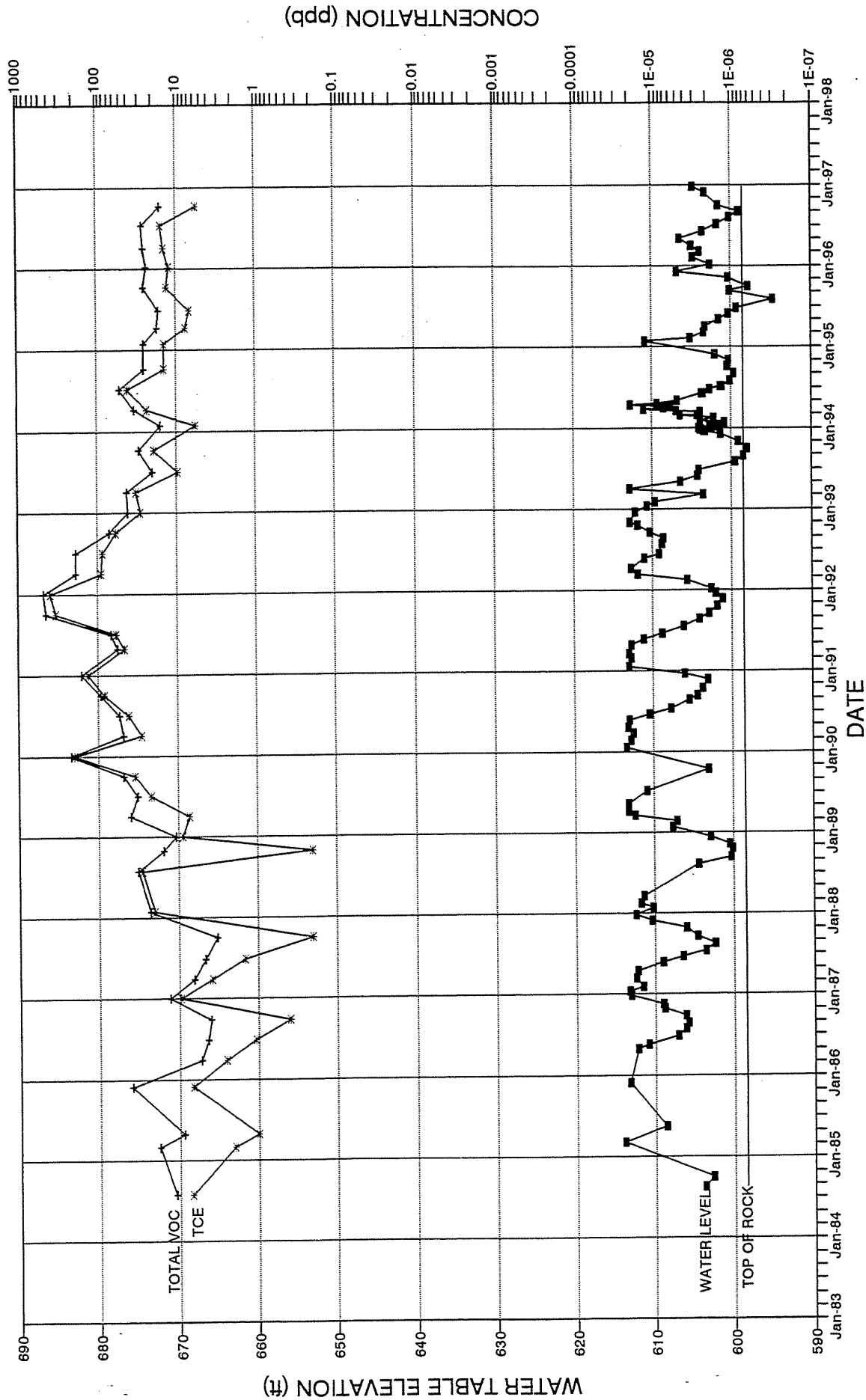
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B6M

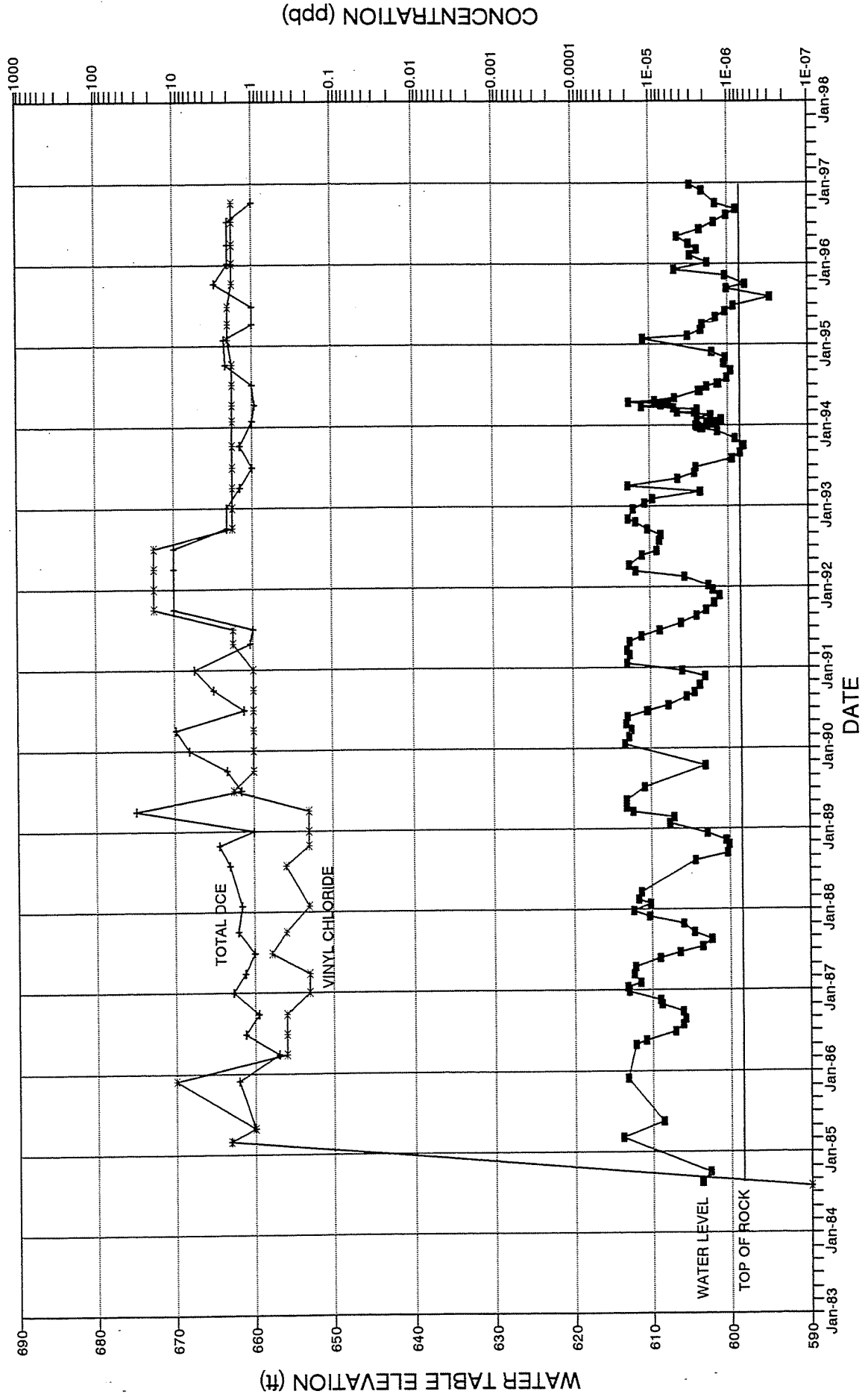


WATER LEVEL & CONTAMINANT CONCENTRATION

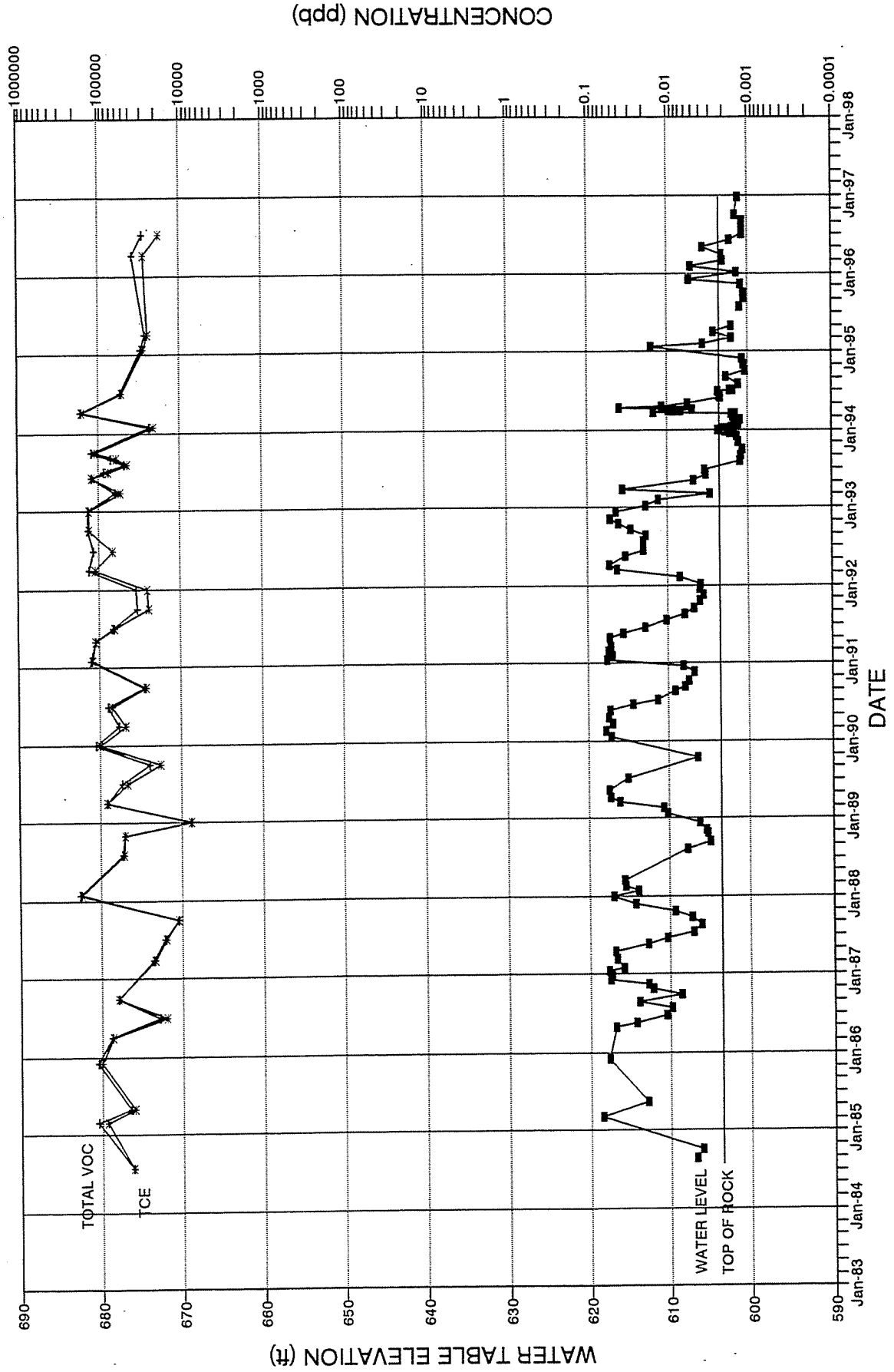
WELL B7M



WATER LEVEL & CONTAMINANT CONCENTRATION WELL B7M

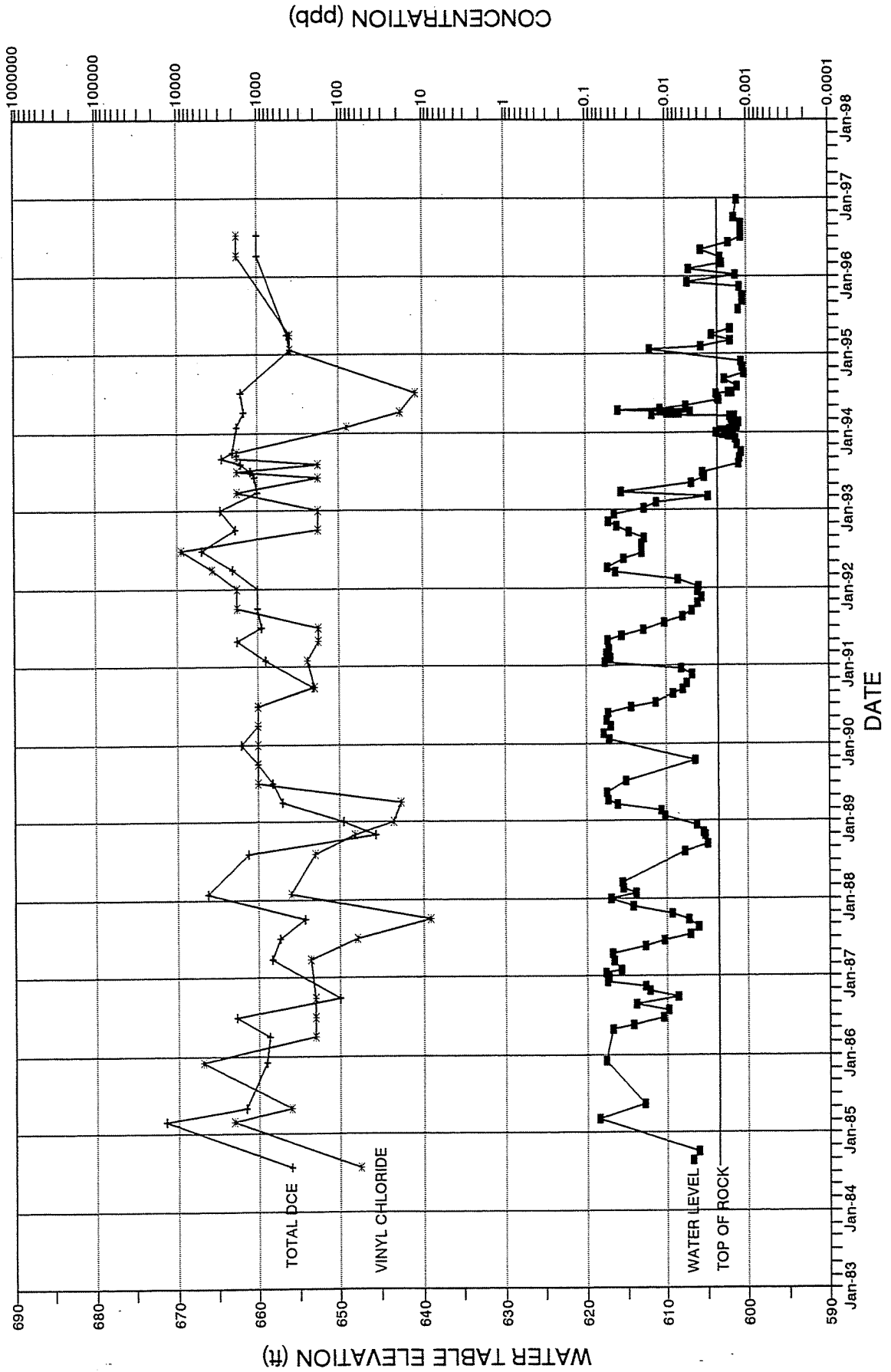


WATER LEVEL & CONTAMINANT CONCENTRATION WELL B8M



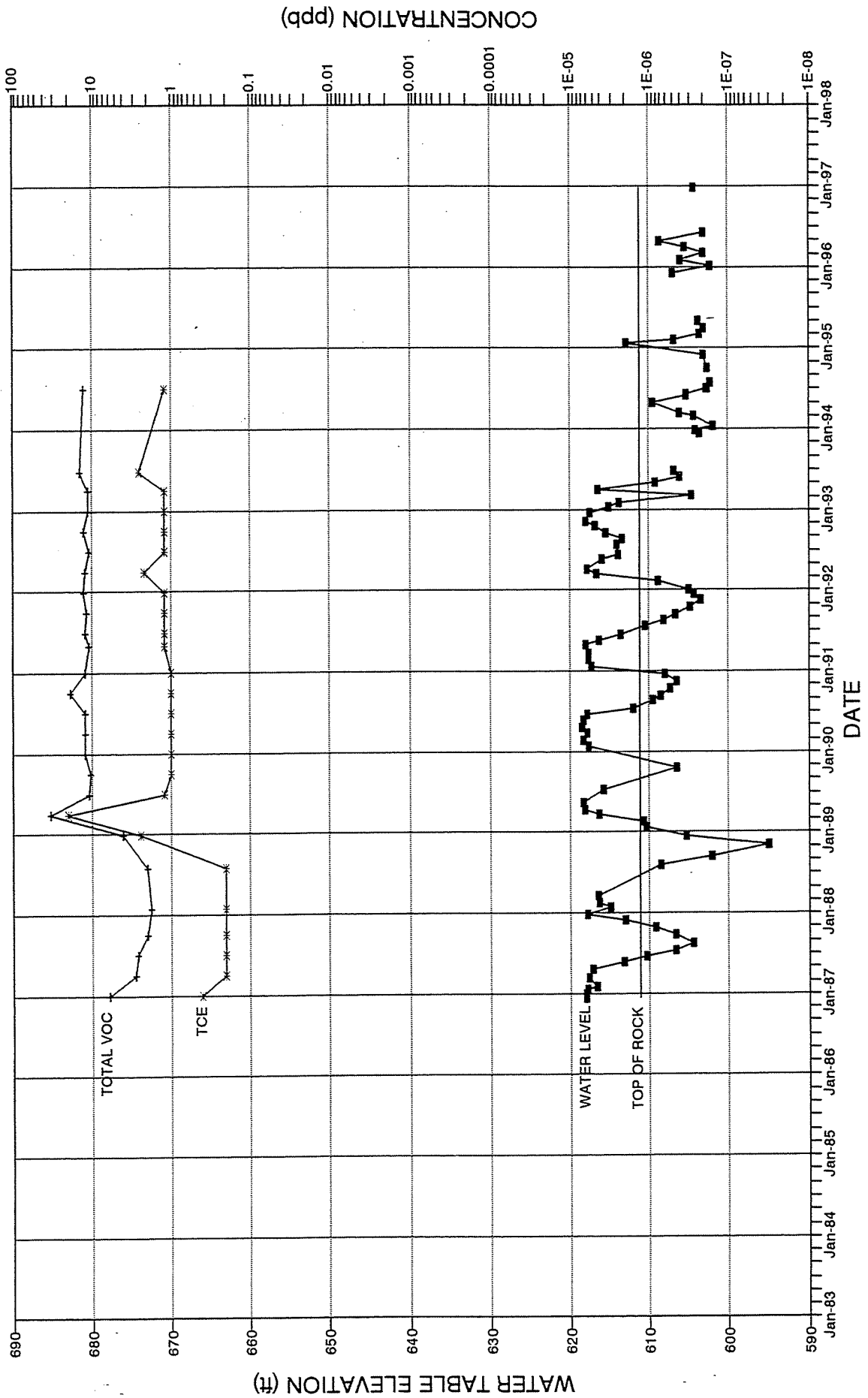
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B8M



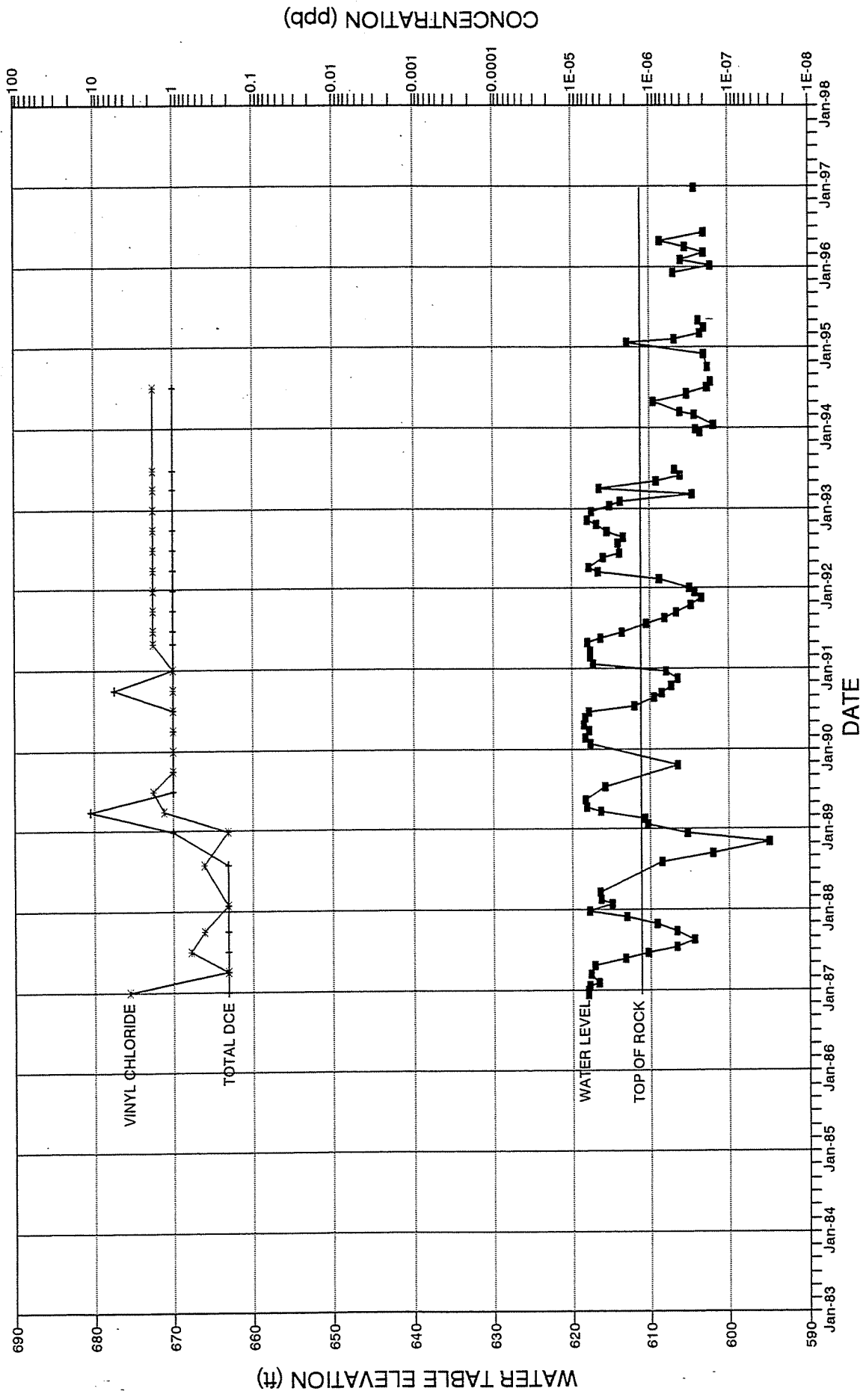
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B9M



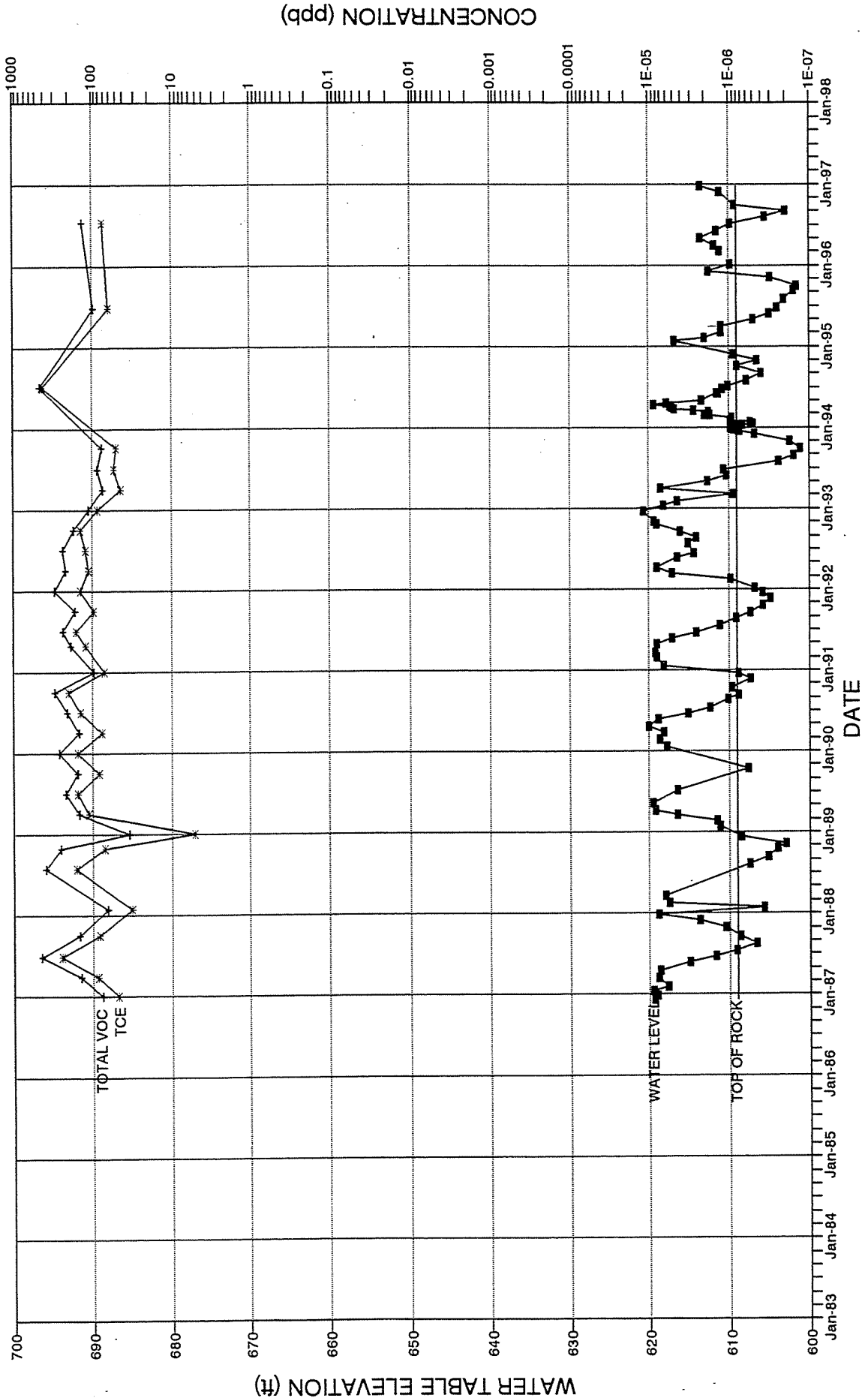
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B9M

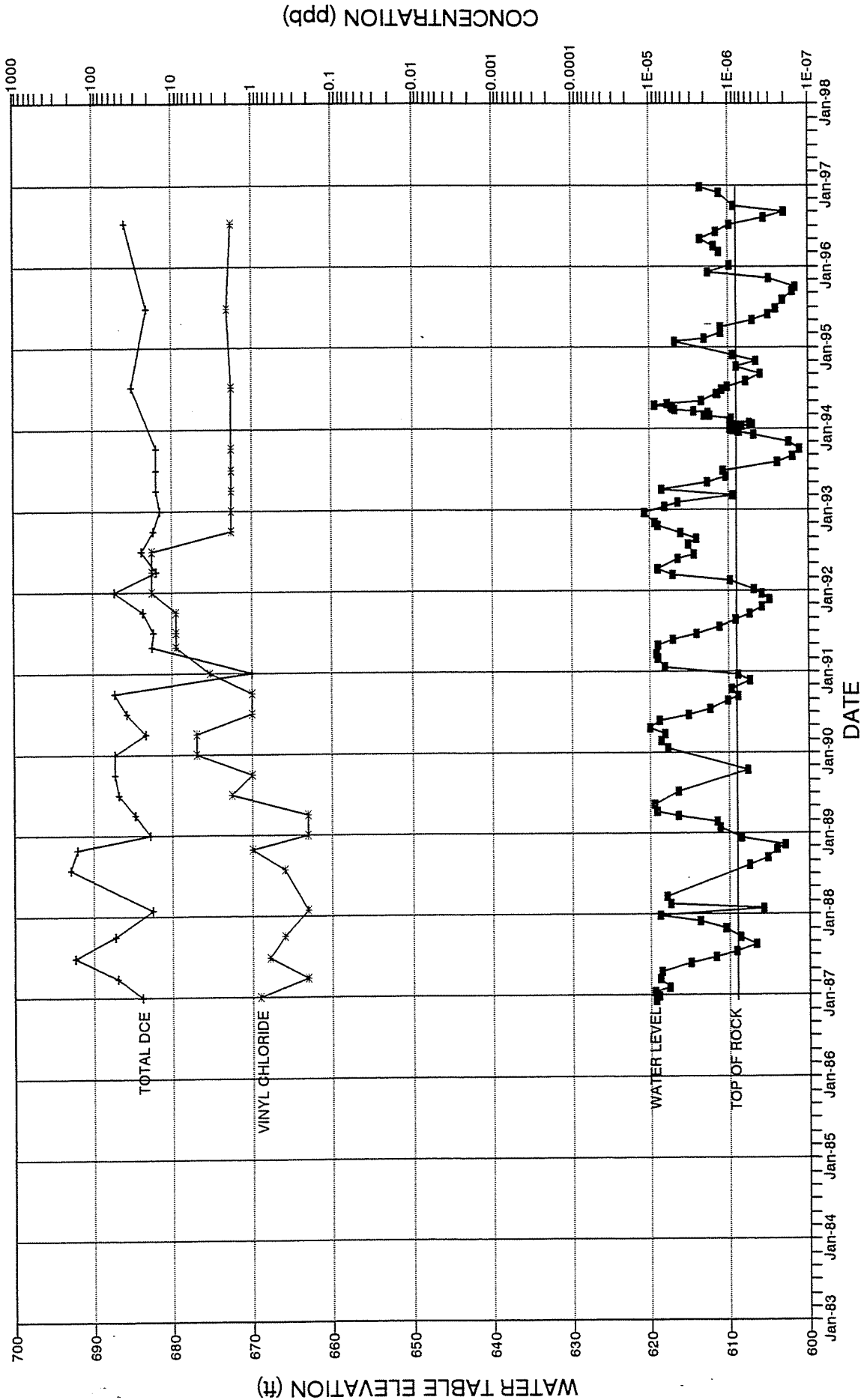


WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B10M

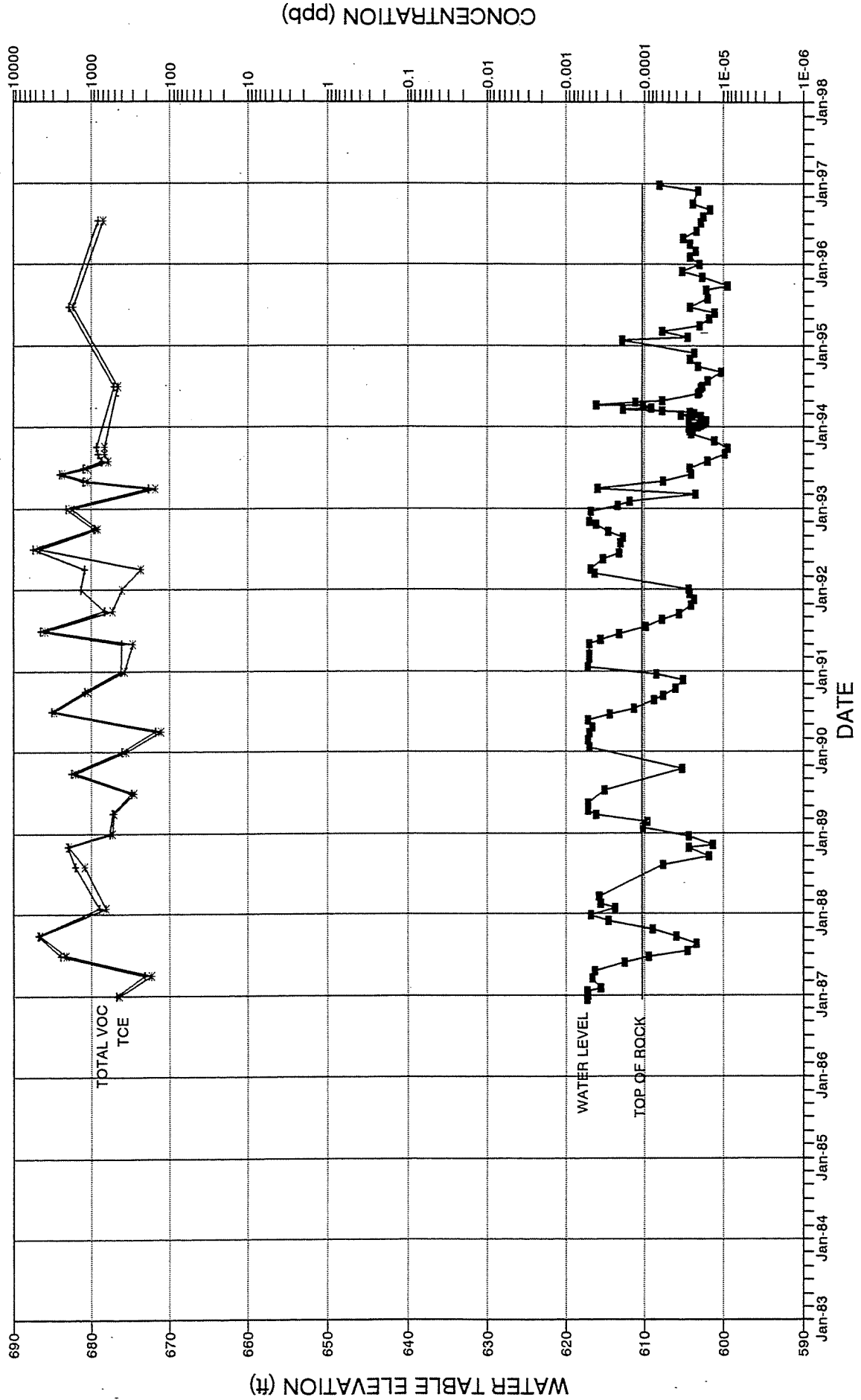


WATER LEVEL & CONTAMINANT CONCENTRATION WELL B10M



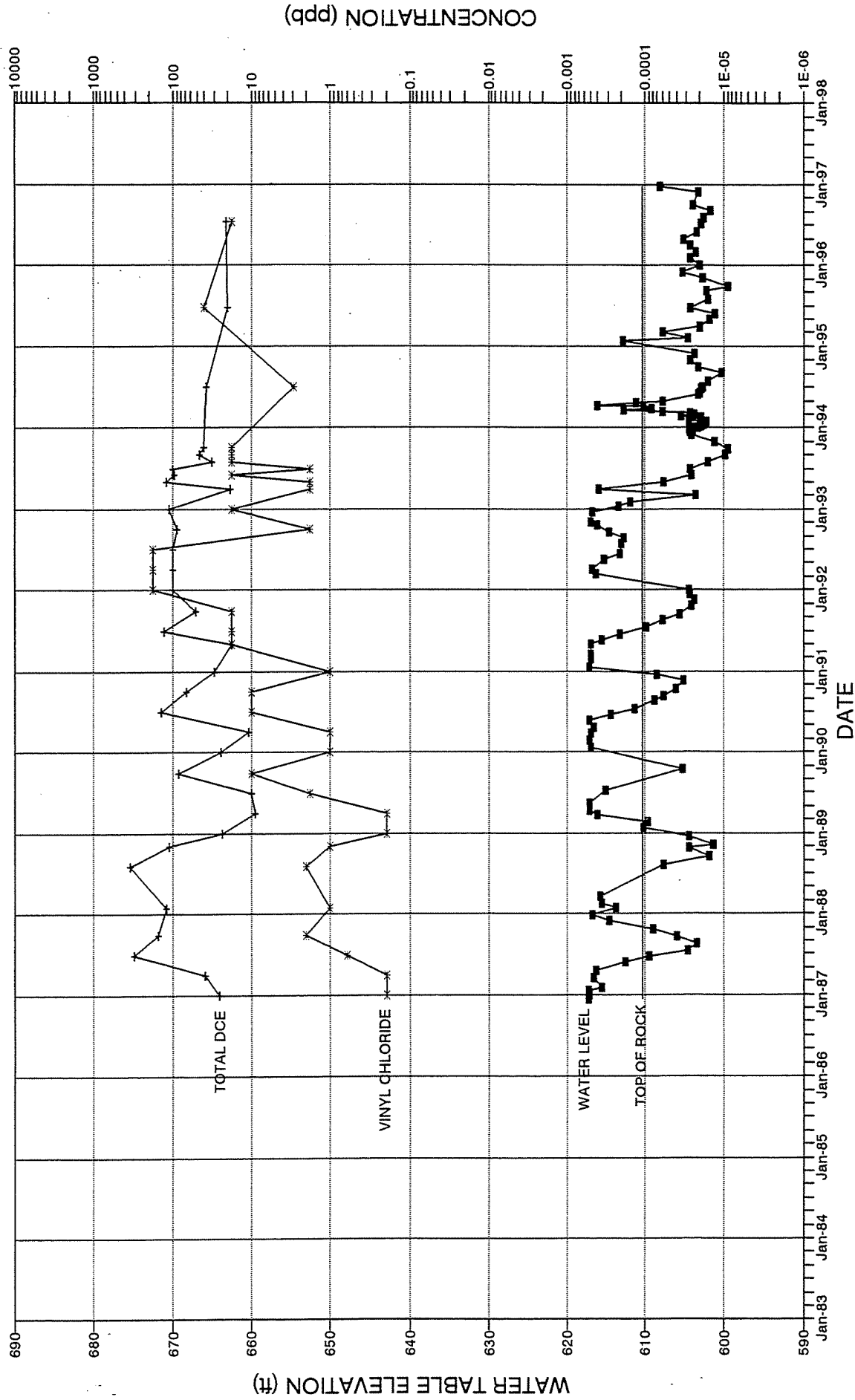
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B11M



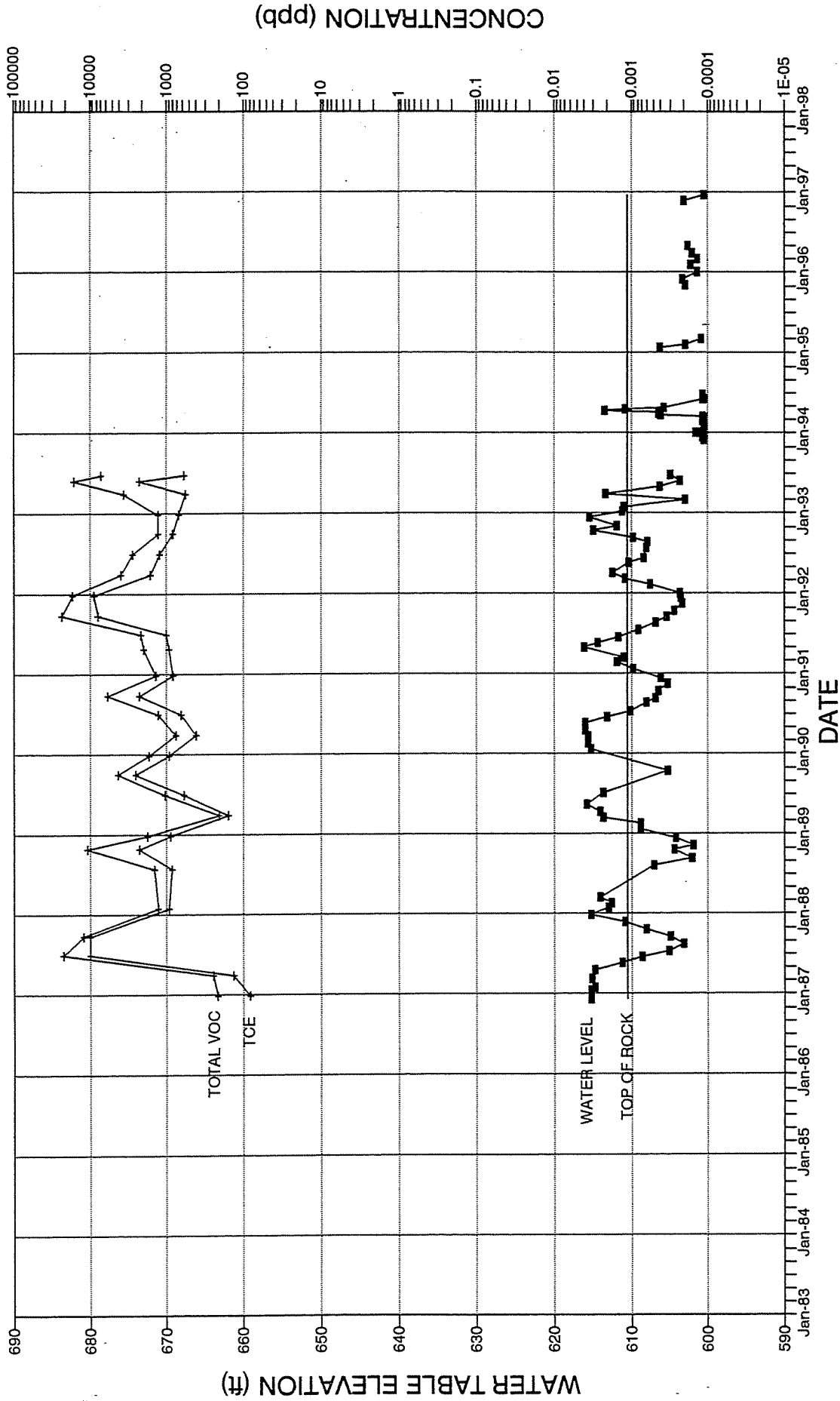
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B11M

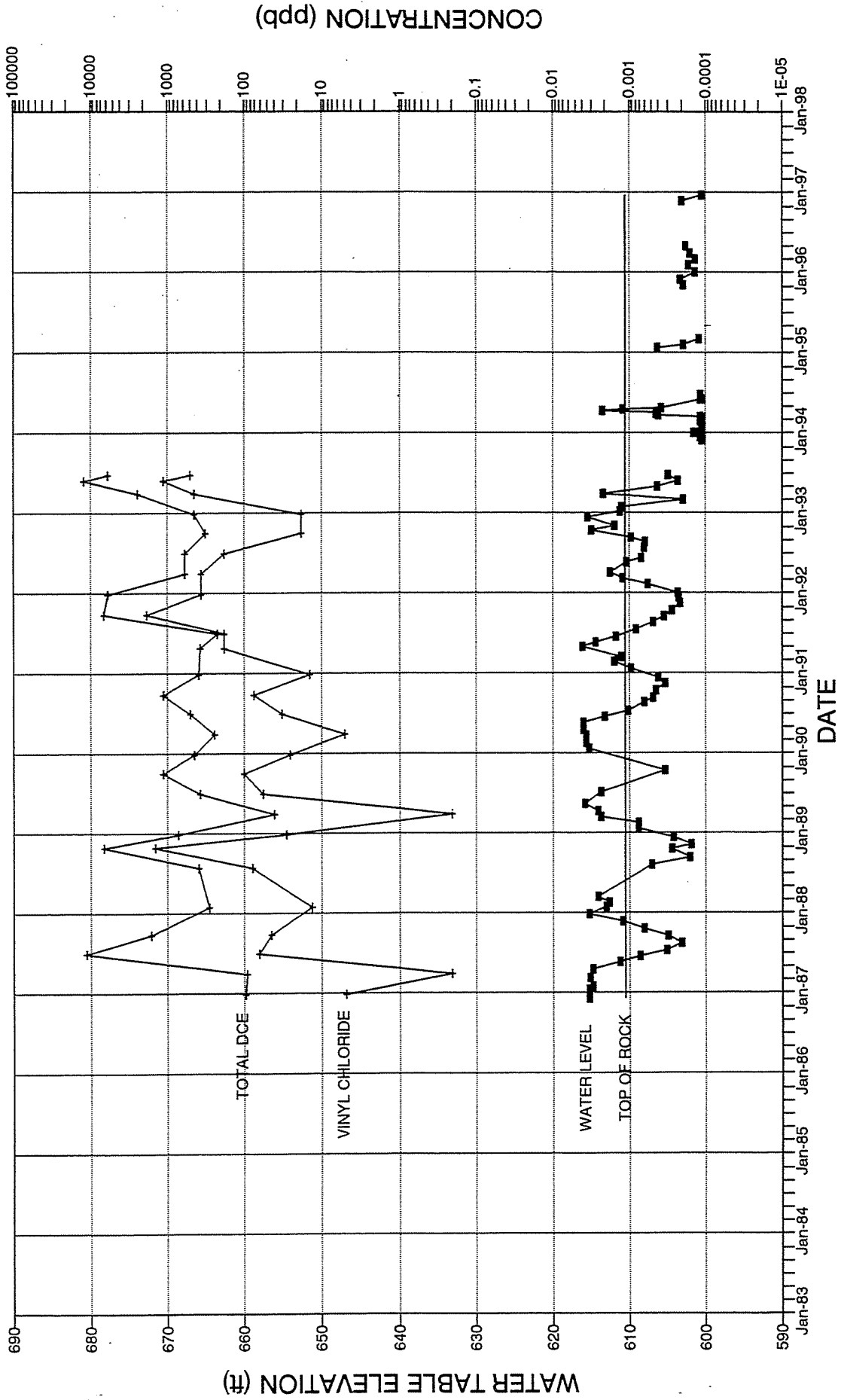


WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B12M

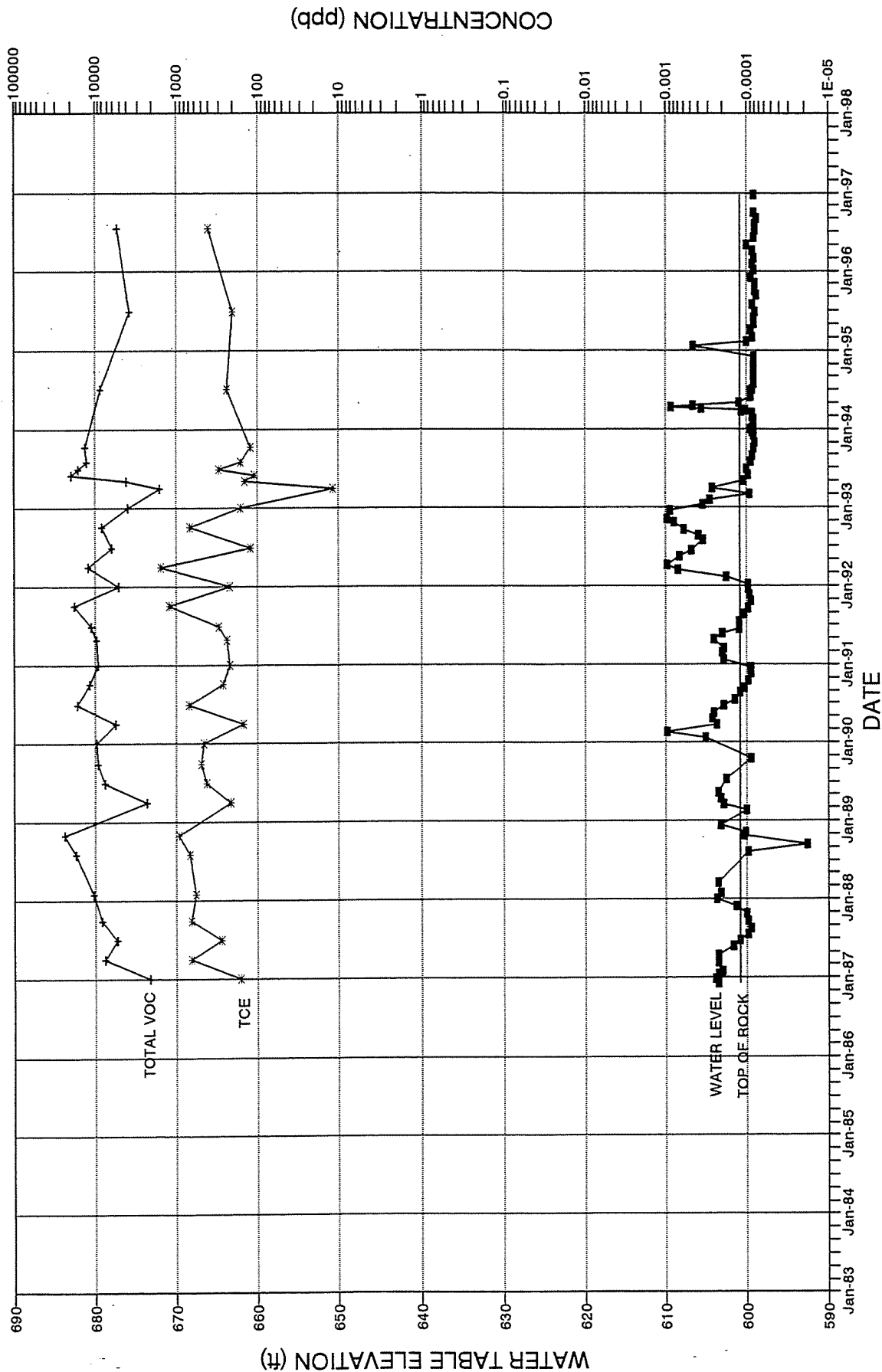


WATER LEVEL & CONTAMINANT CONCENTRATION WELL B12M



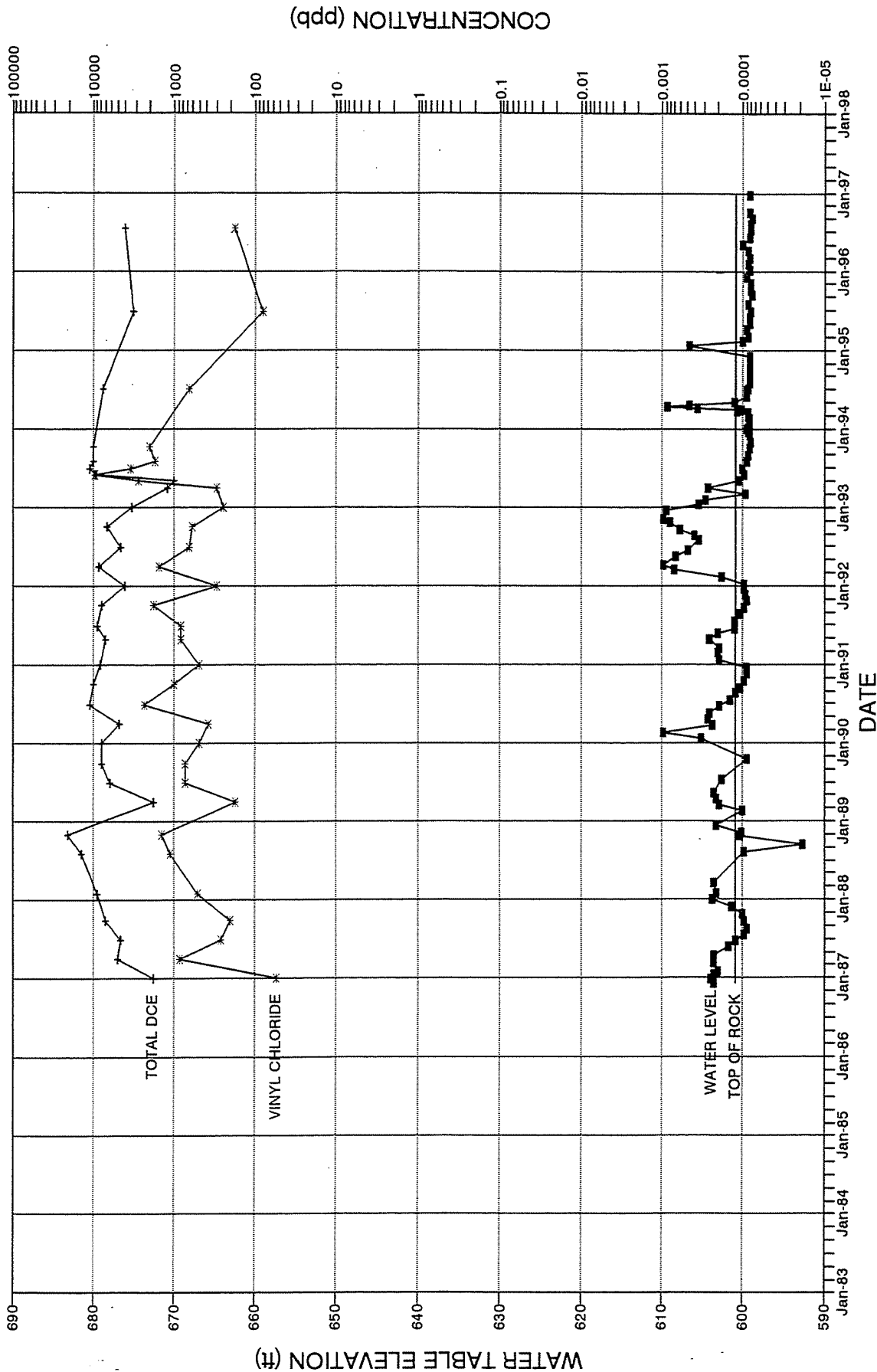
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B13M



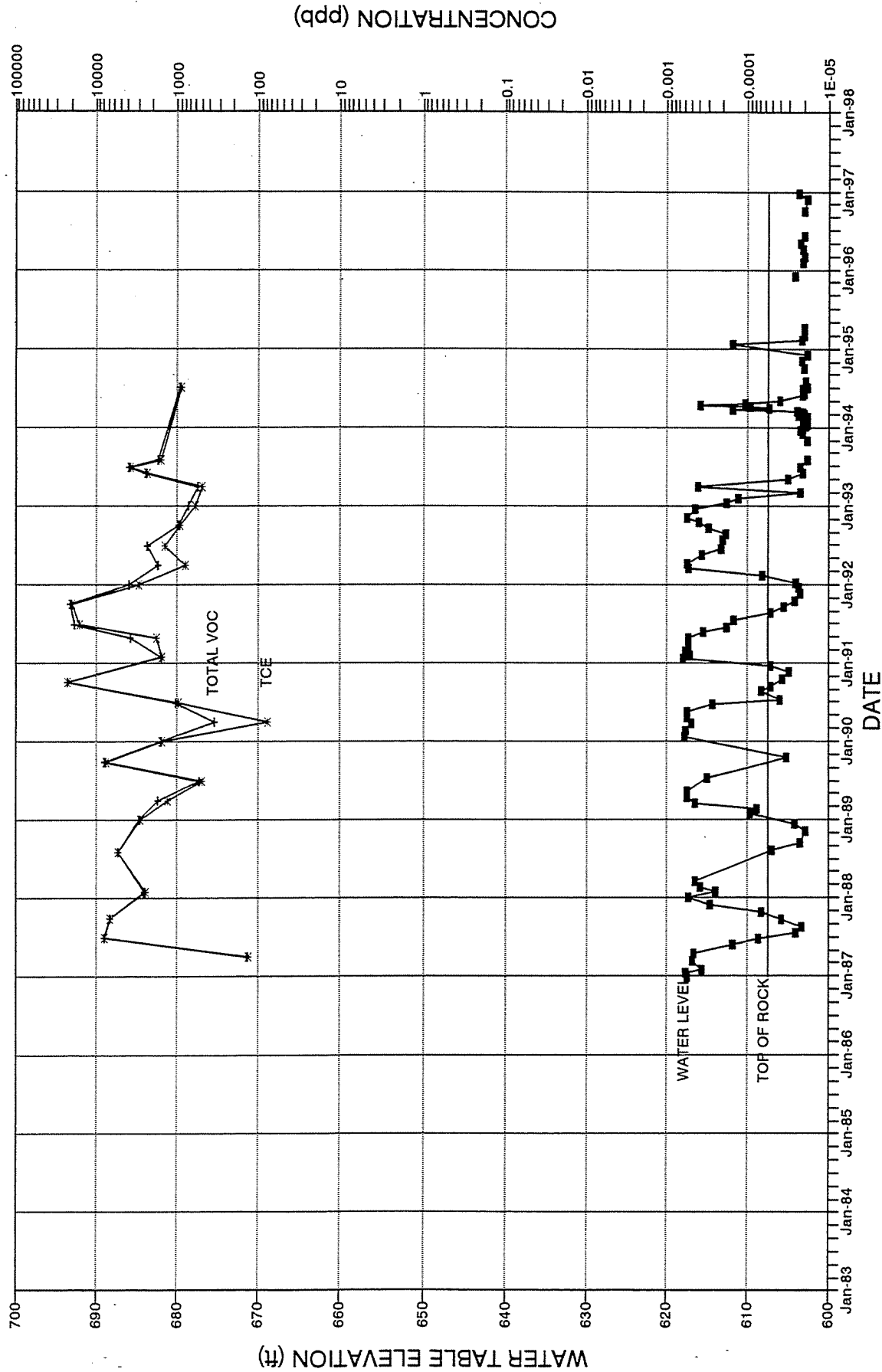
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B13M



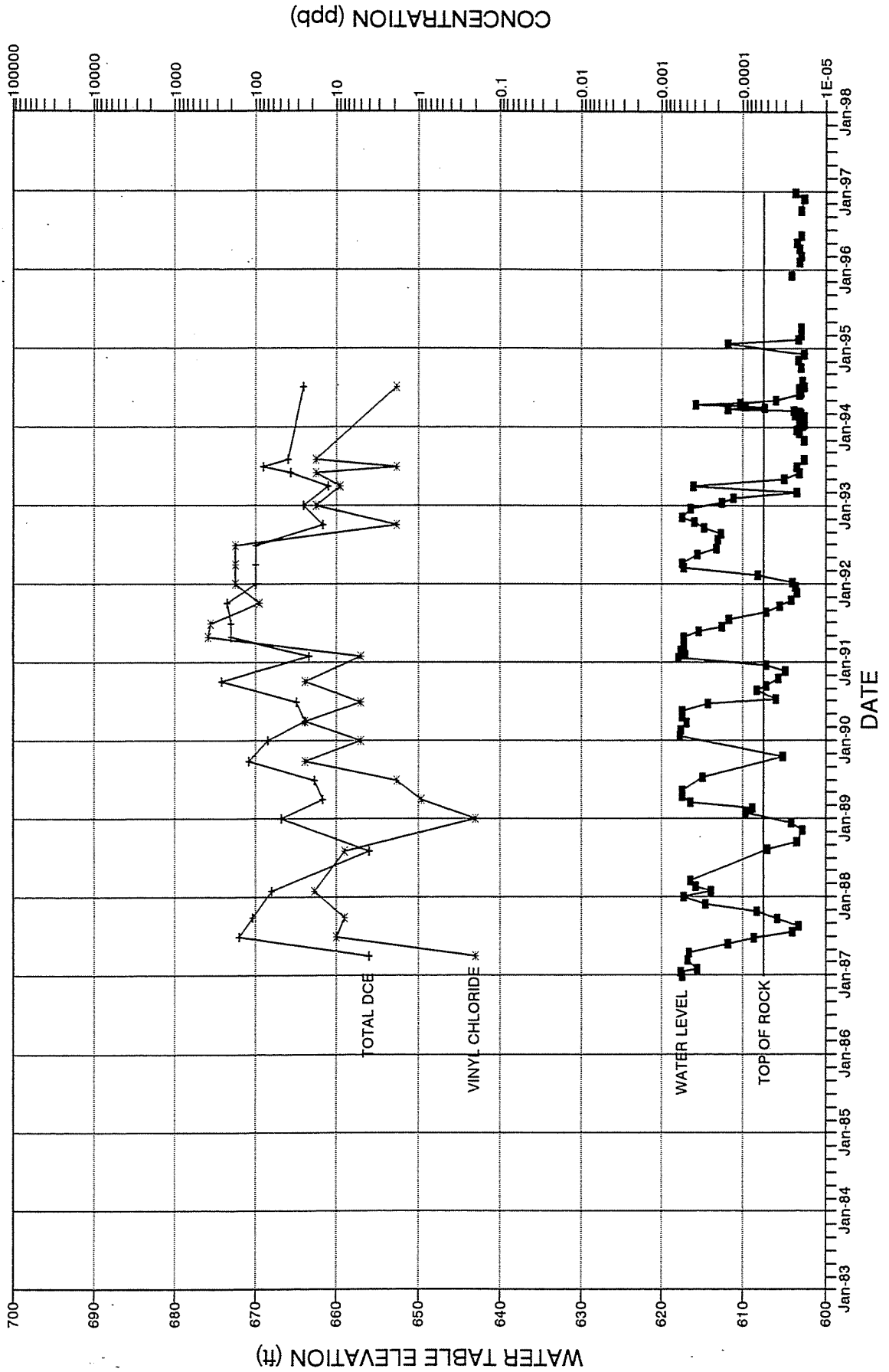
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B14M



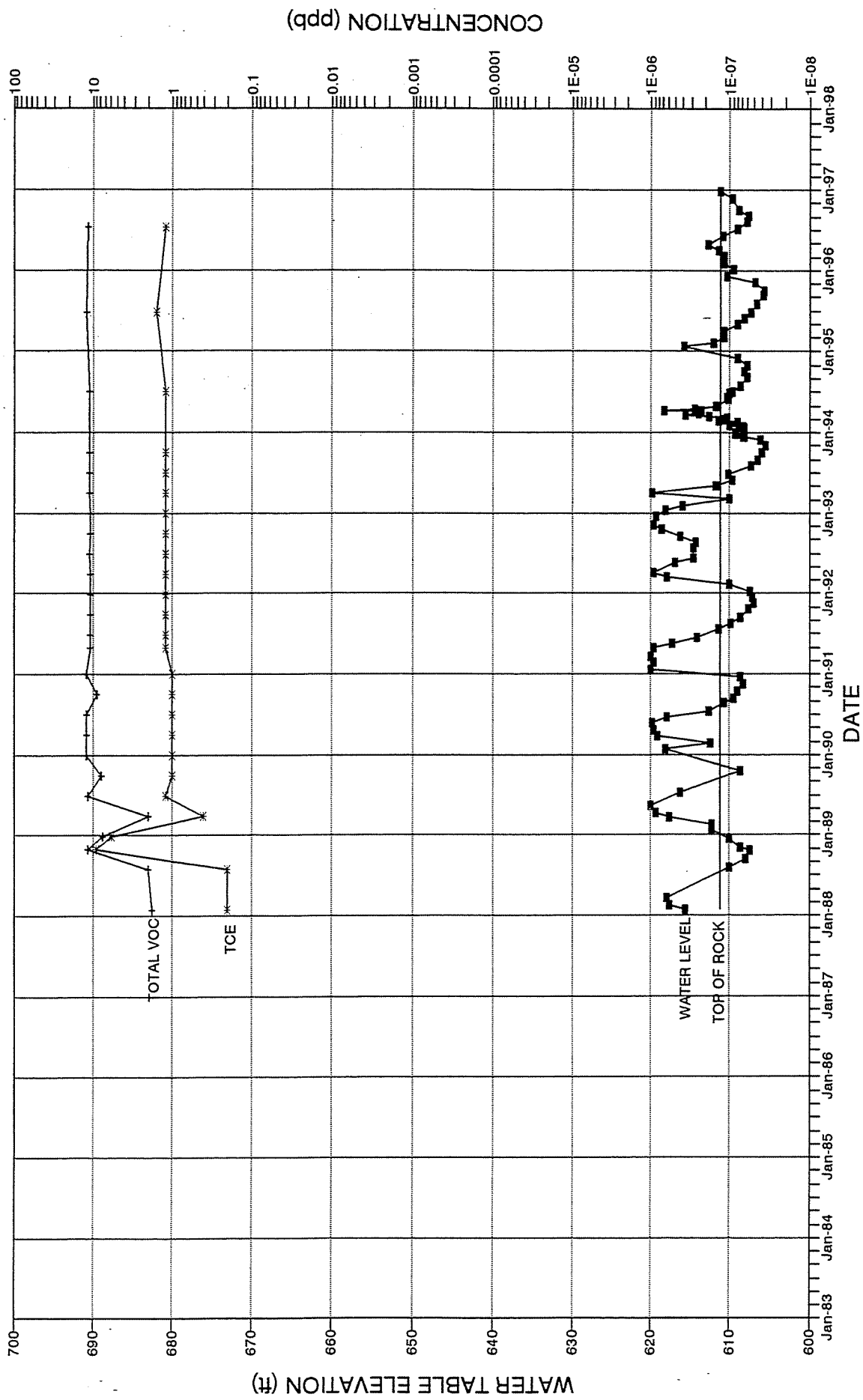
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B14M



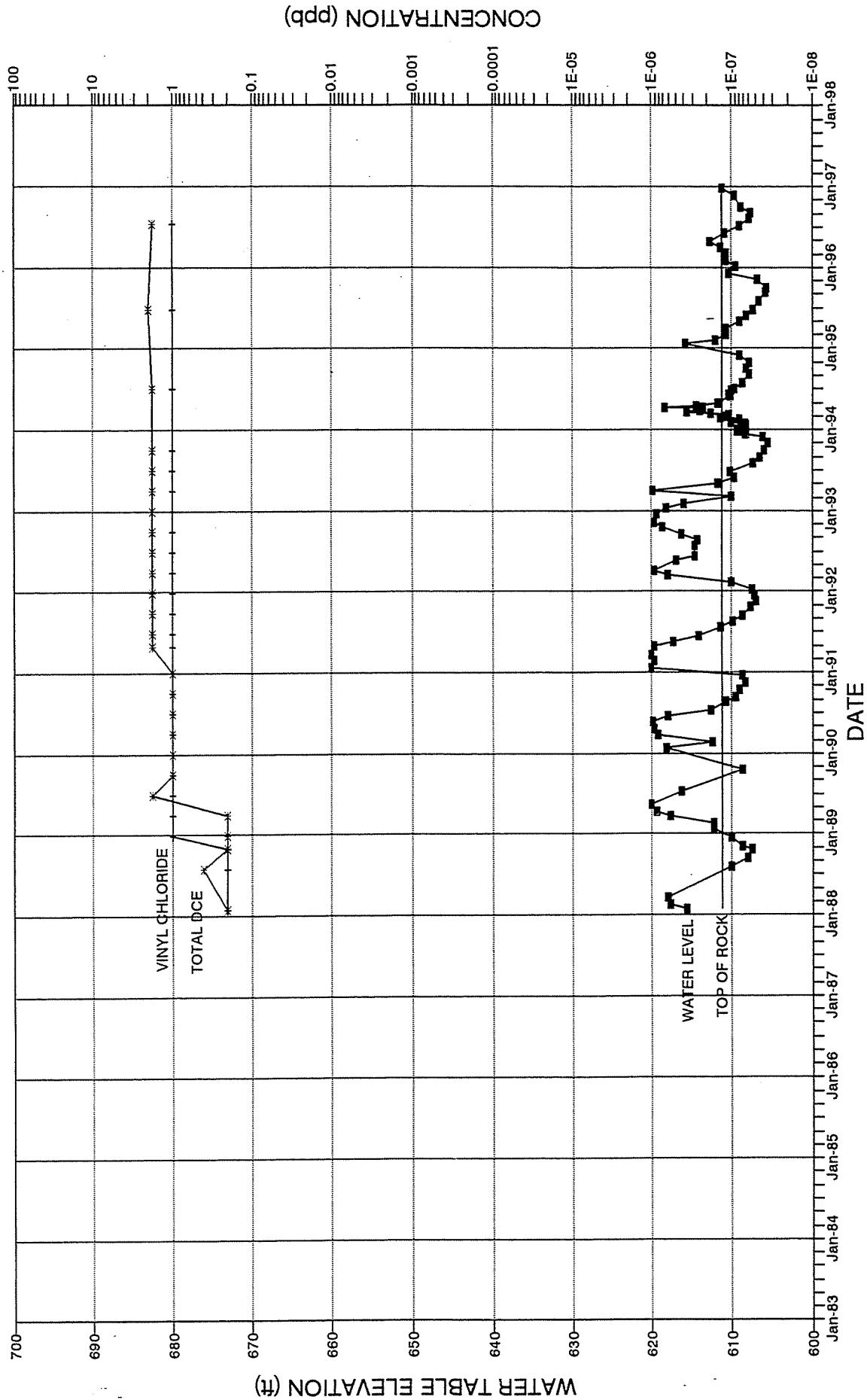
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B15M



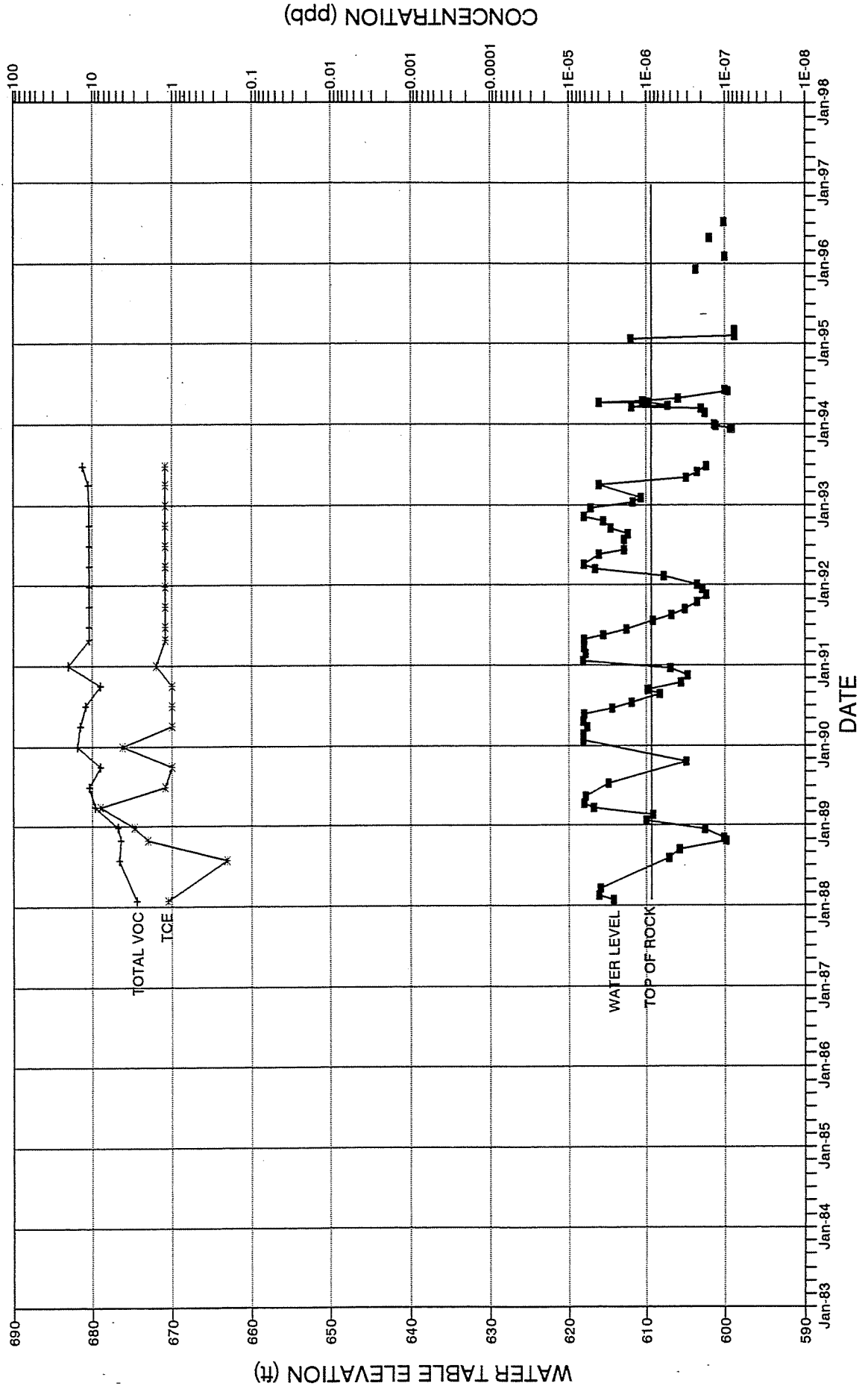
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B15M

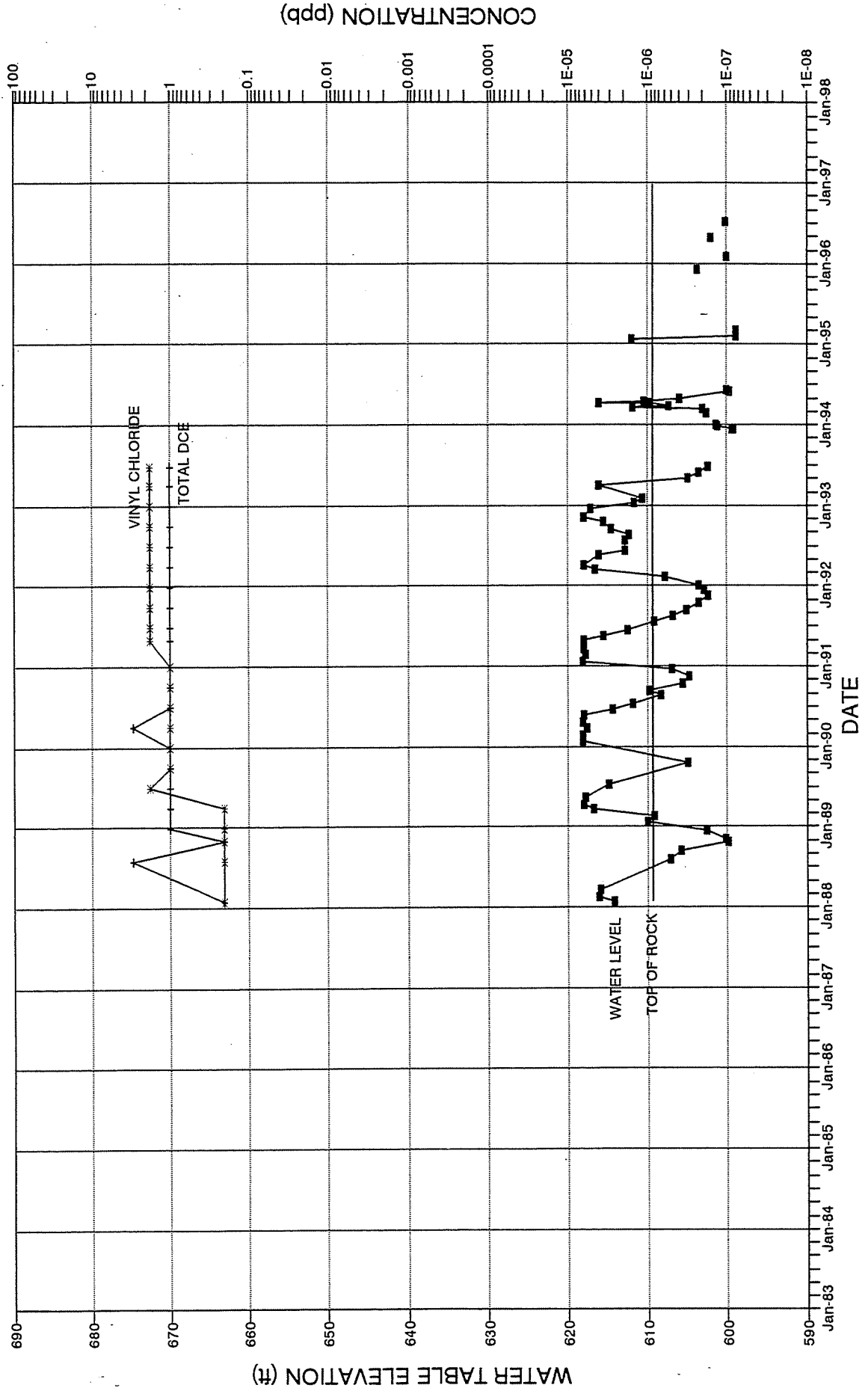


WATER LEVEL & CONTAMINANT CONCENTRATION

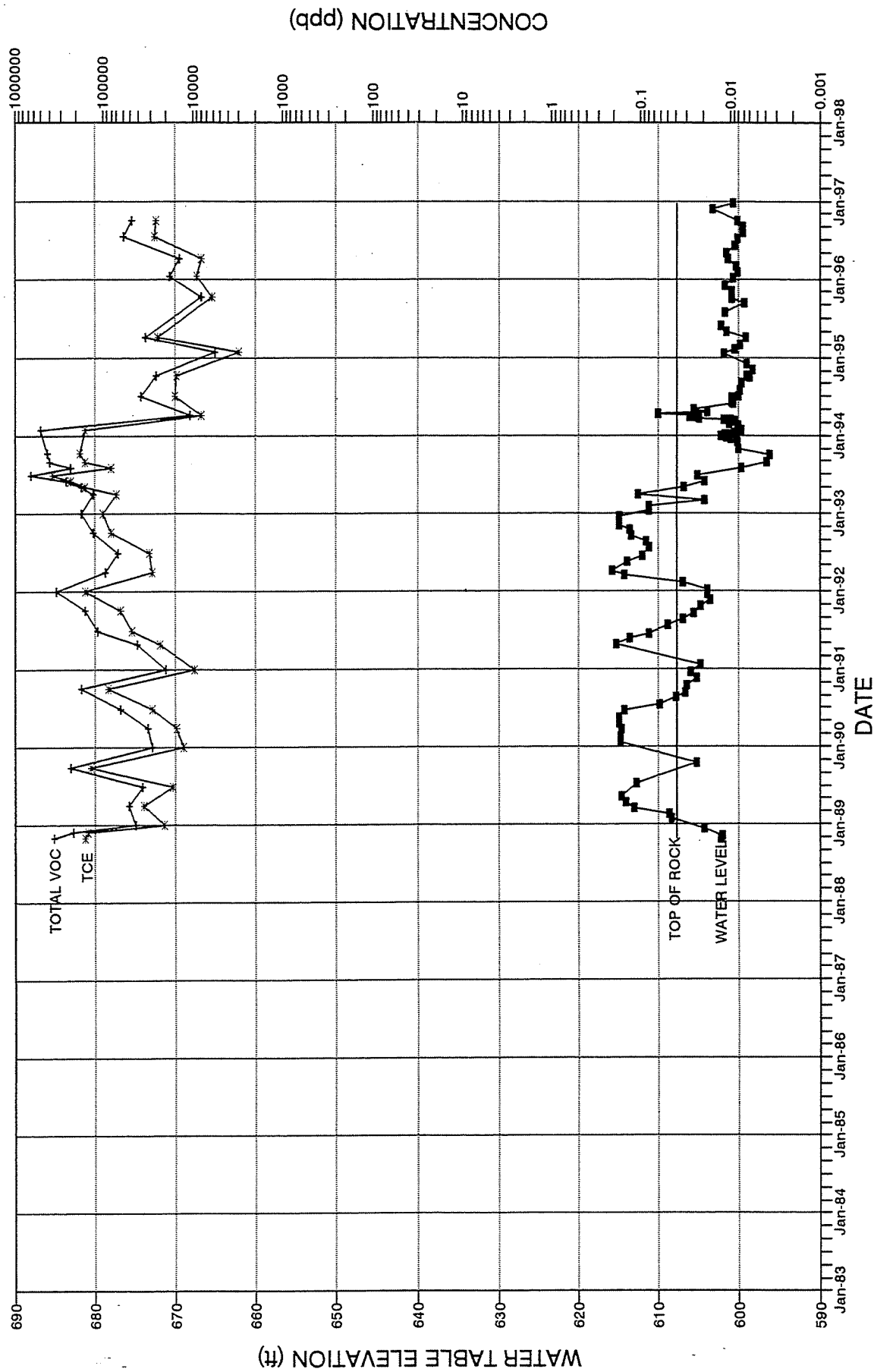
WELL B16M



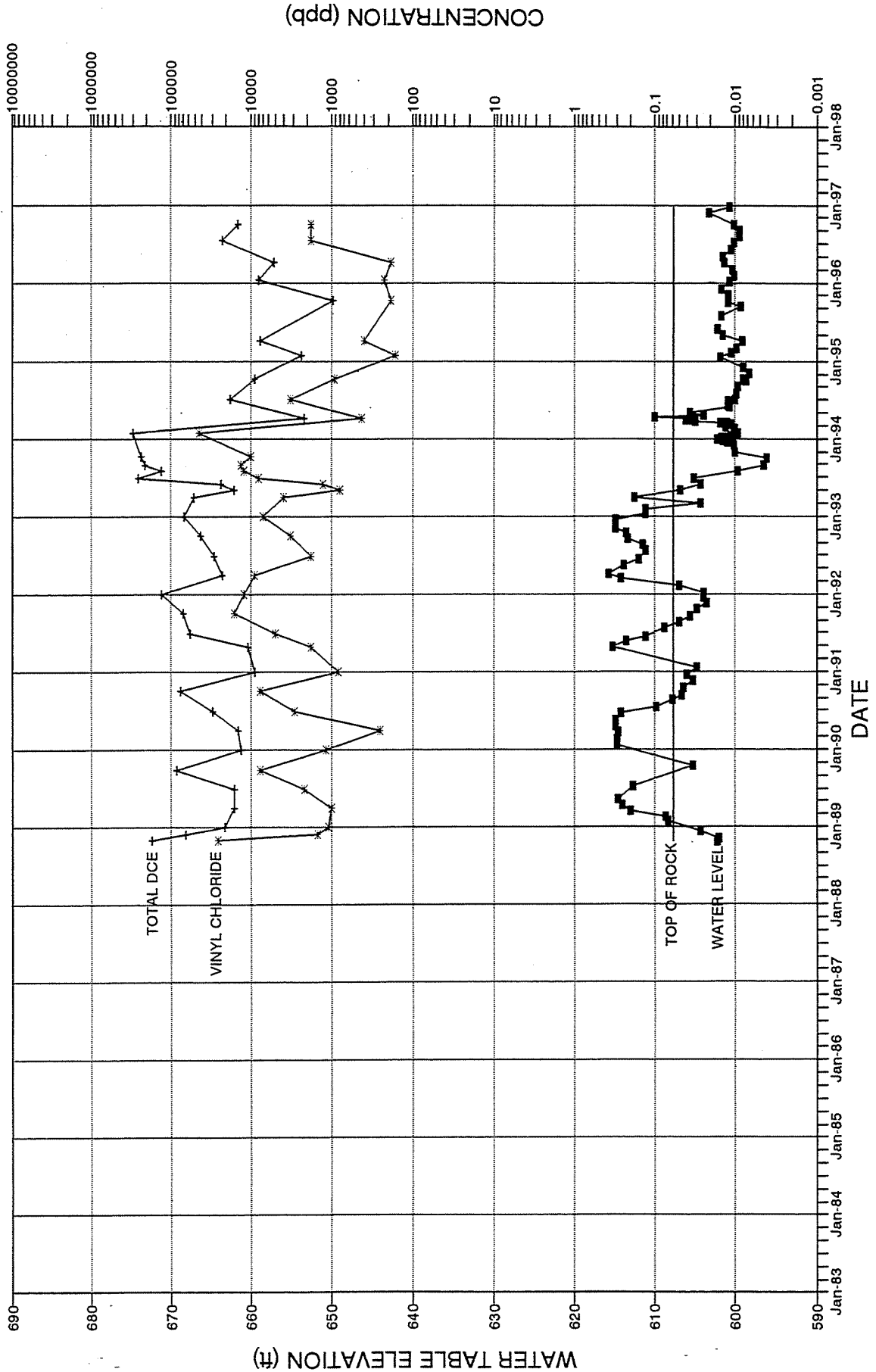
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B16M



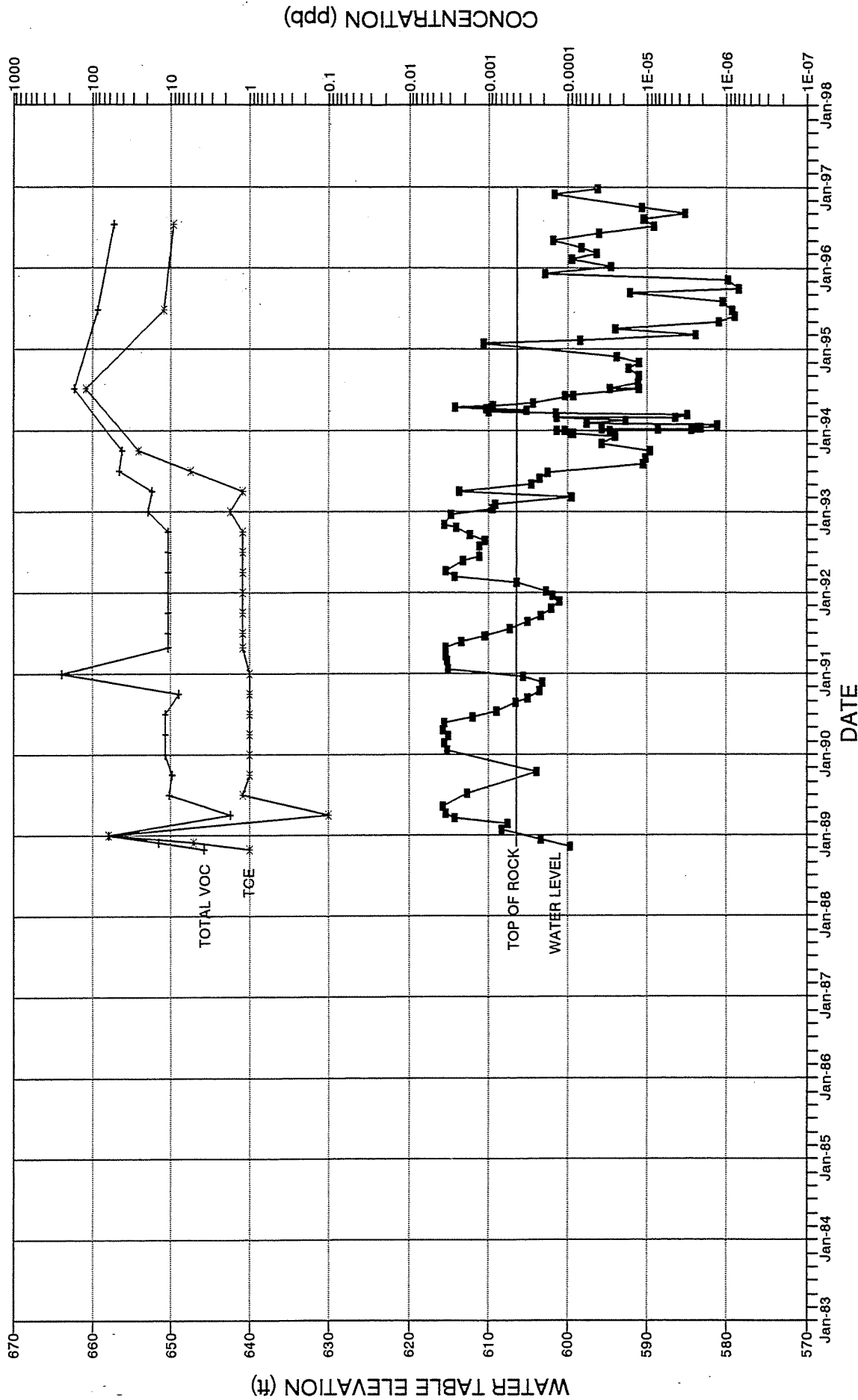
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B17M



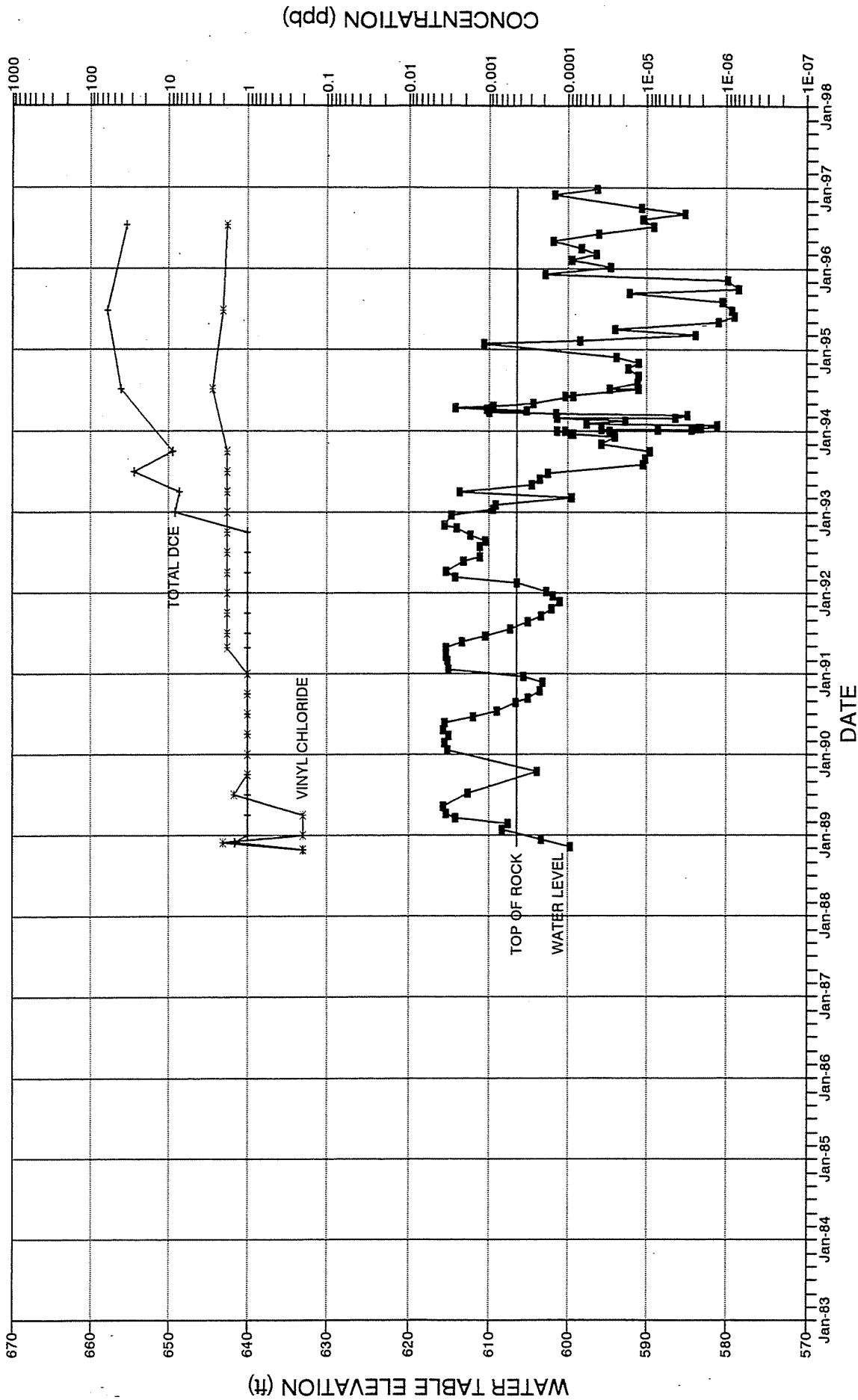
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B17M



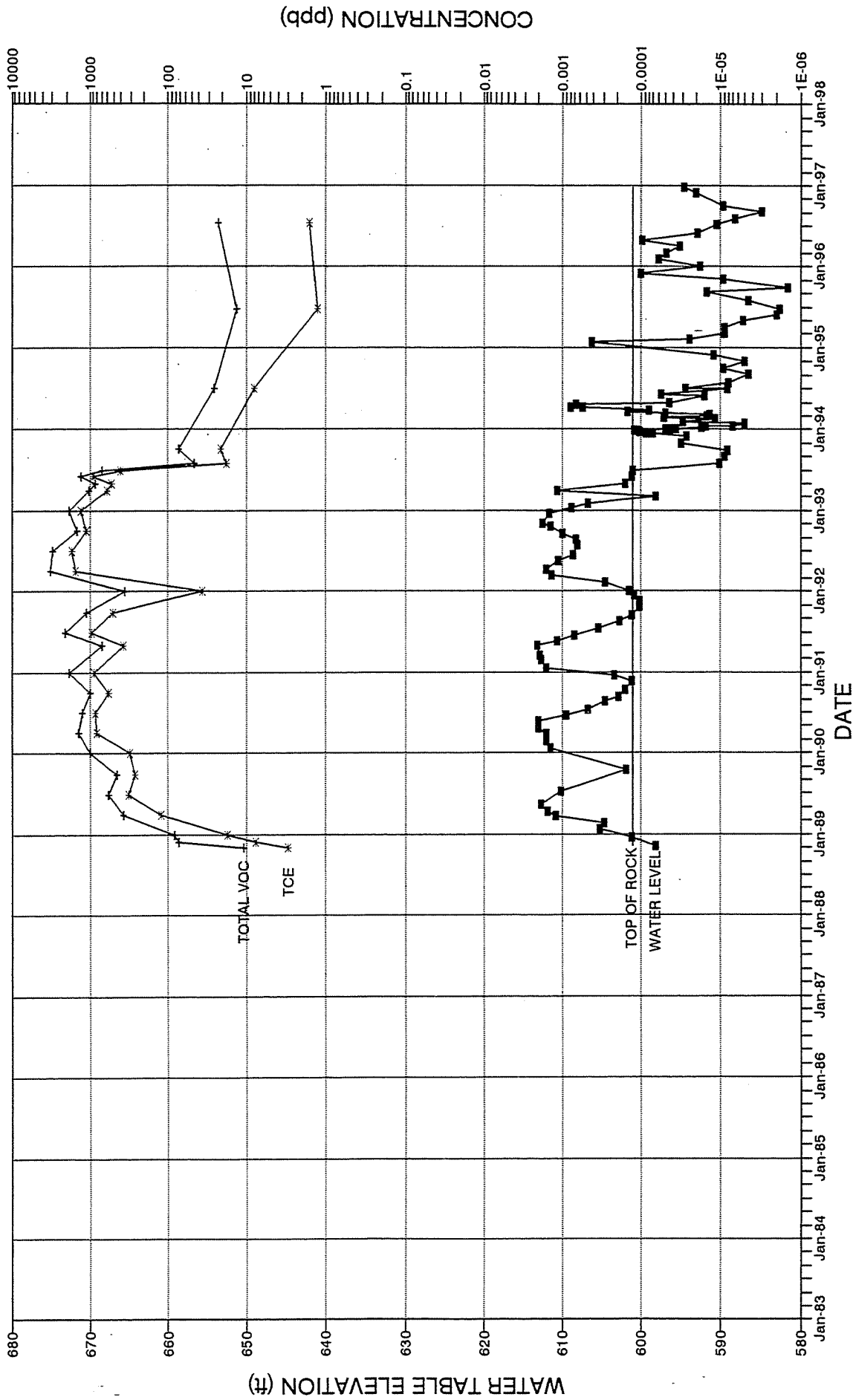
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B18M



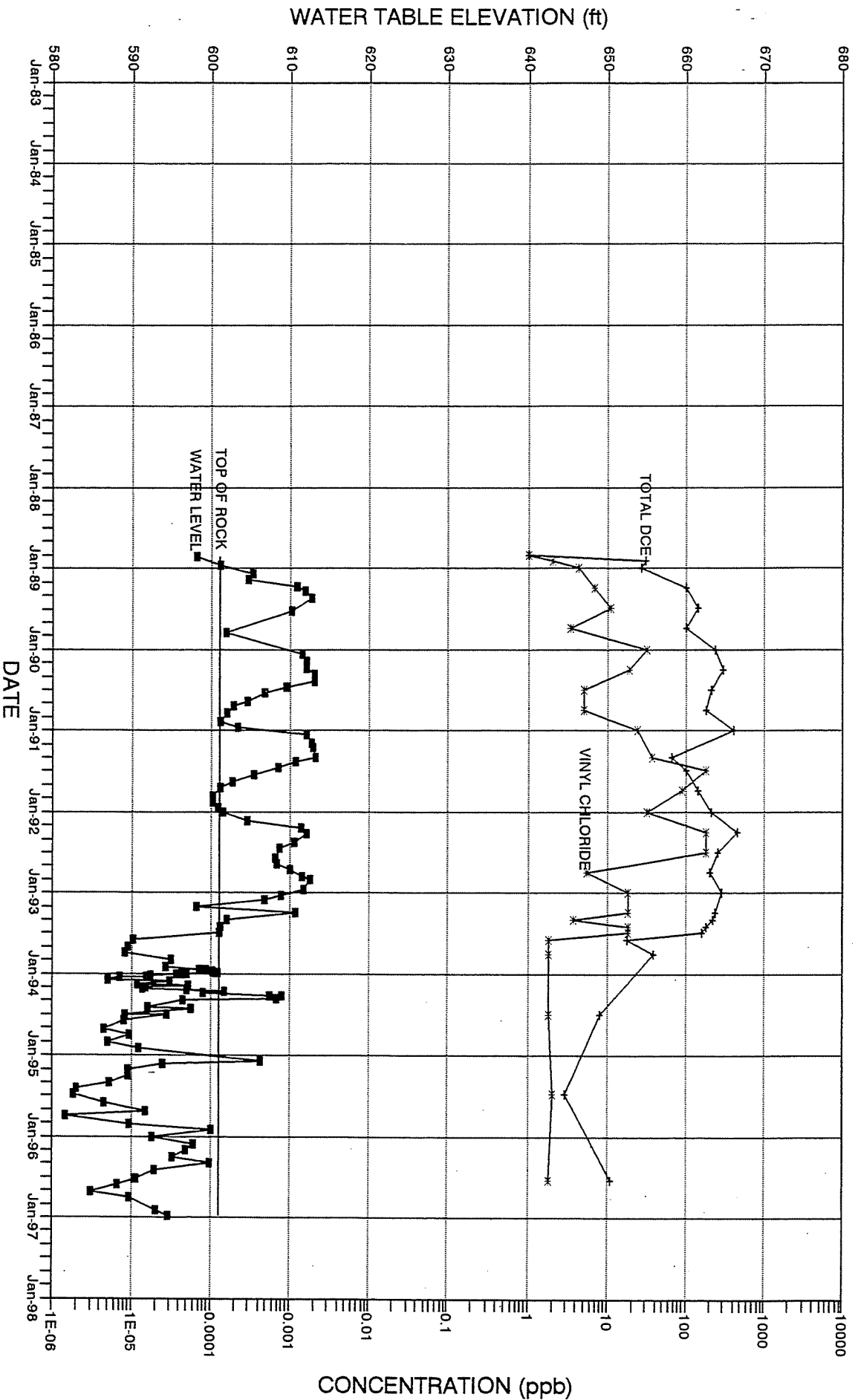
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B18M



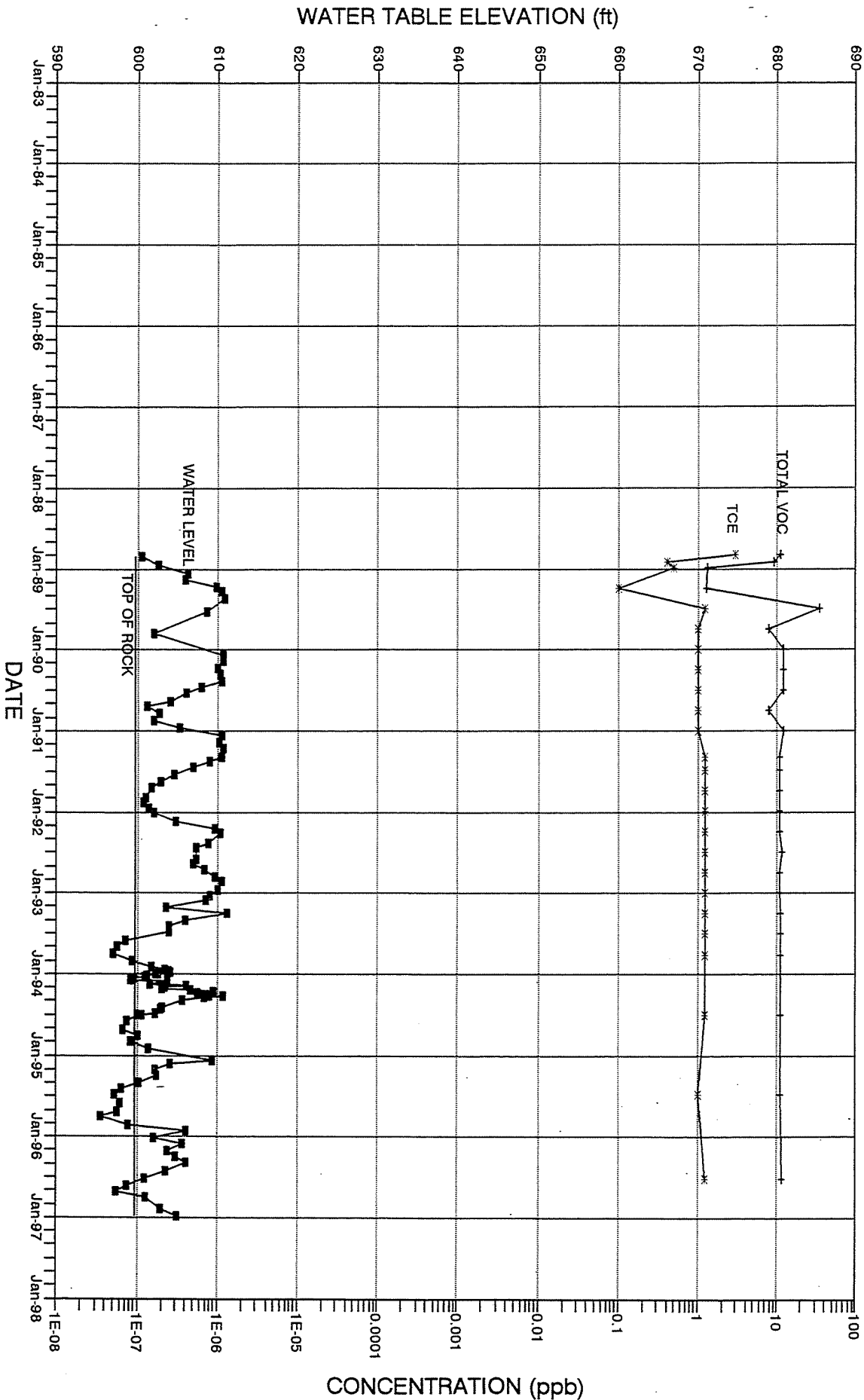
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B19M



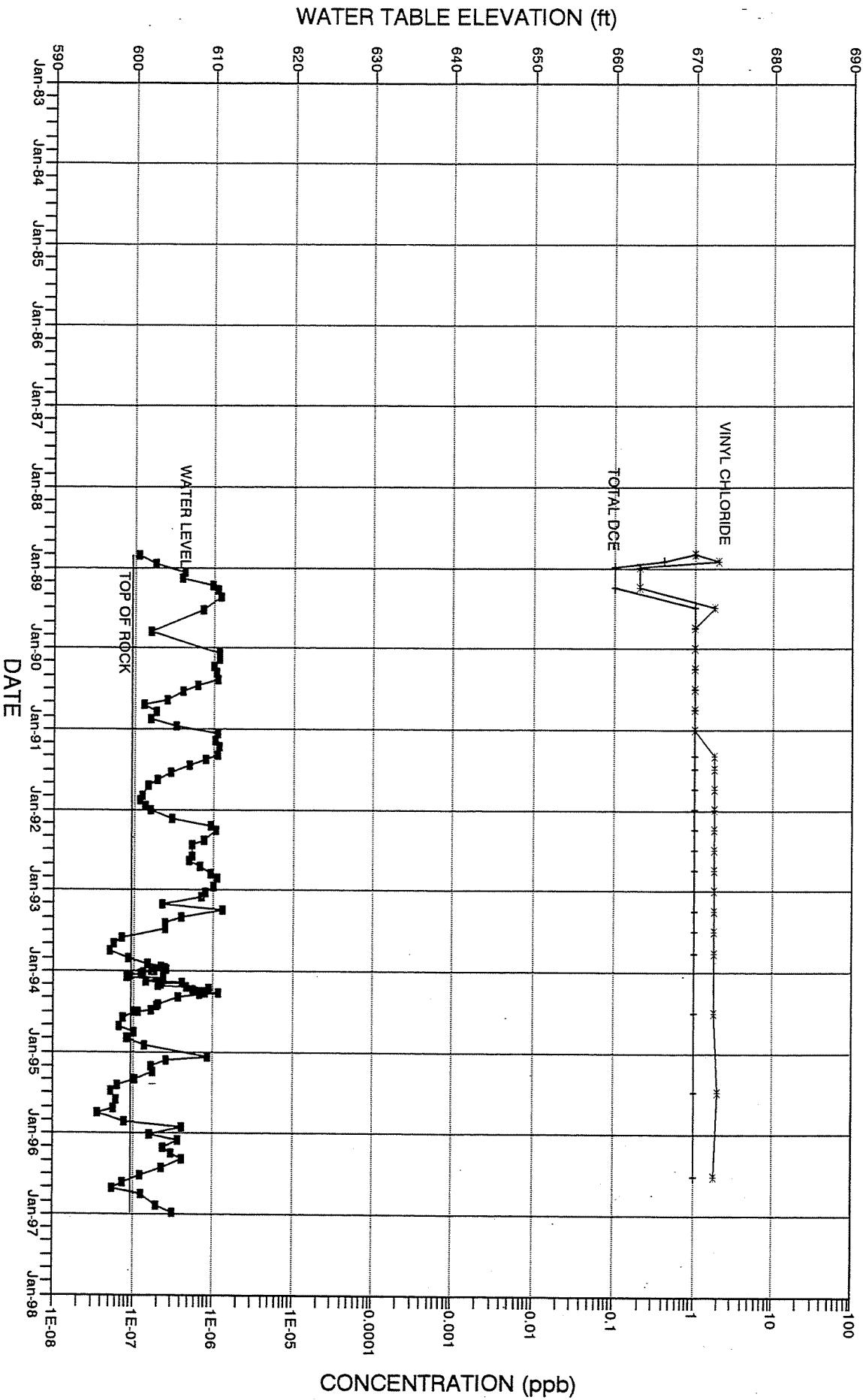
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B19M



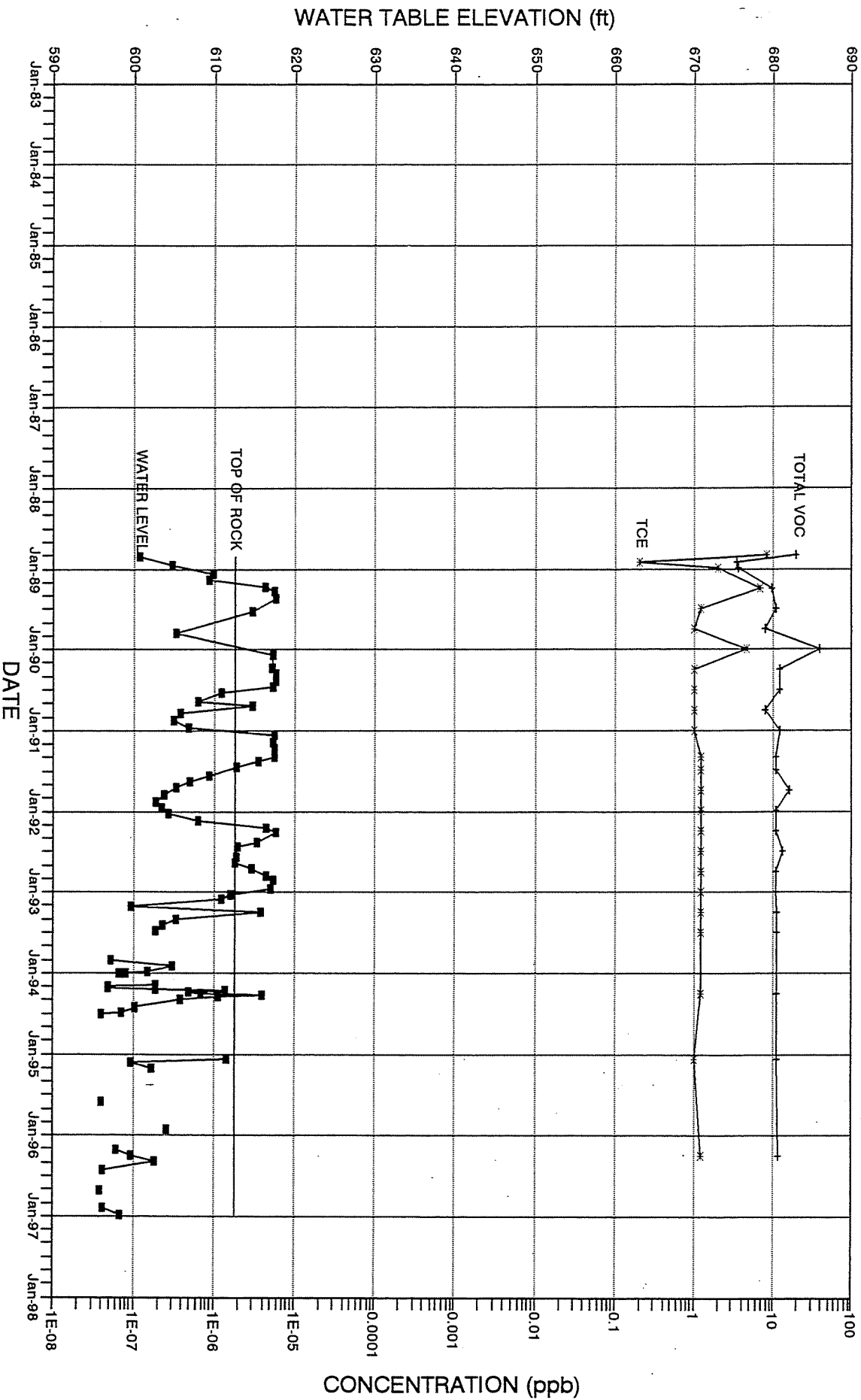
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B20M



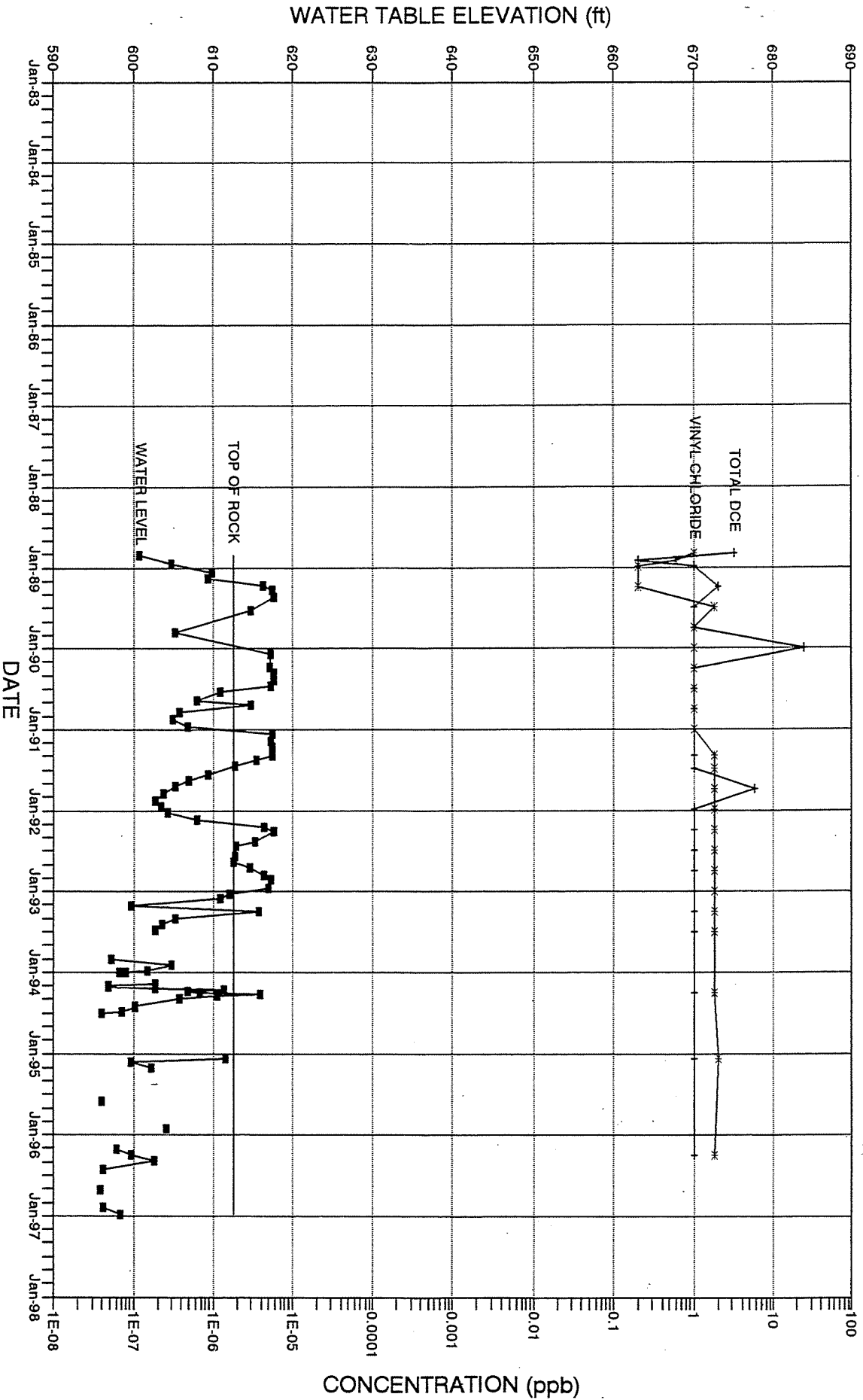
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B20M



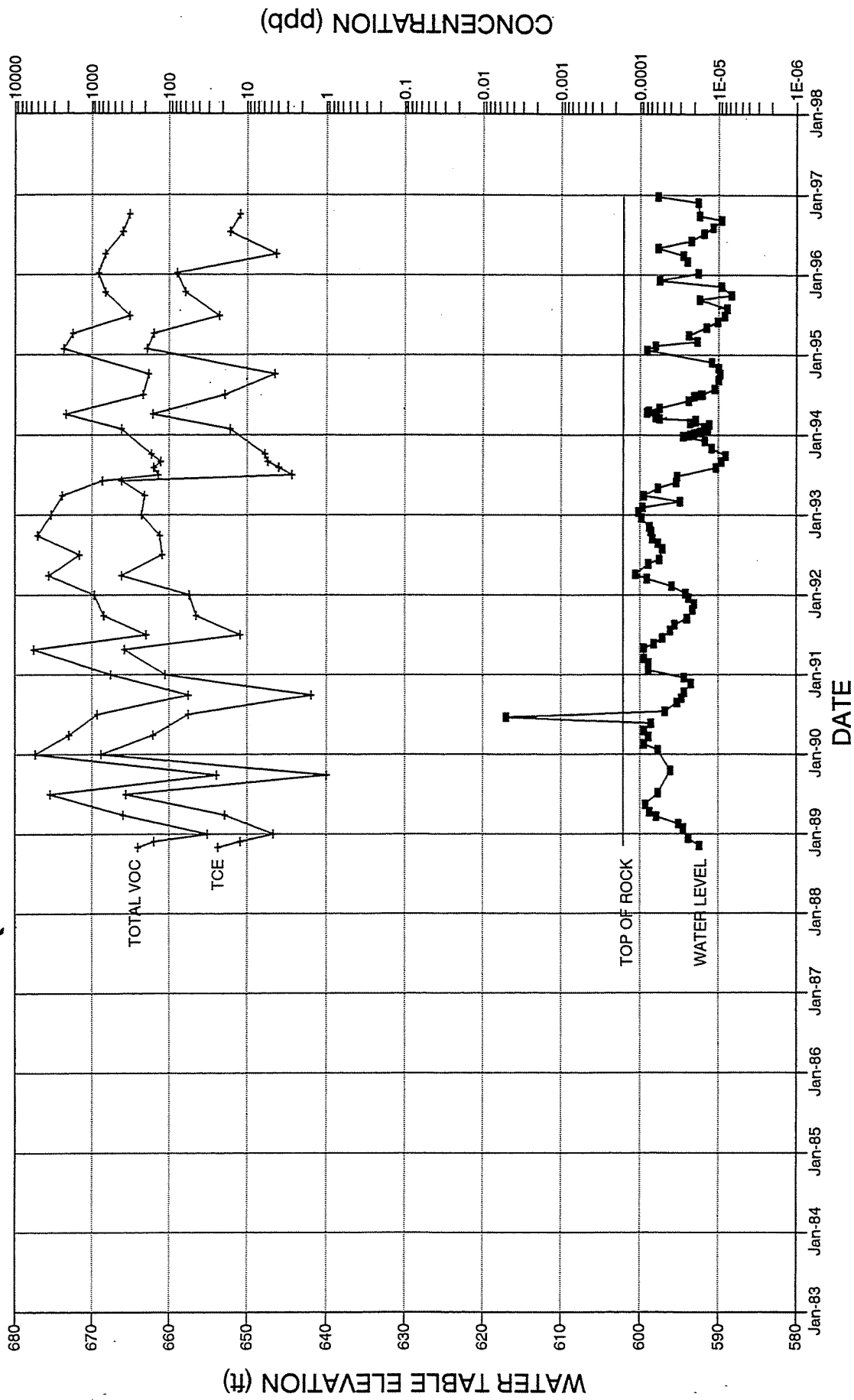
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B21M



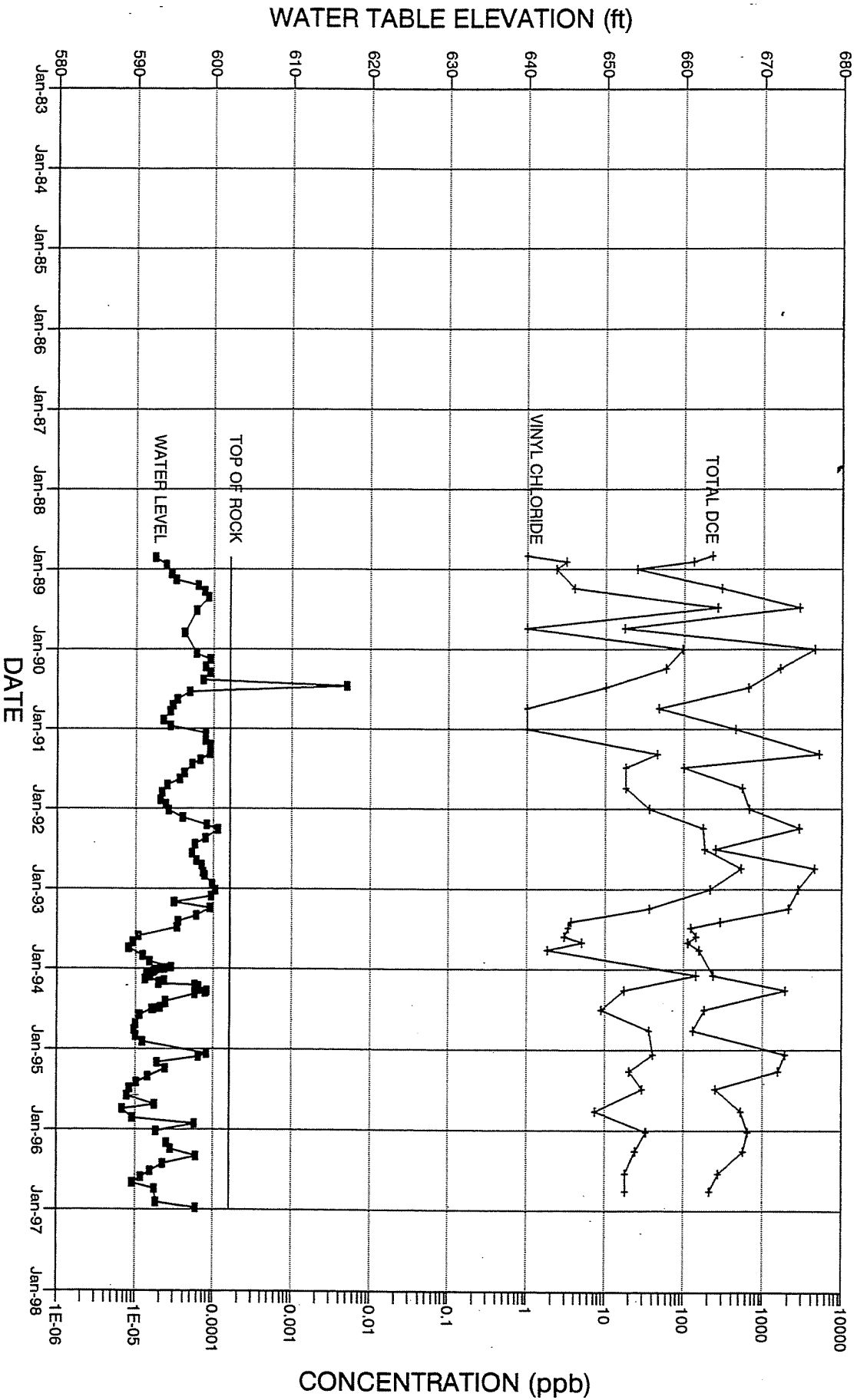
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B21M



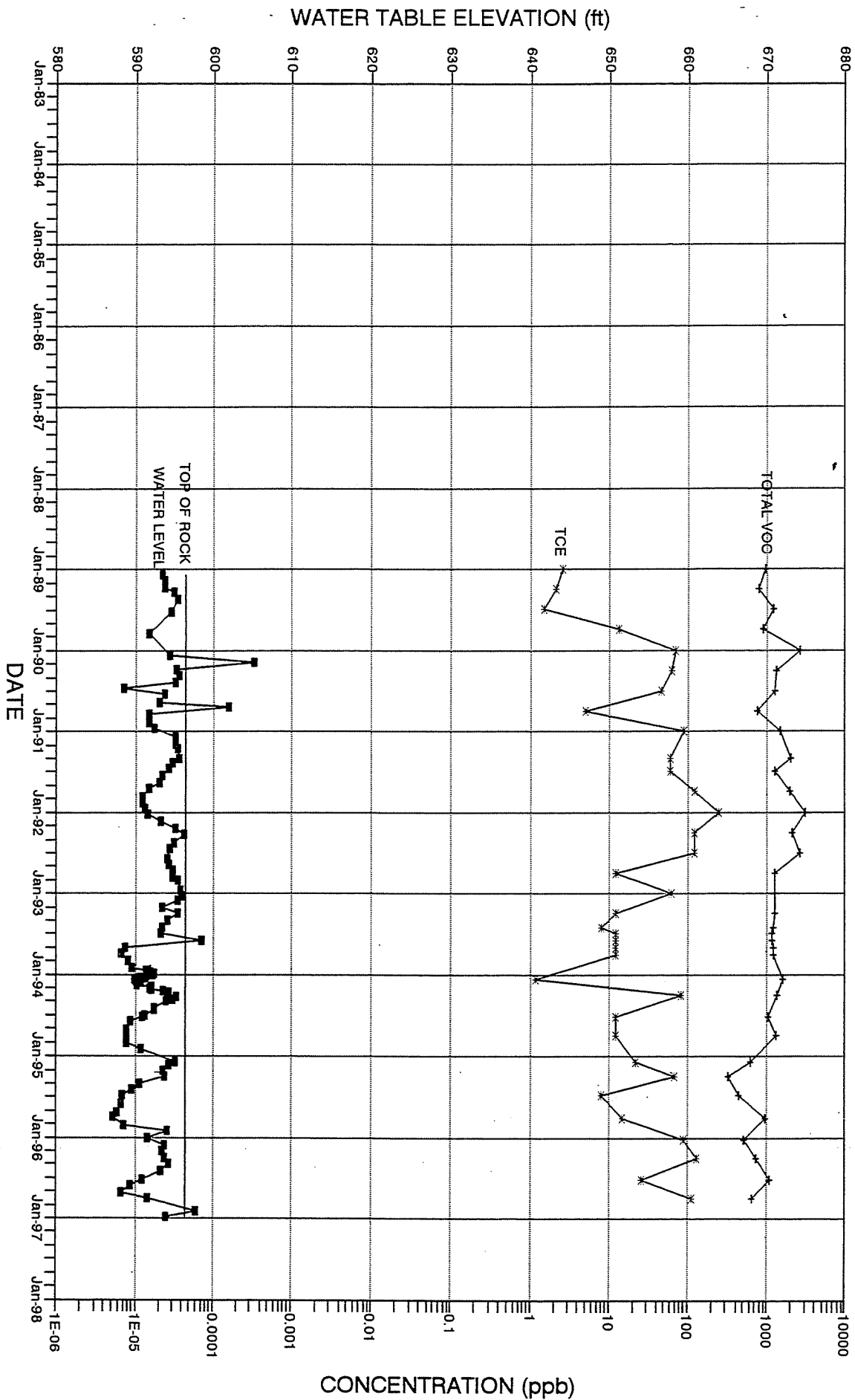
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B22M



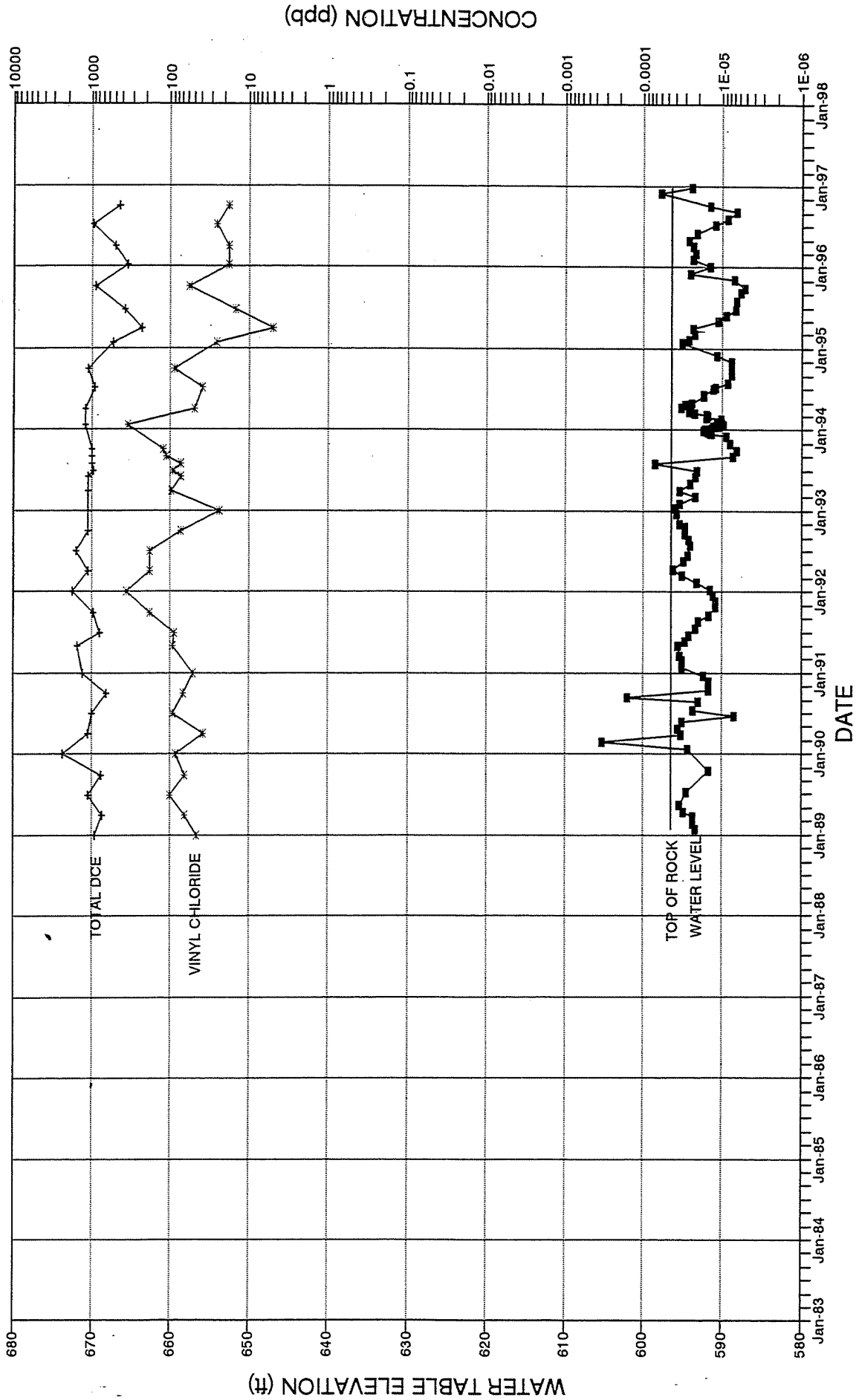
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B22M



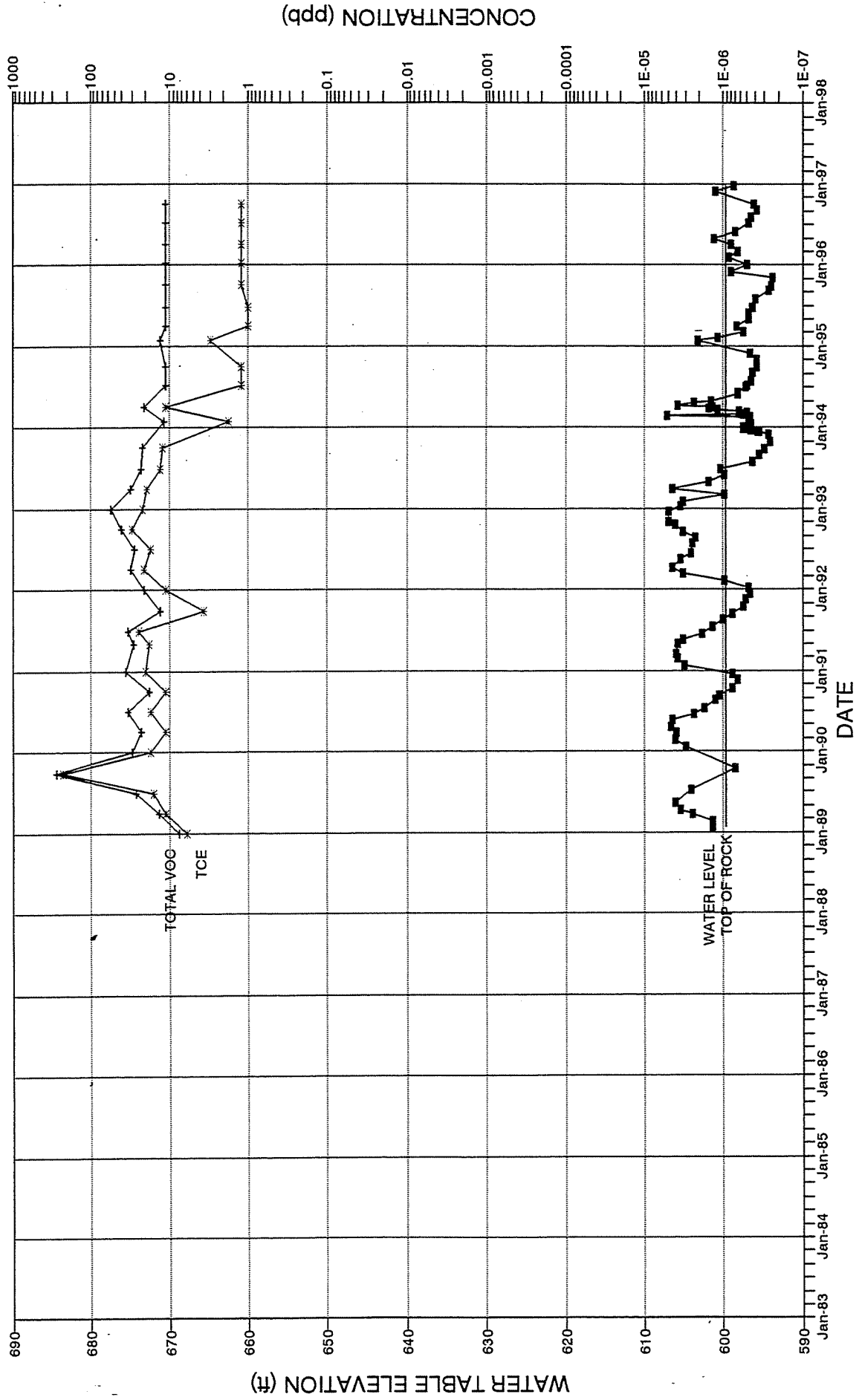
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B23M



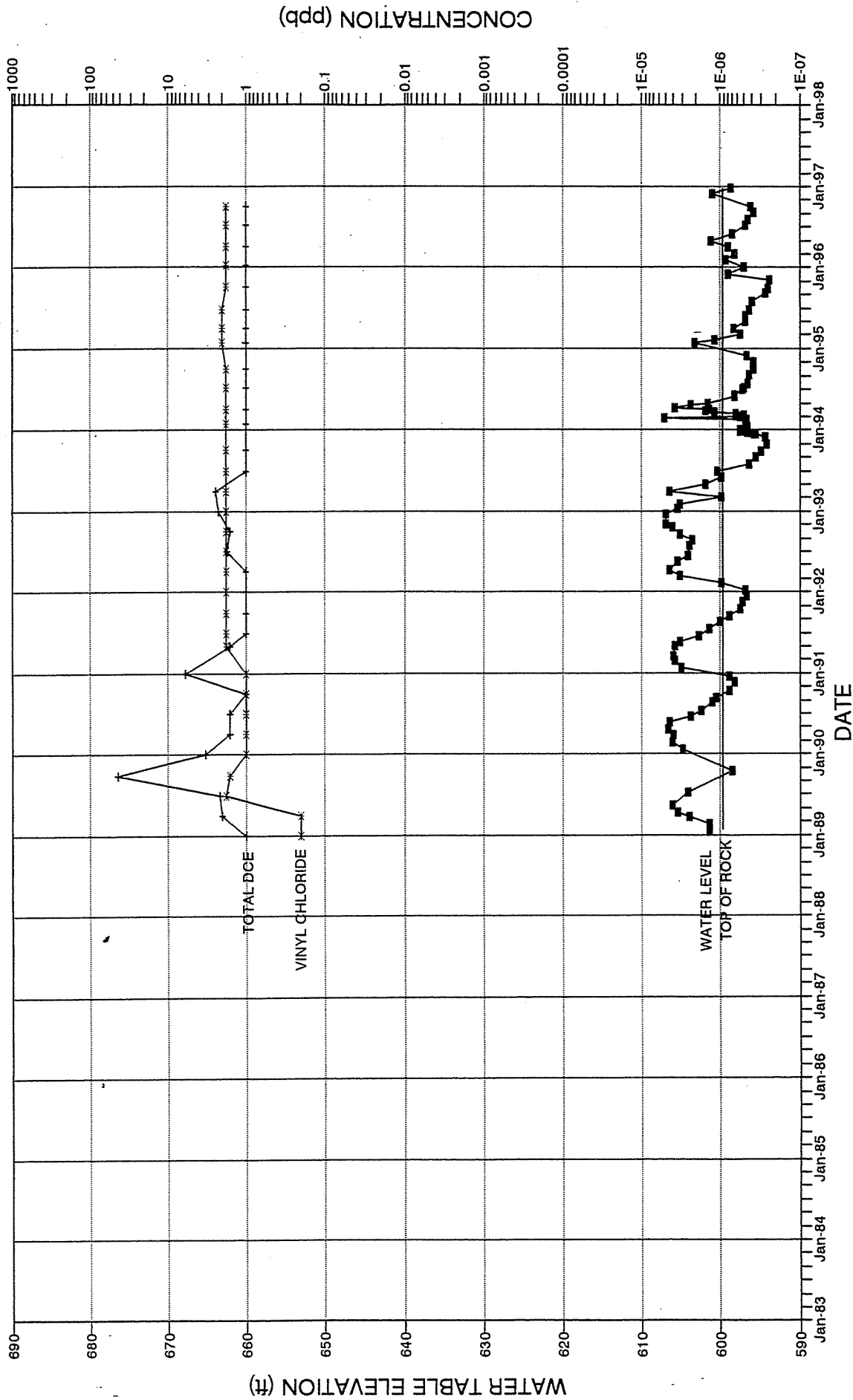
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B23M



WATER LEVEL & CONTAMINANT CONCENTRATION WELL B24M

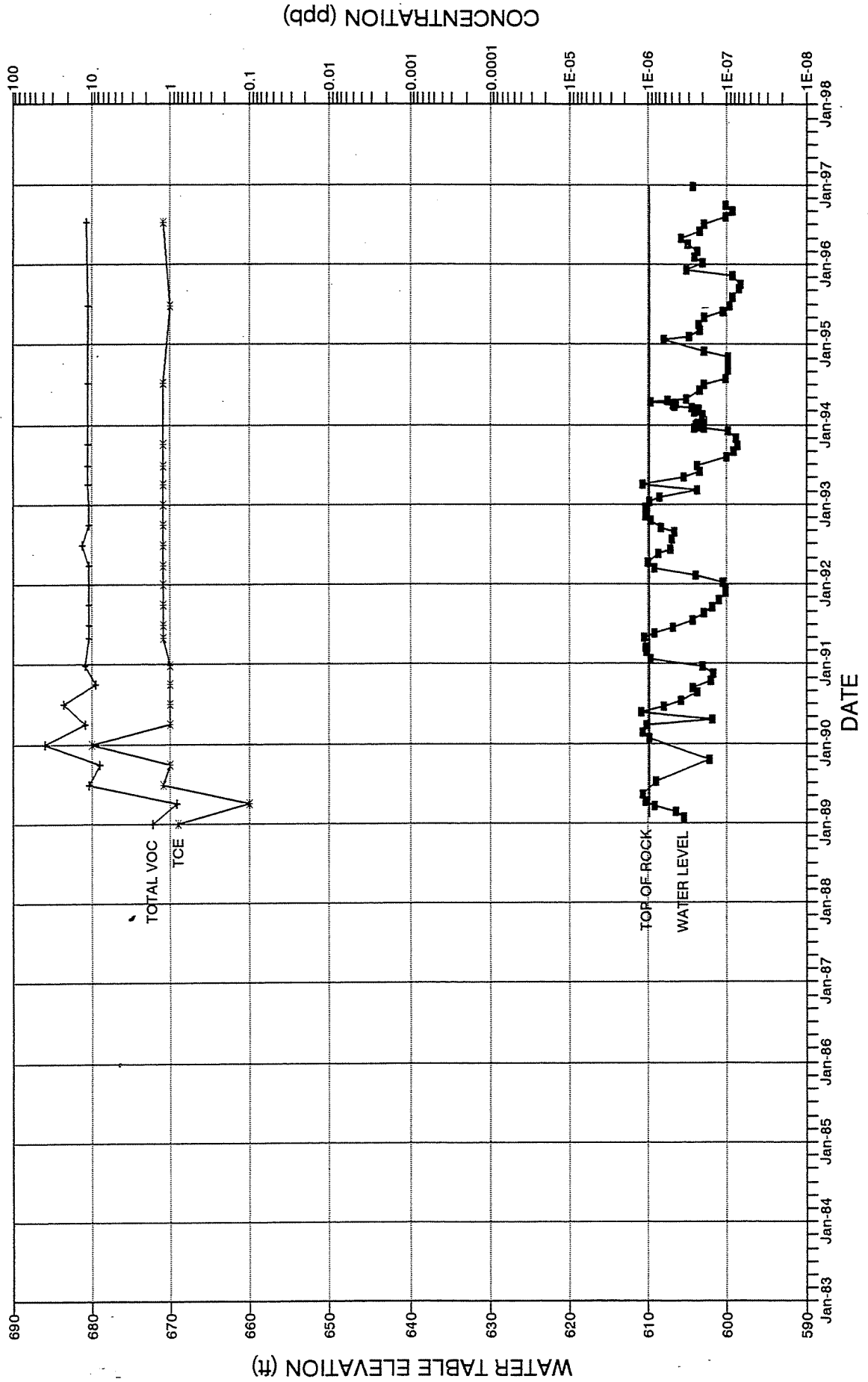


WATER LEVEL & CONTAMINANT CONCENTRATION WELL B24M

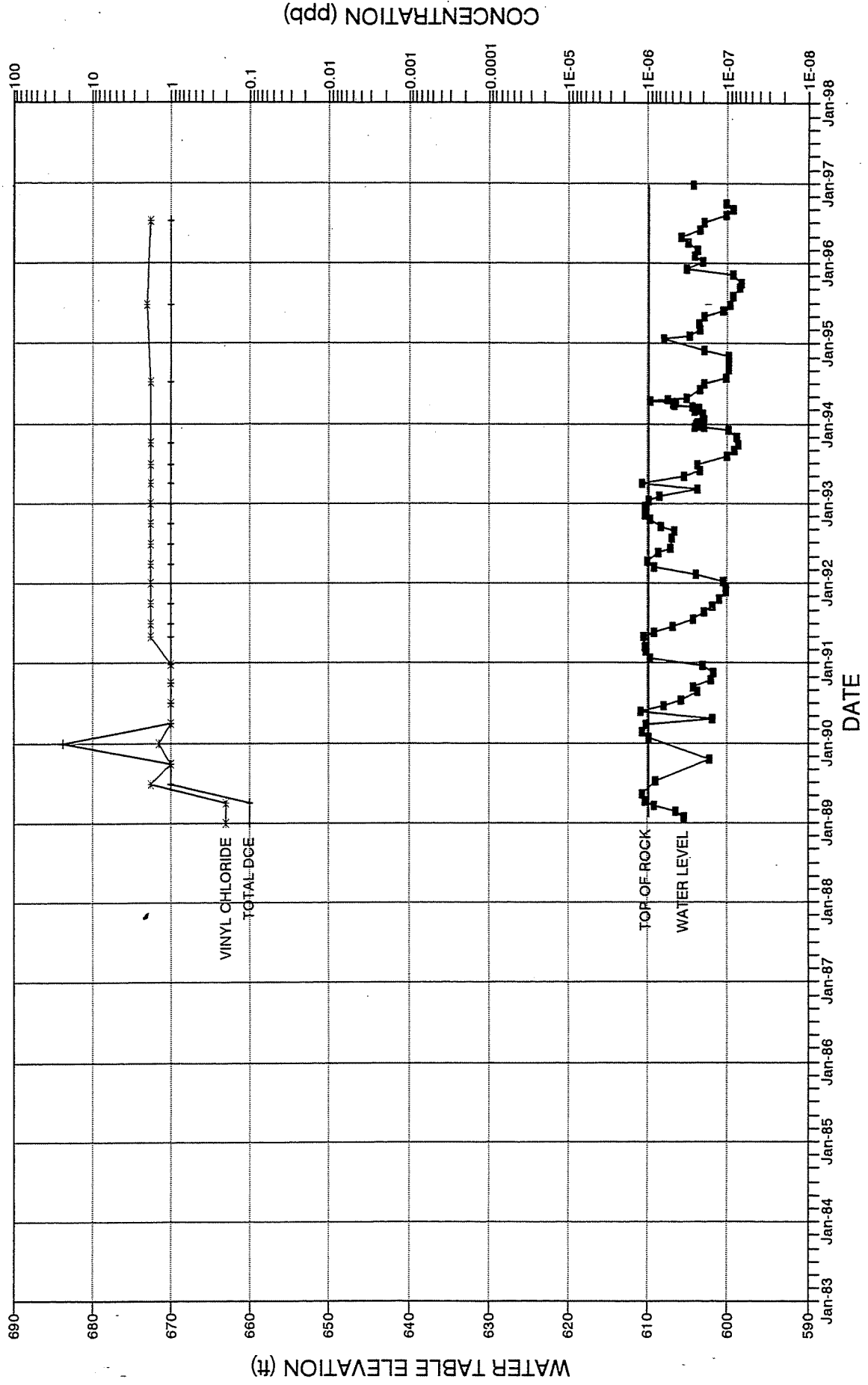


WATER LEVEL & CONTAMINANT CONCENTRATION

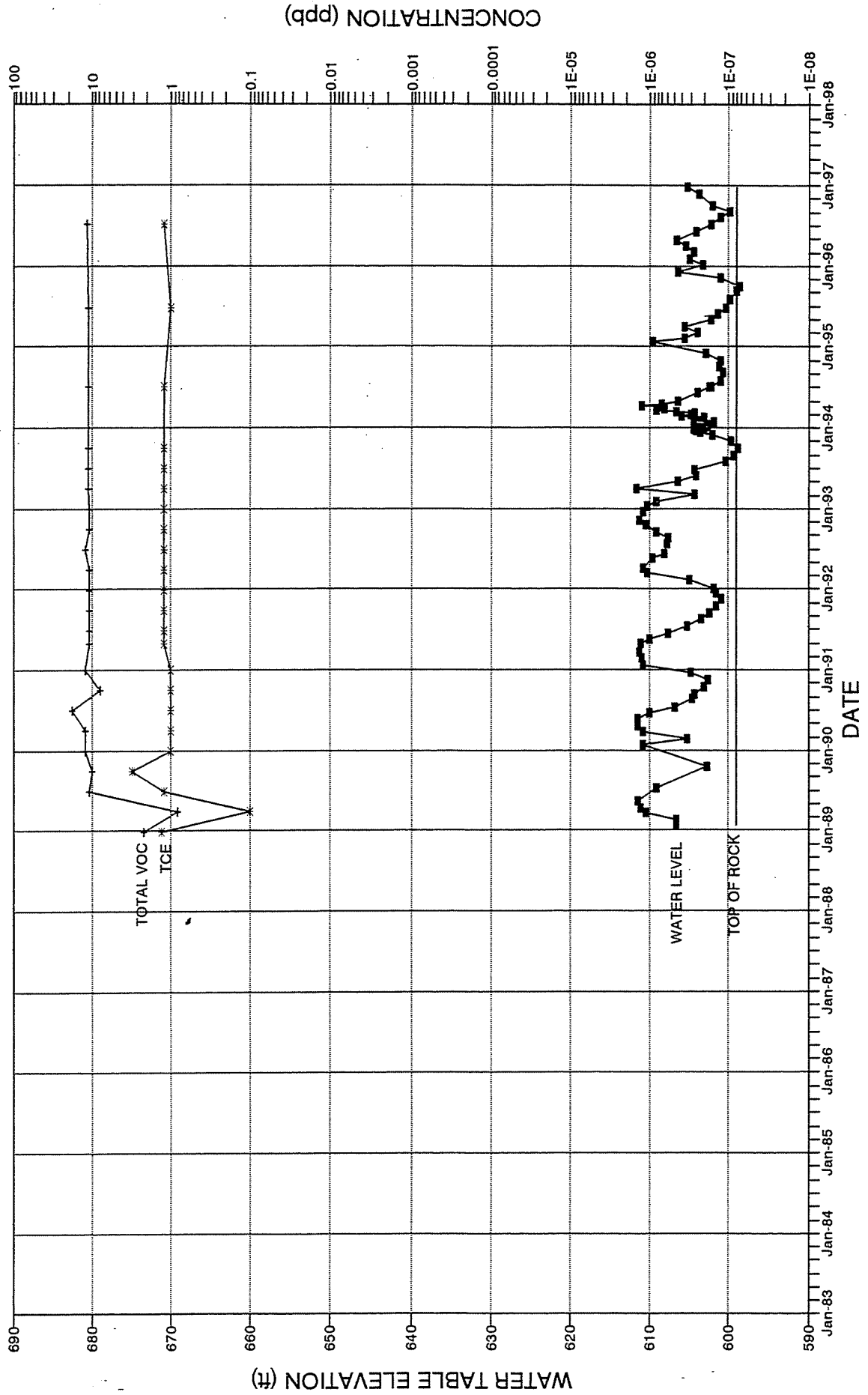
WELL B25M



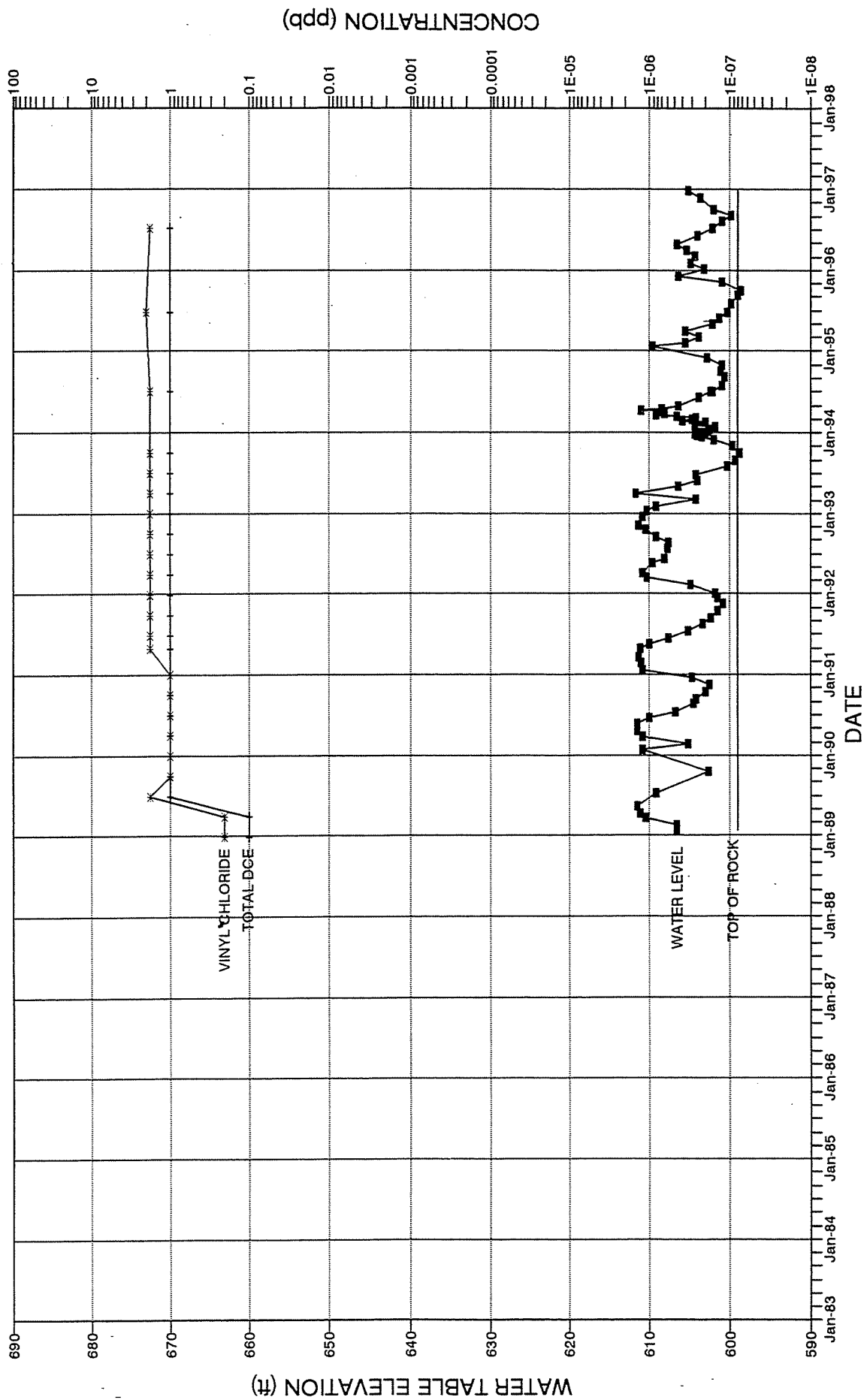
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B25M



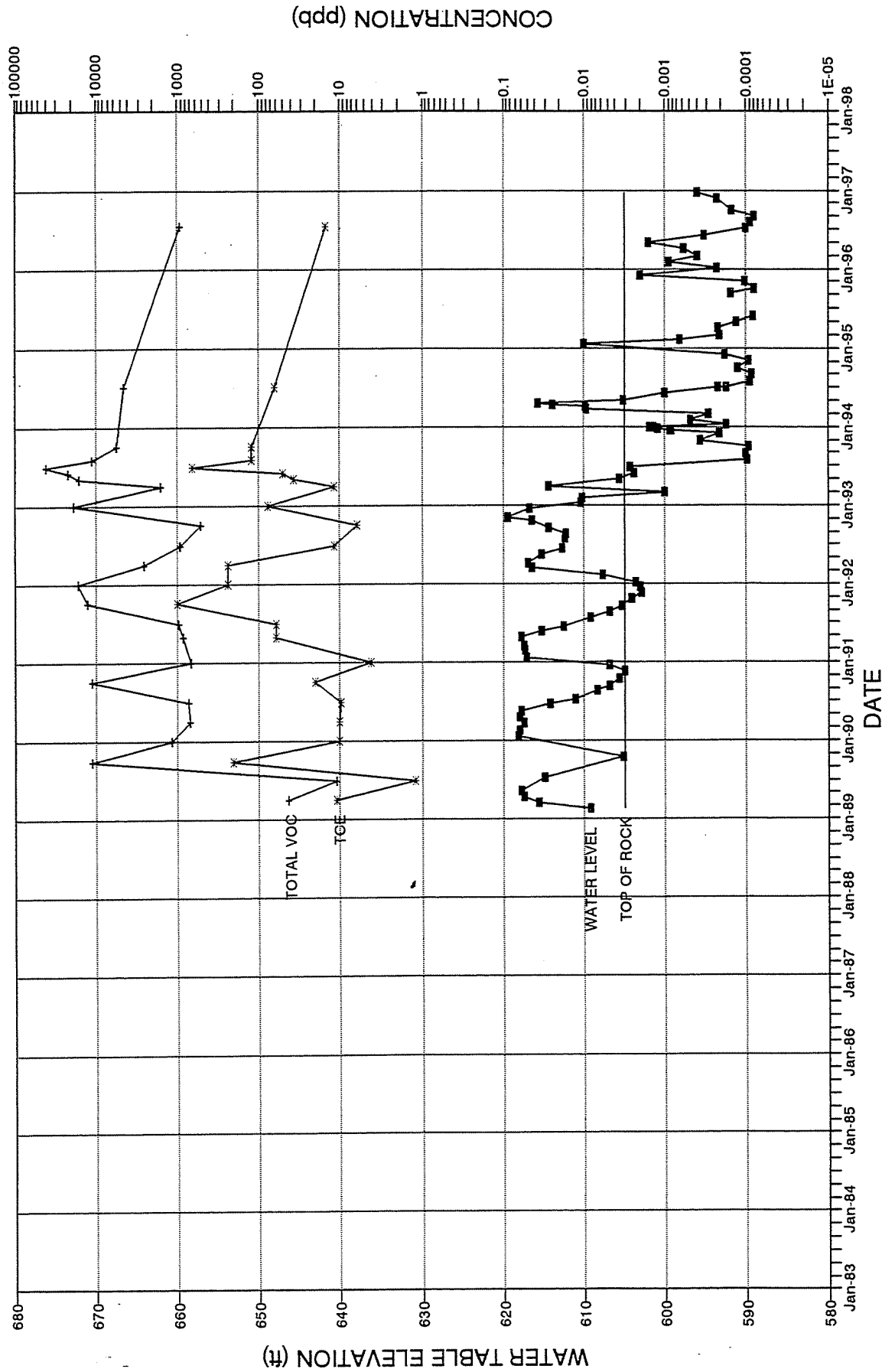
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B26M



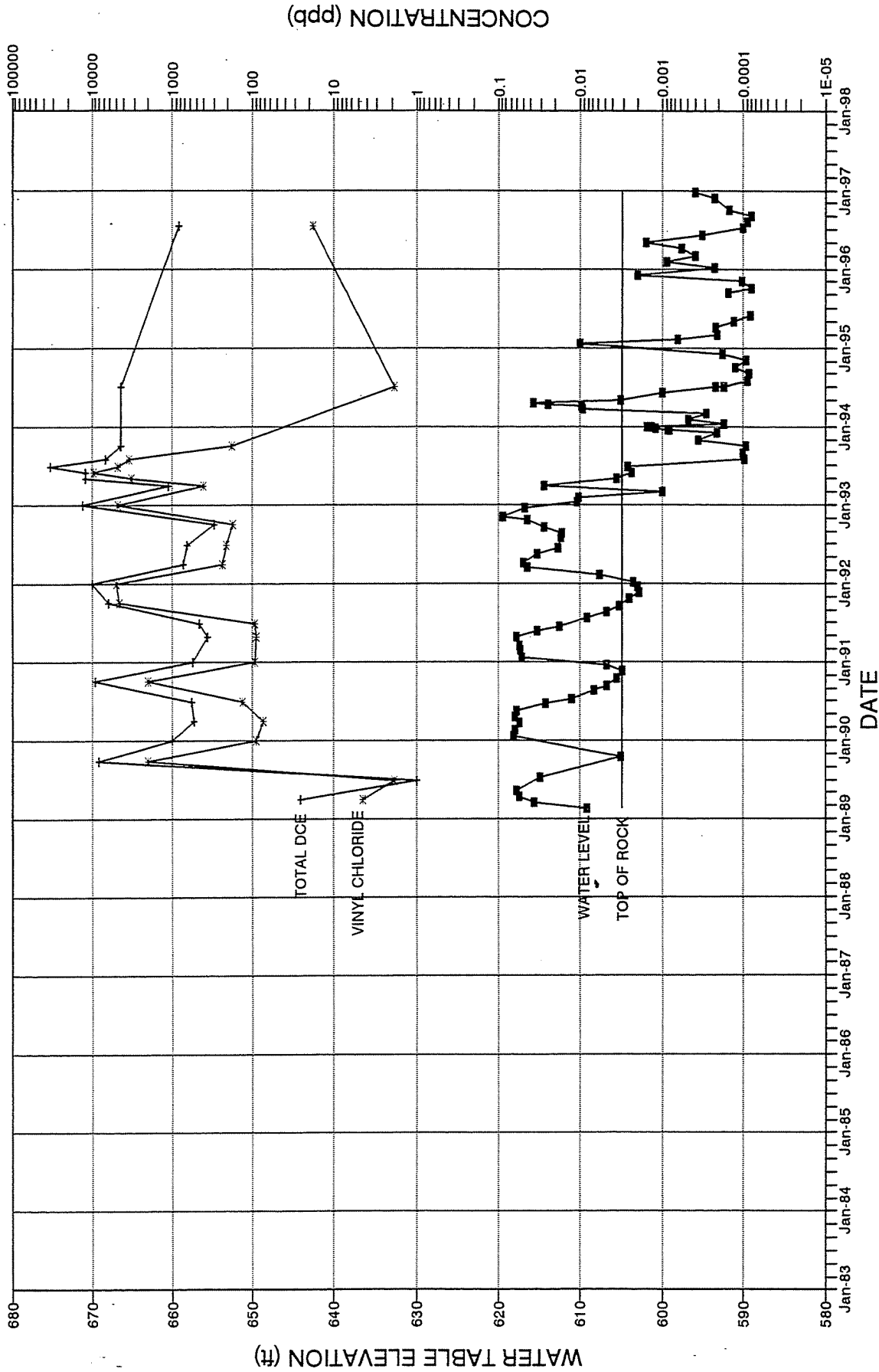
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B26M



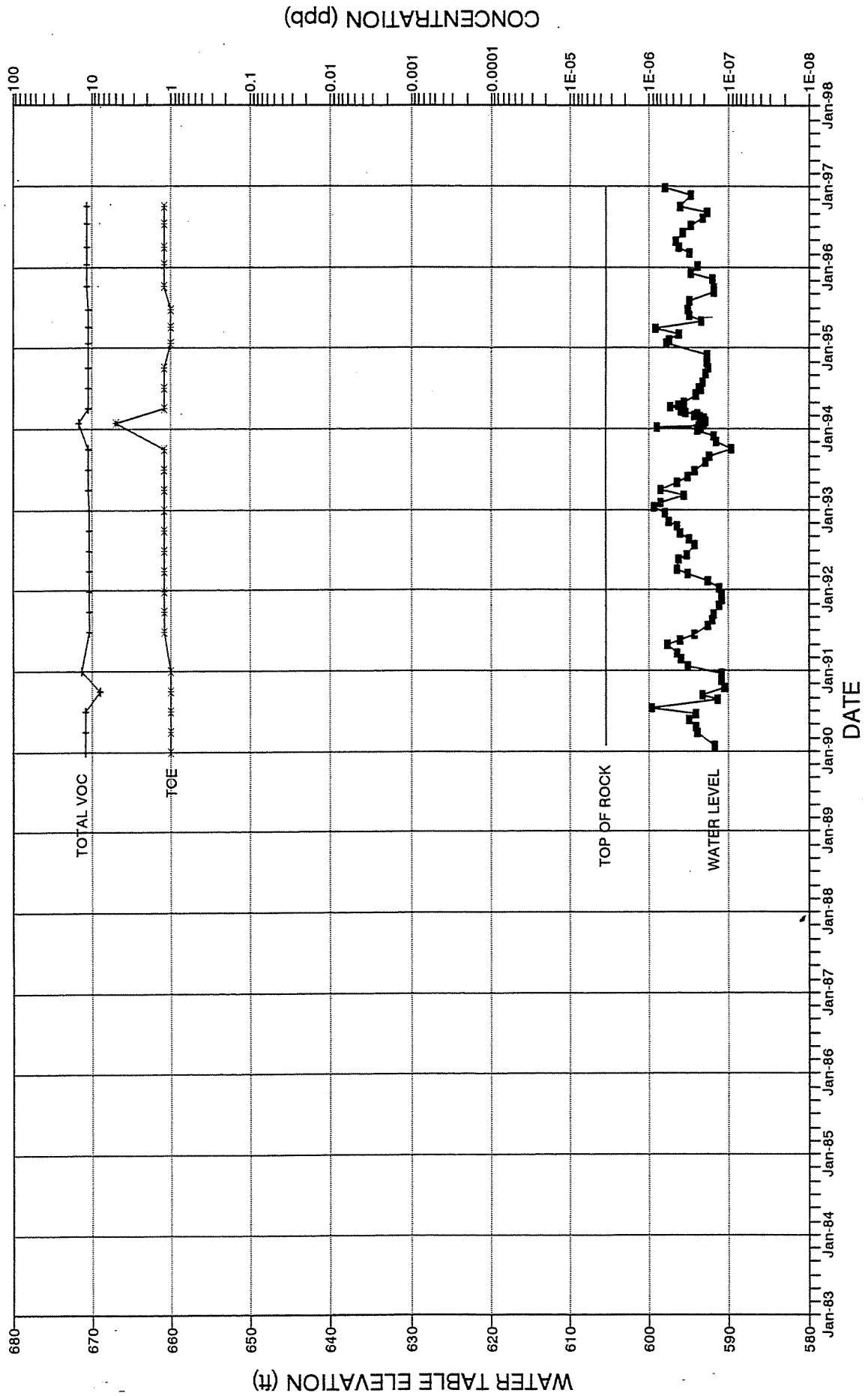
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B27M



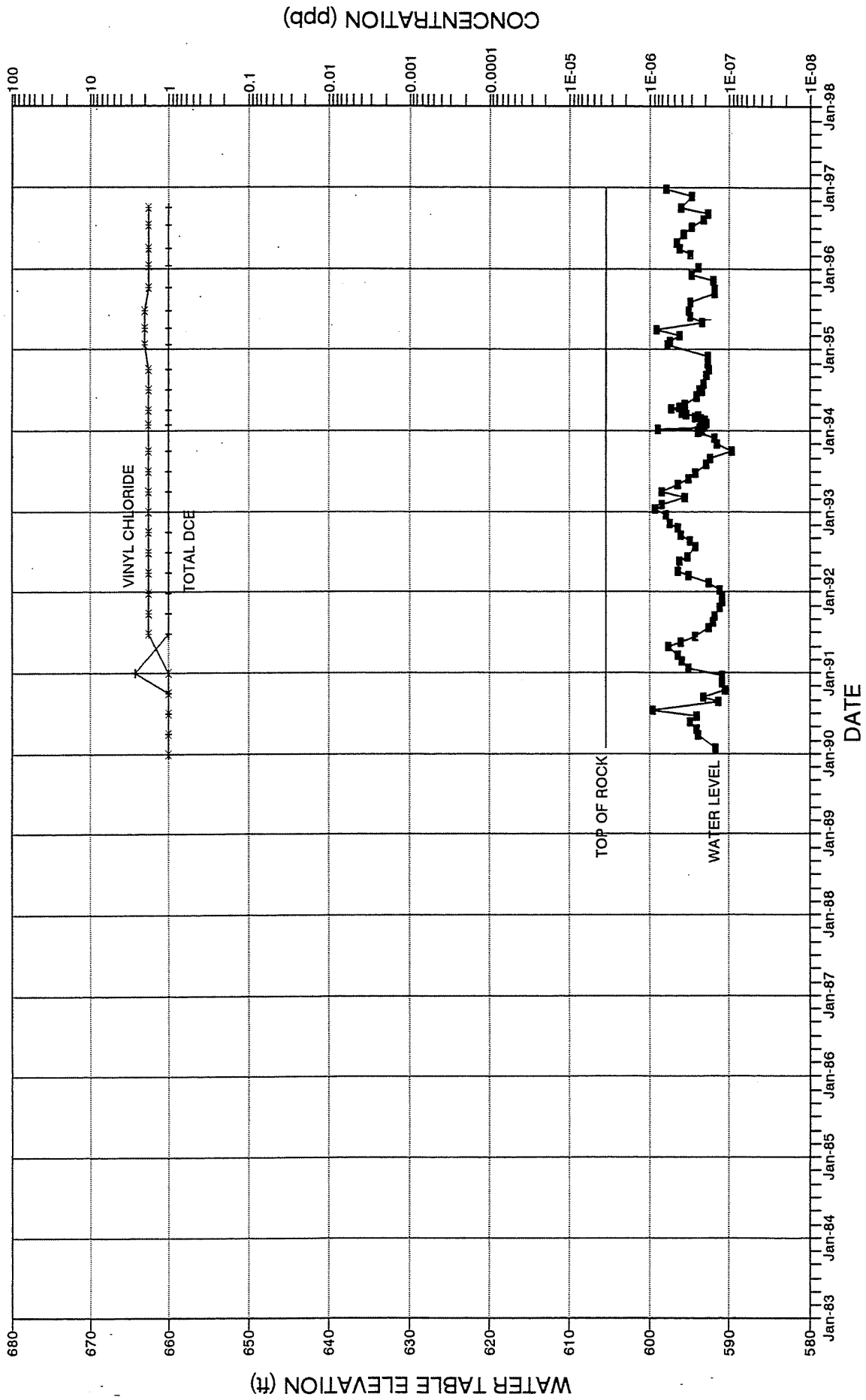
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B27M



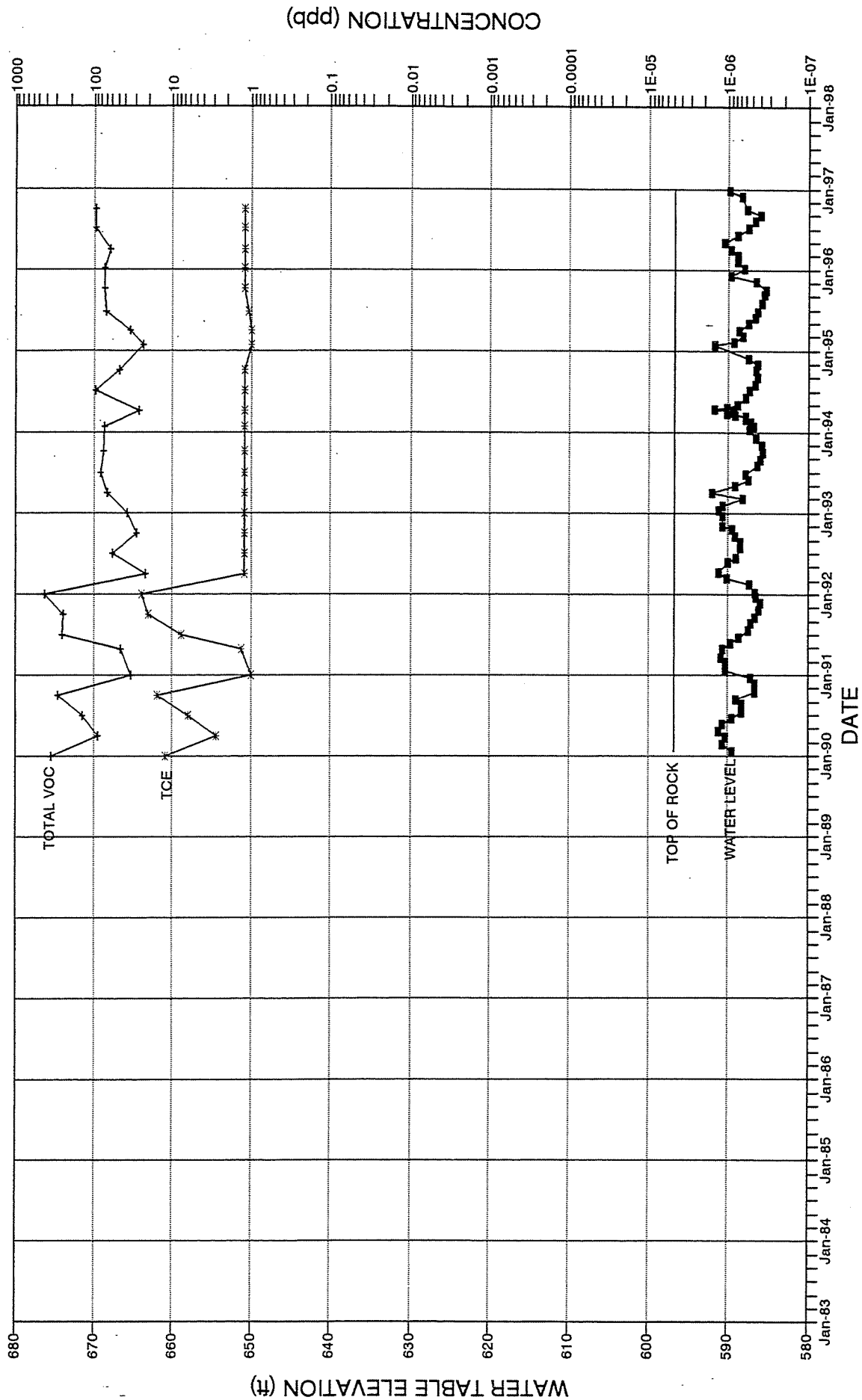
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B28M



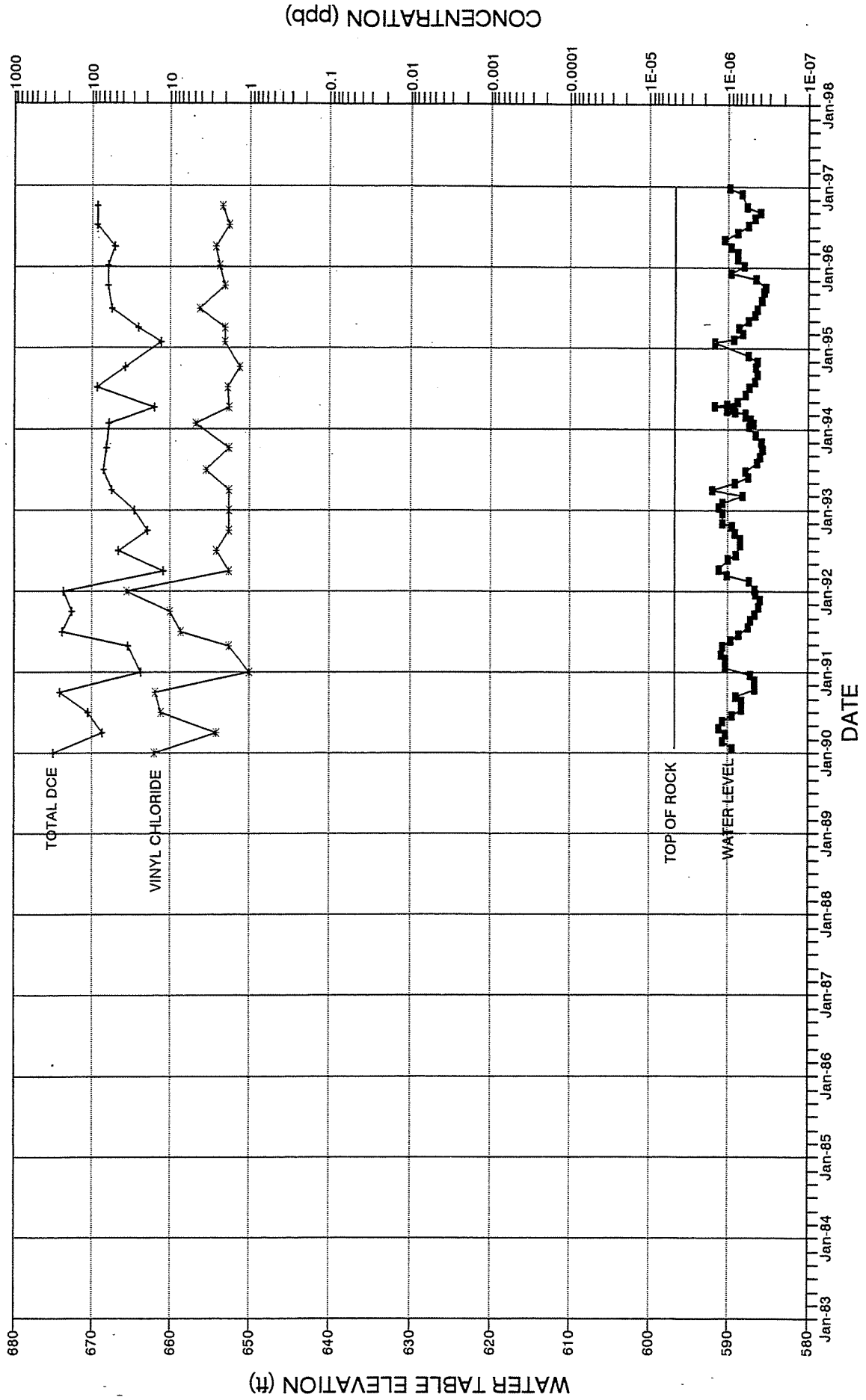
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B28M



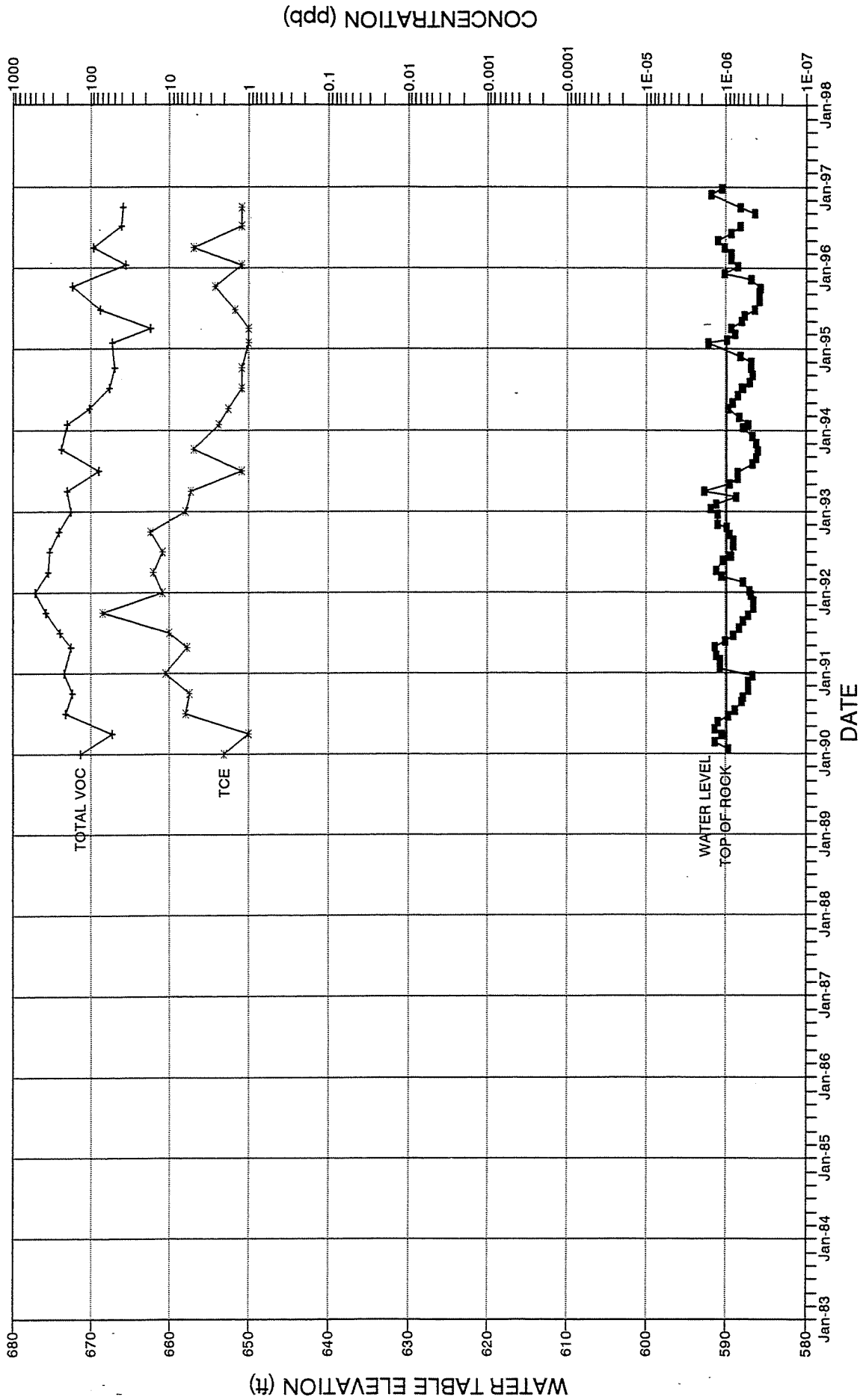
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B29M



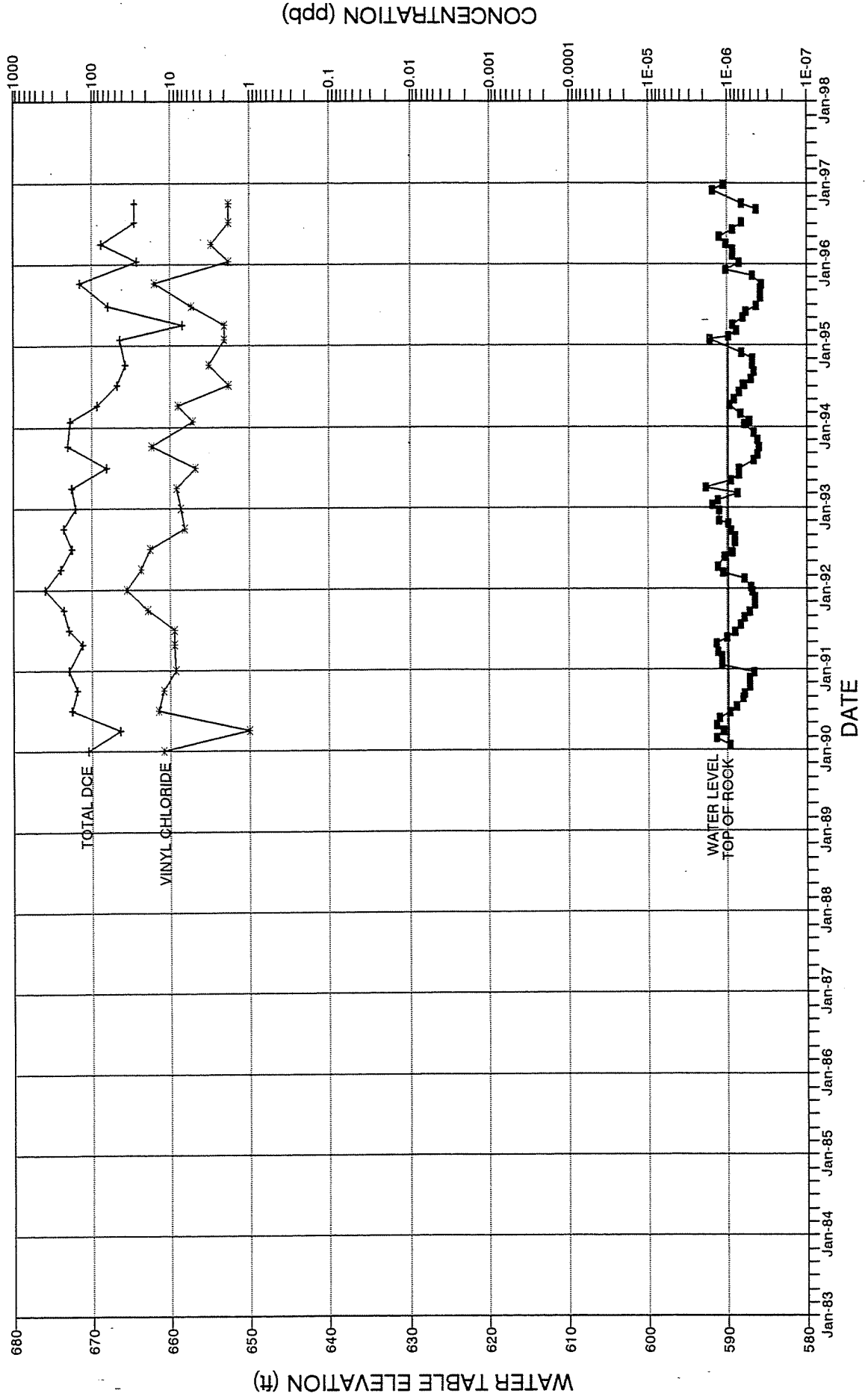
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B29M



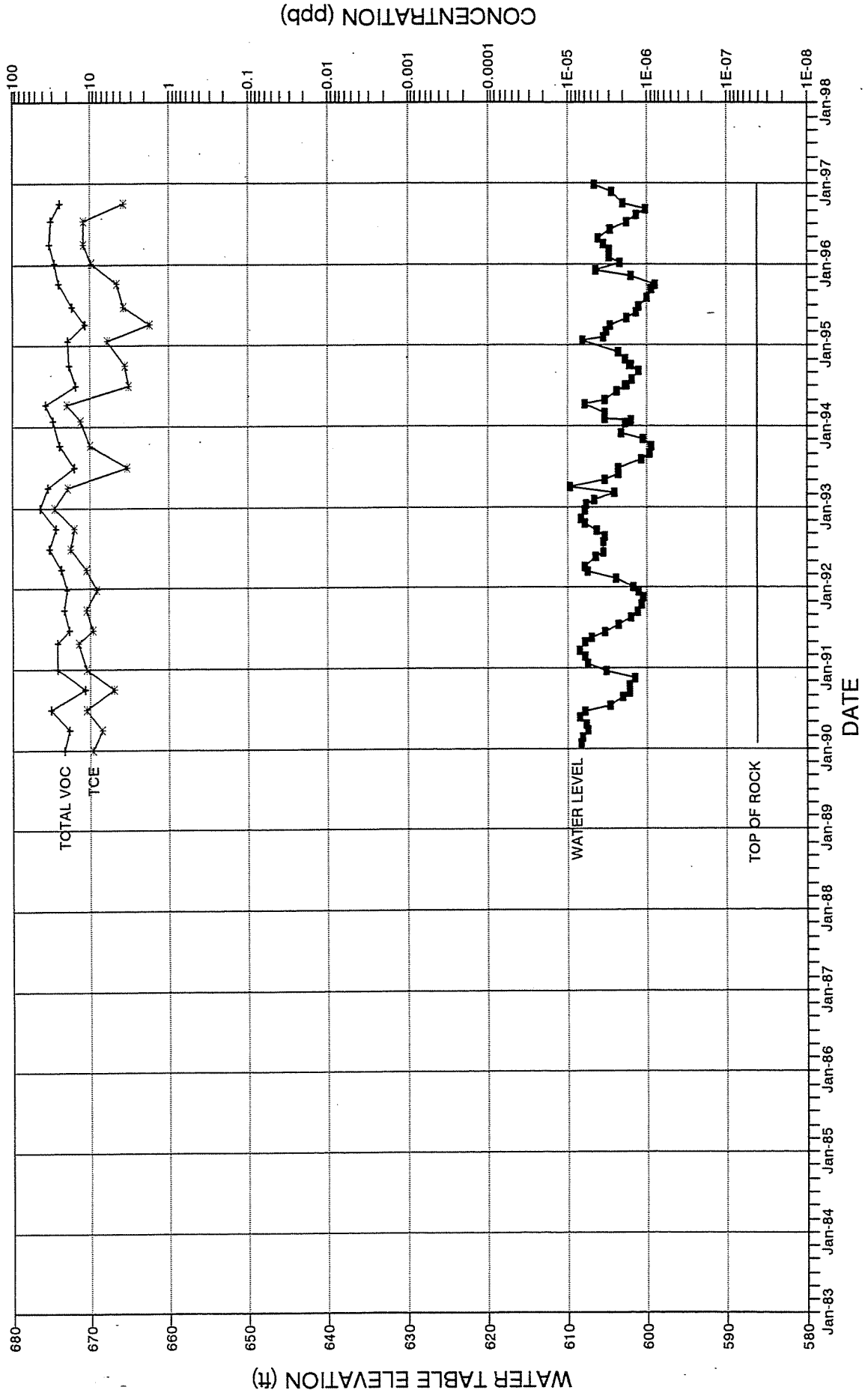
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B30M



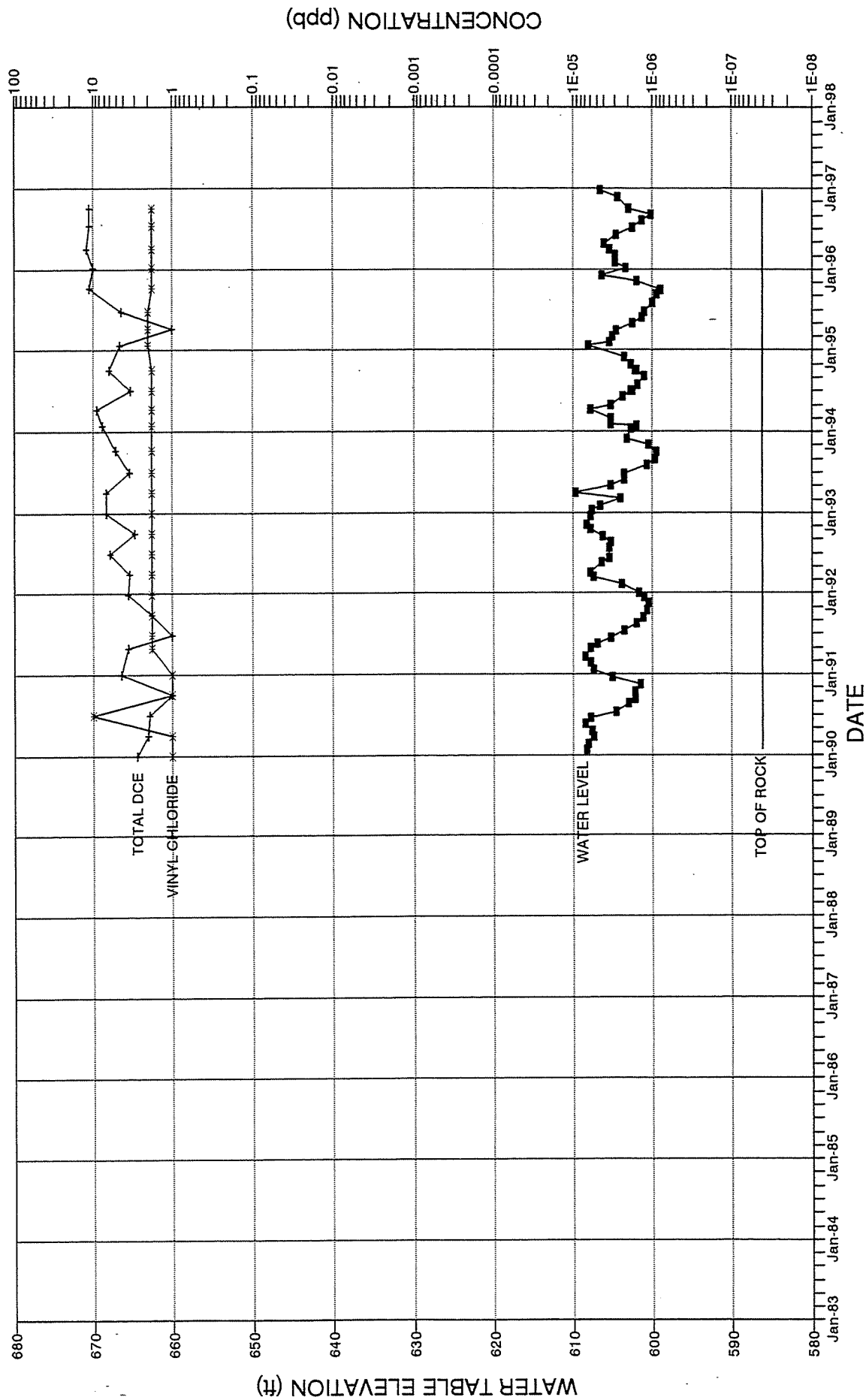
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B30M



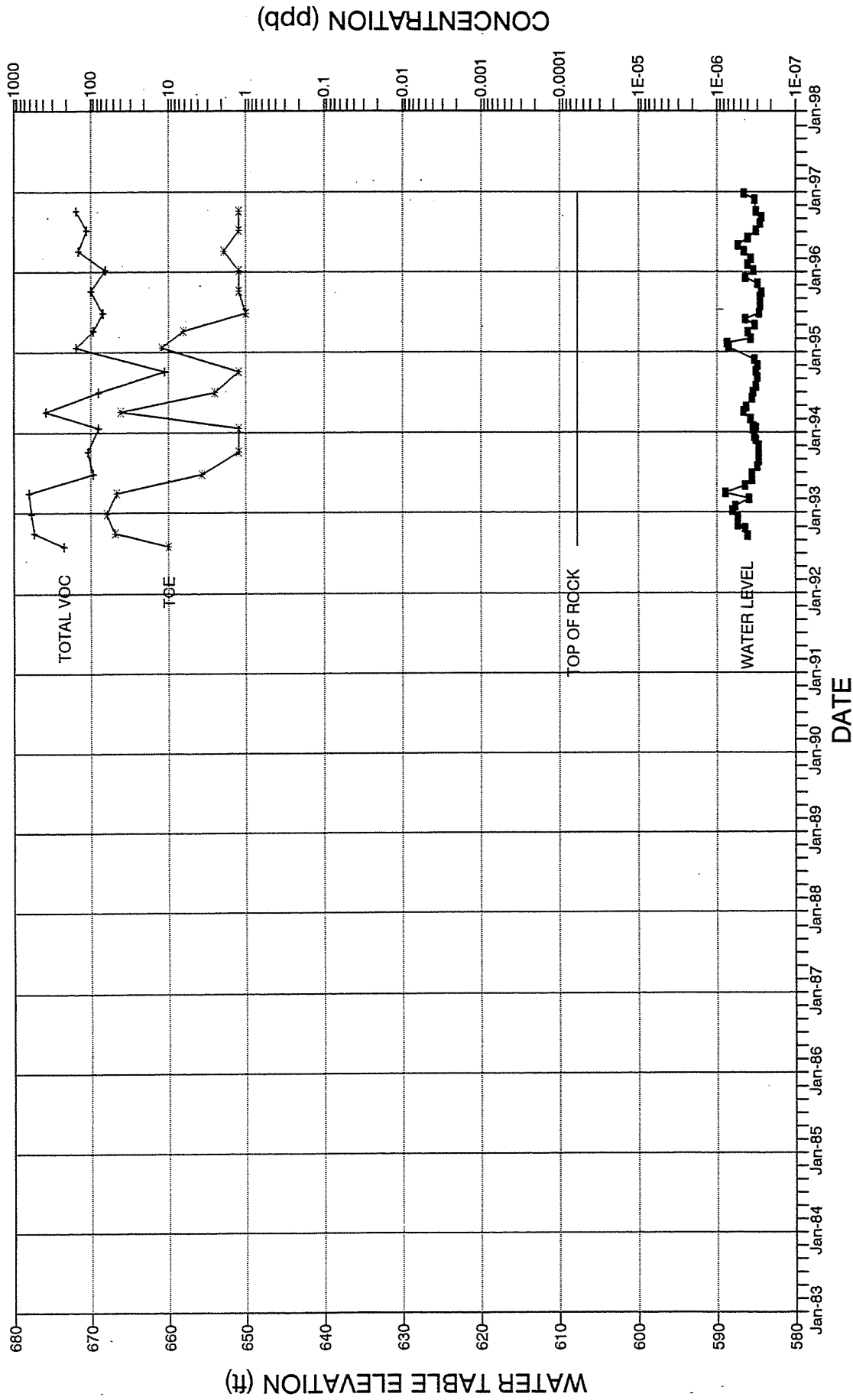
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B31M



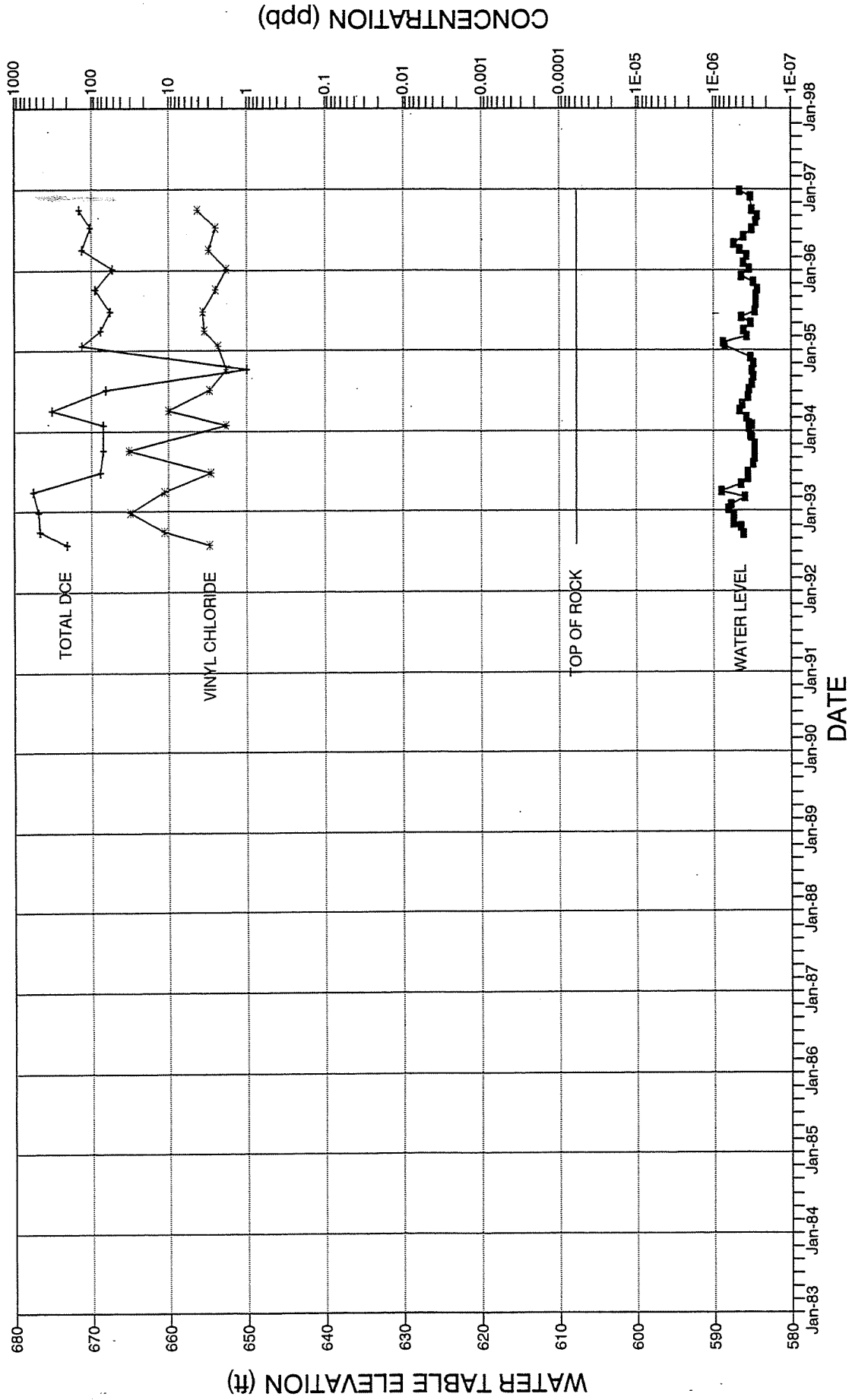
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B31M



WATER LEVEL & CONTAMINANT CONCENTRATION WELL B32M

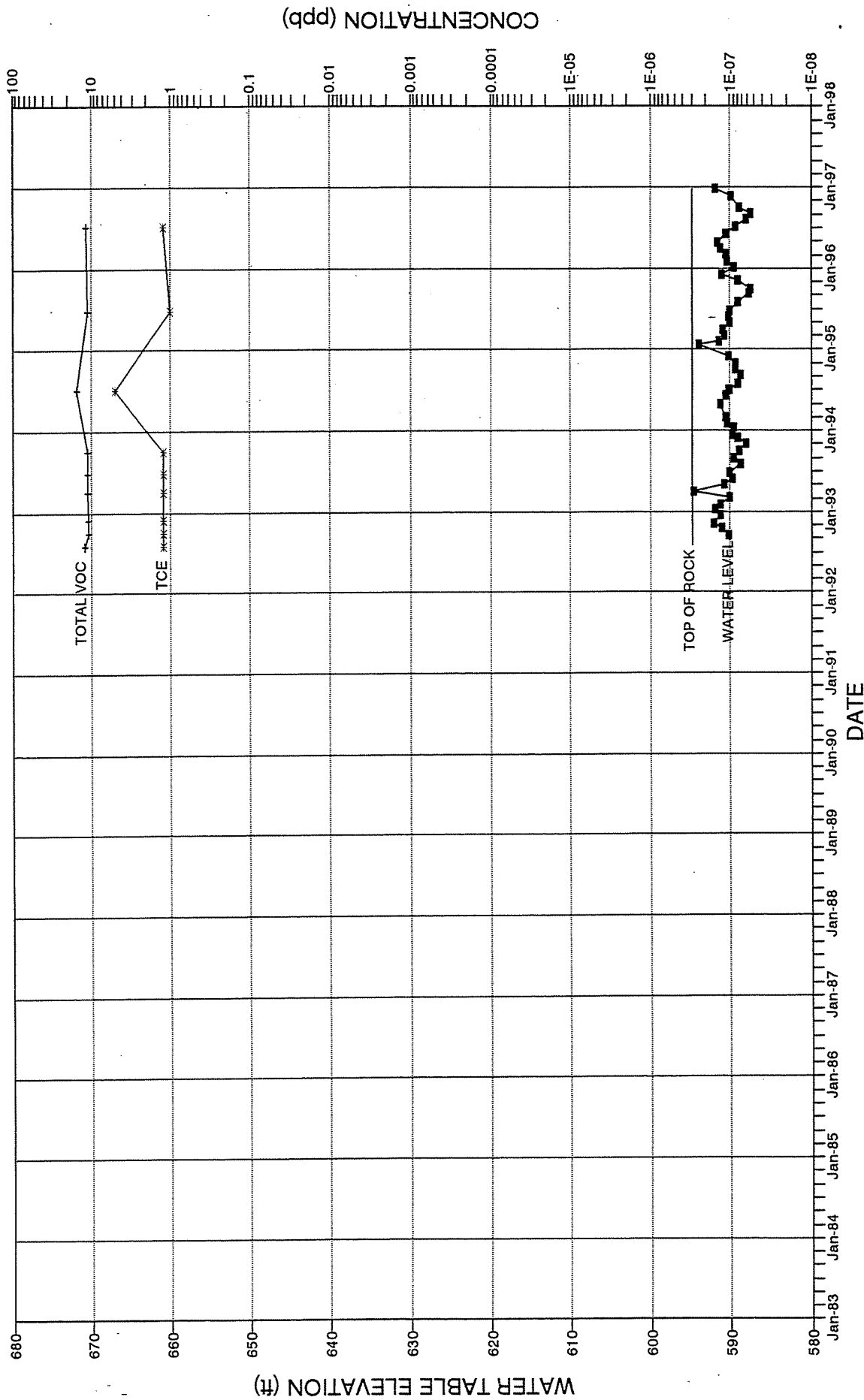


WATER LEVEL & CONTAMINANT CONCENTRATION WELL B32M



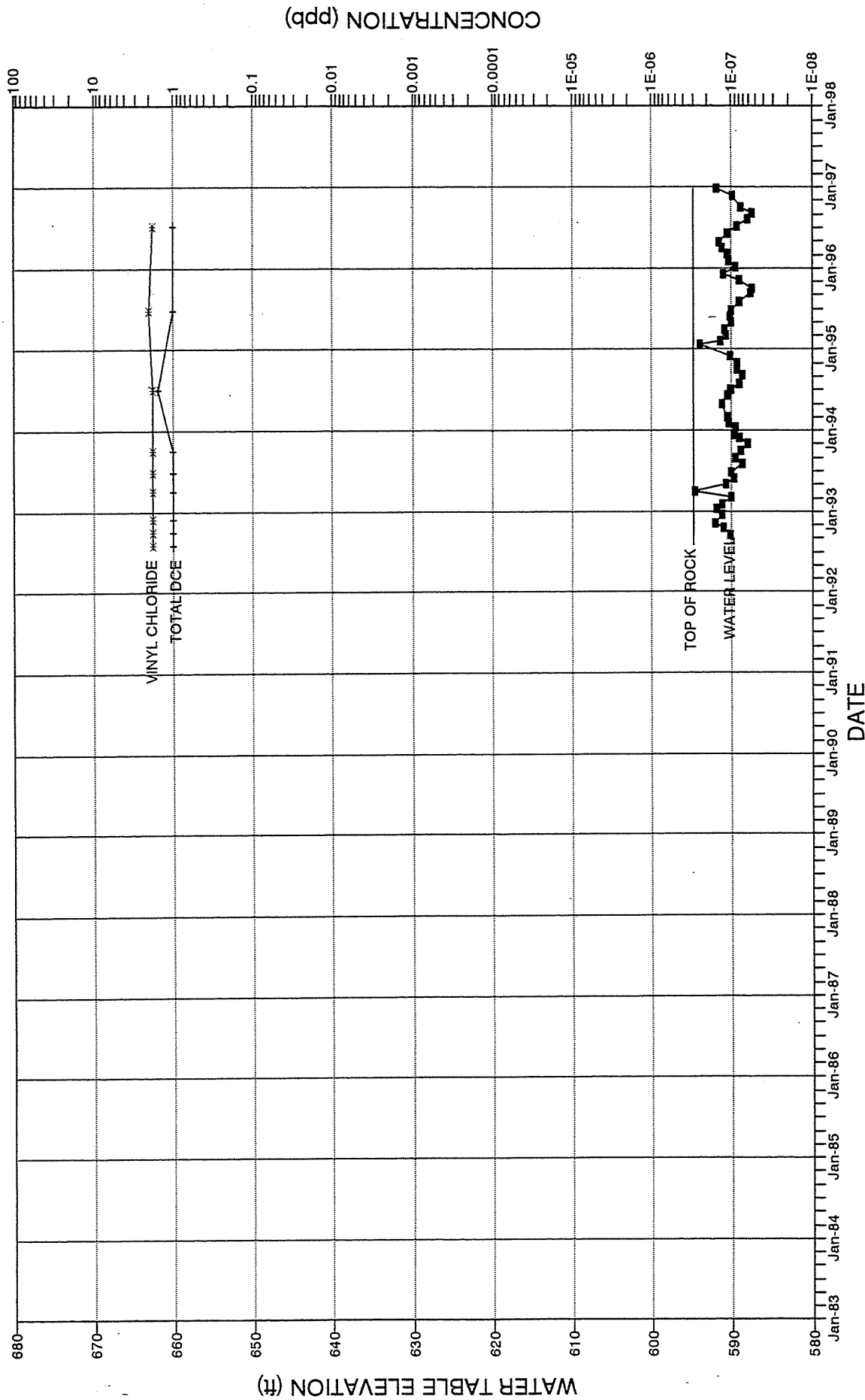
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B33M



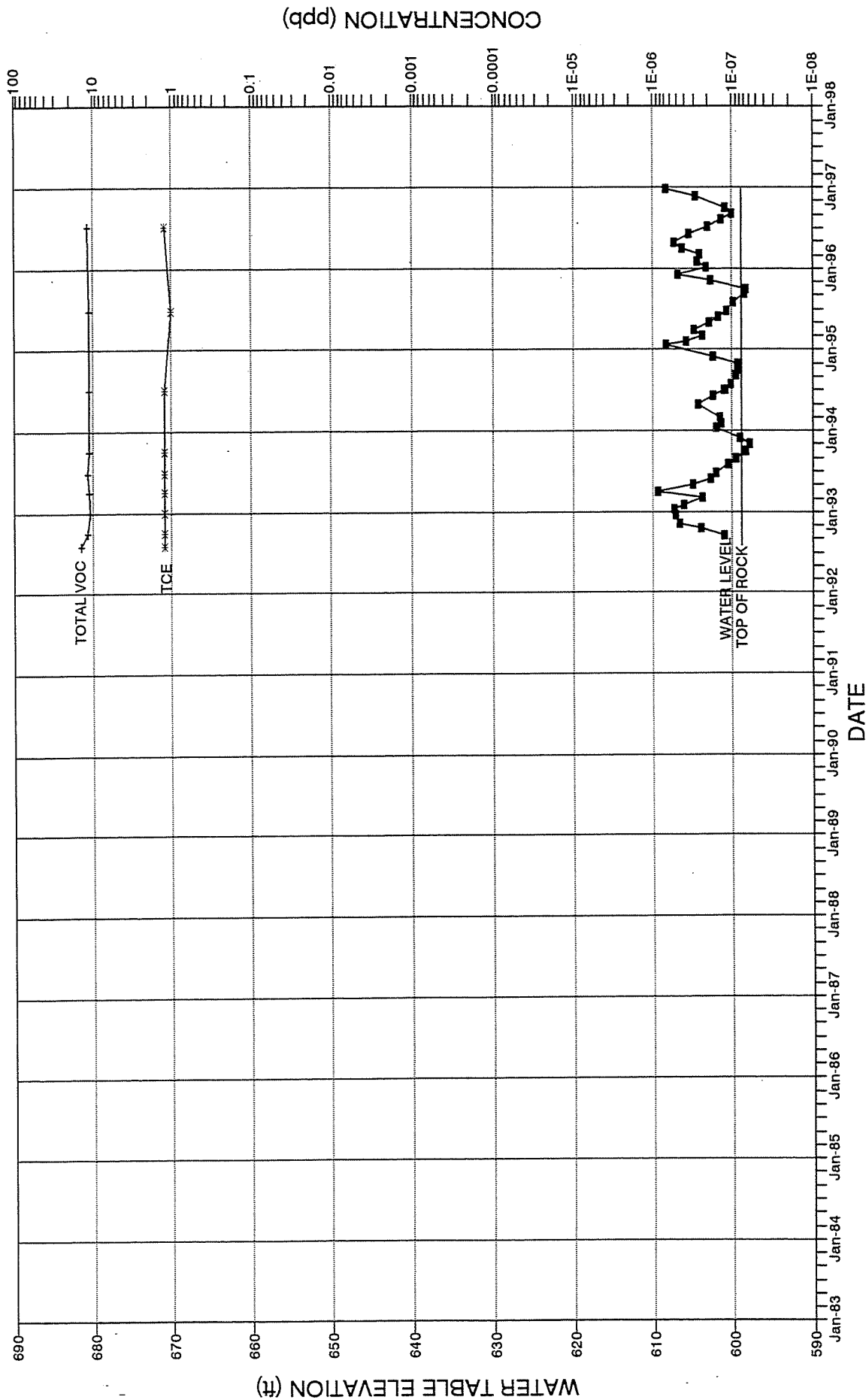
WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B33M

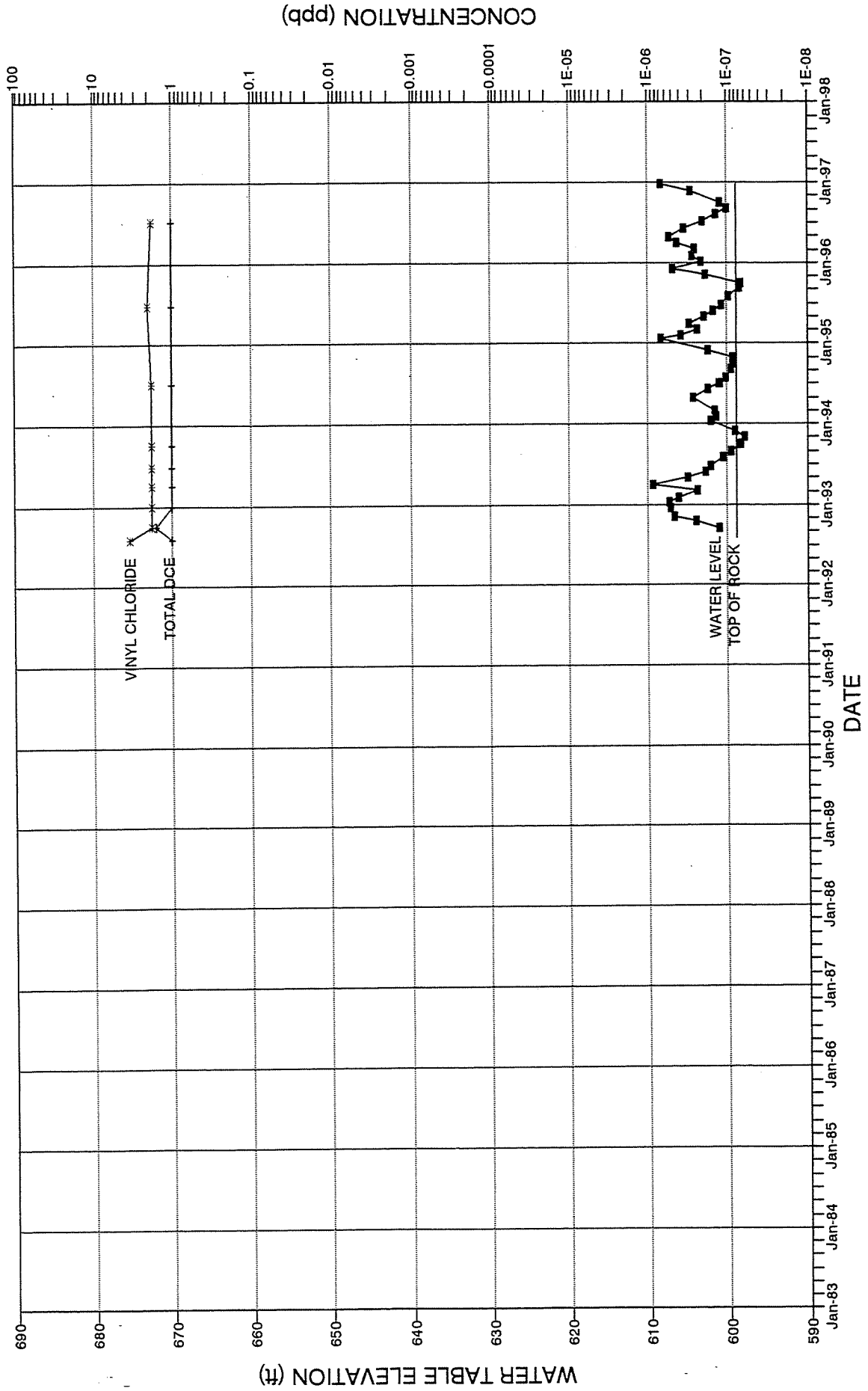


WATER LEVEL & CONTAMINANT CONCENTRATION

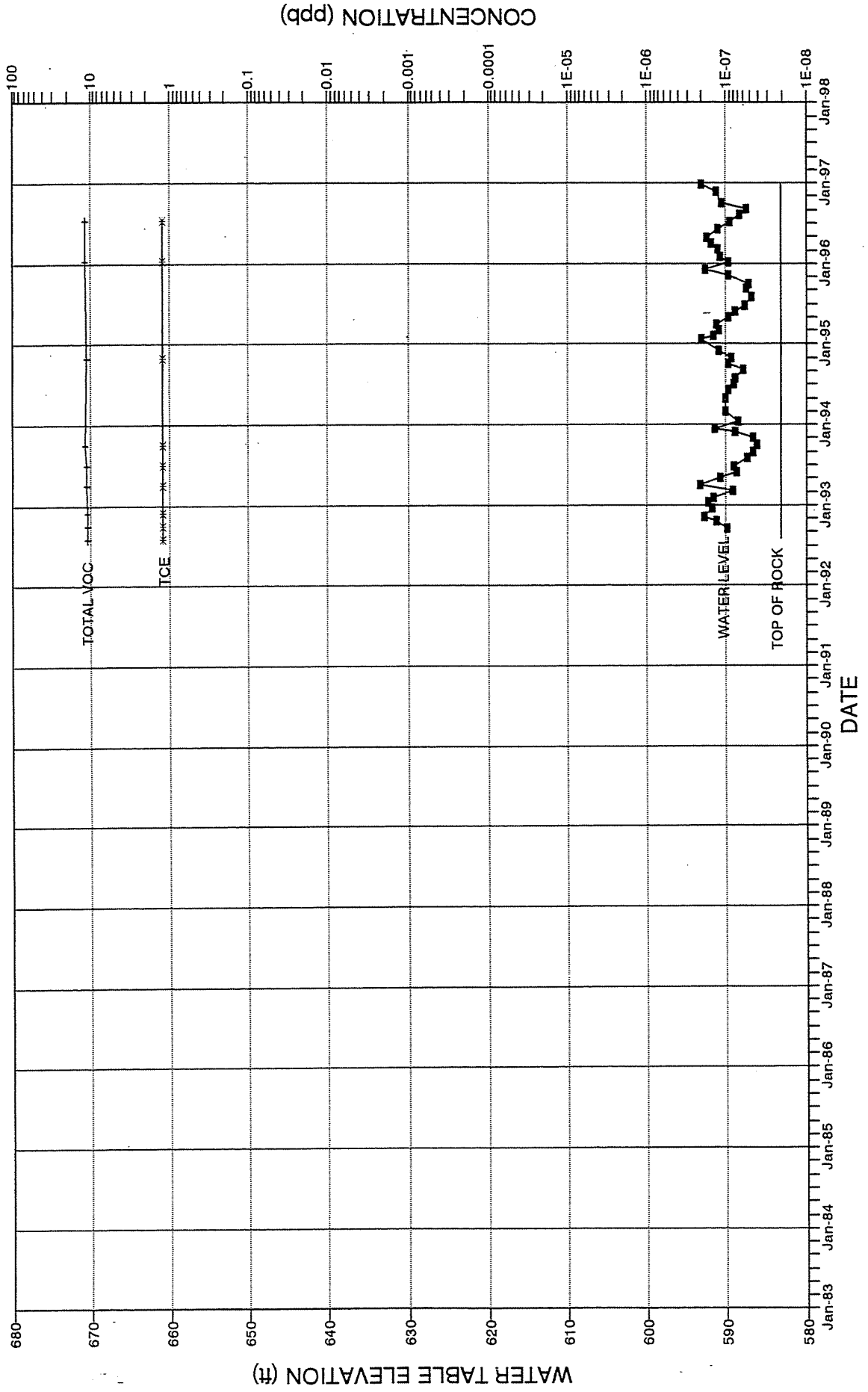
WELL B34M



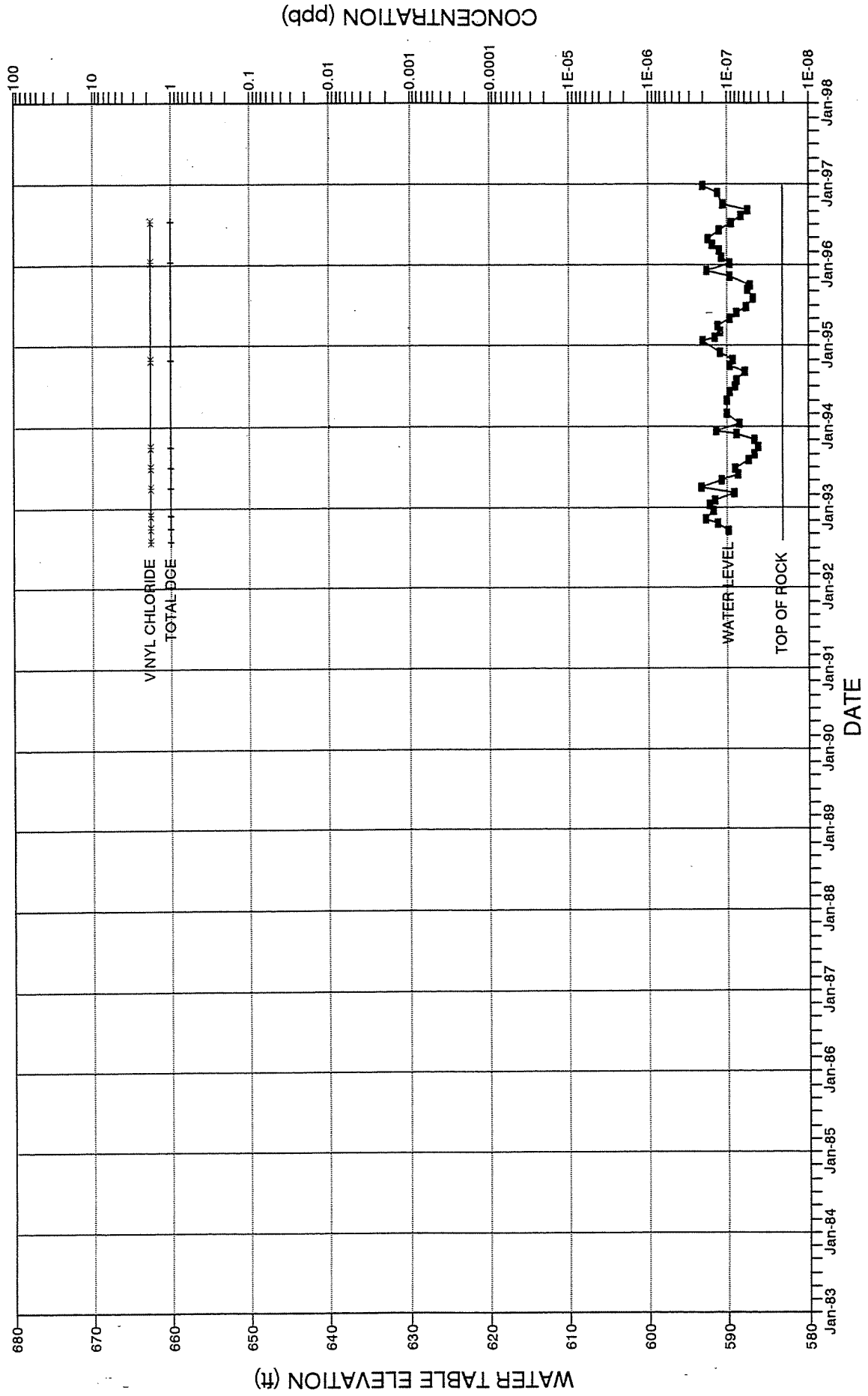
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B34M



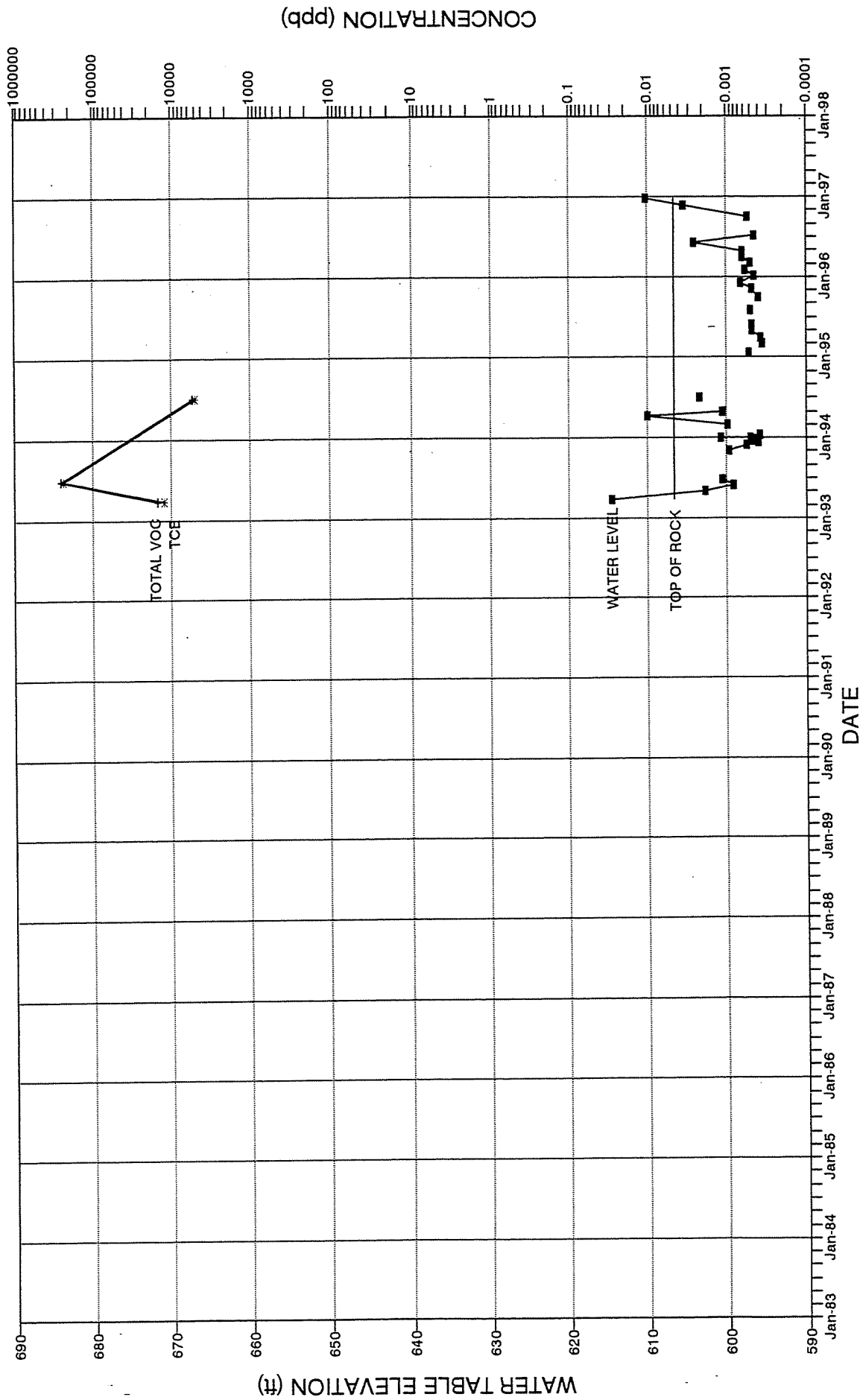
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B35M



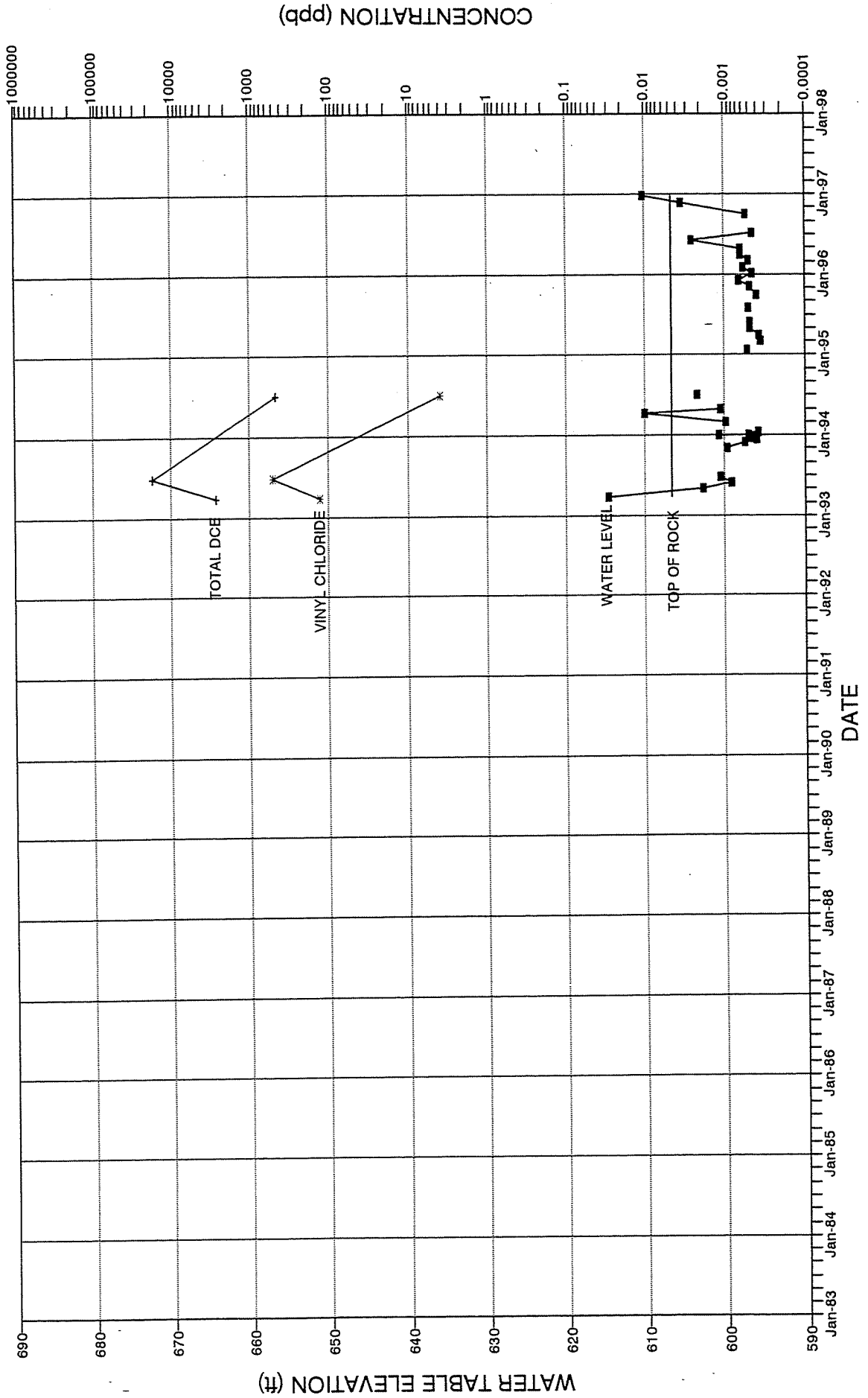
WATER LEVEL & CONTAMINANT CONCENTRATION WELL B35M



WATER LEVEL & CONTAMINANT CONCENTRATION WELL B37M

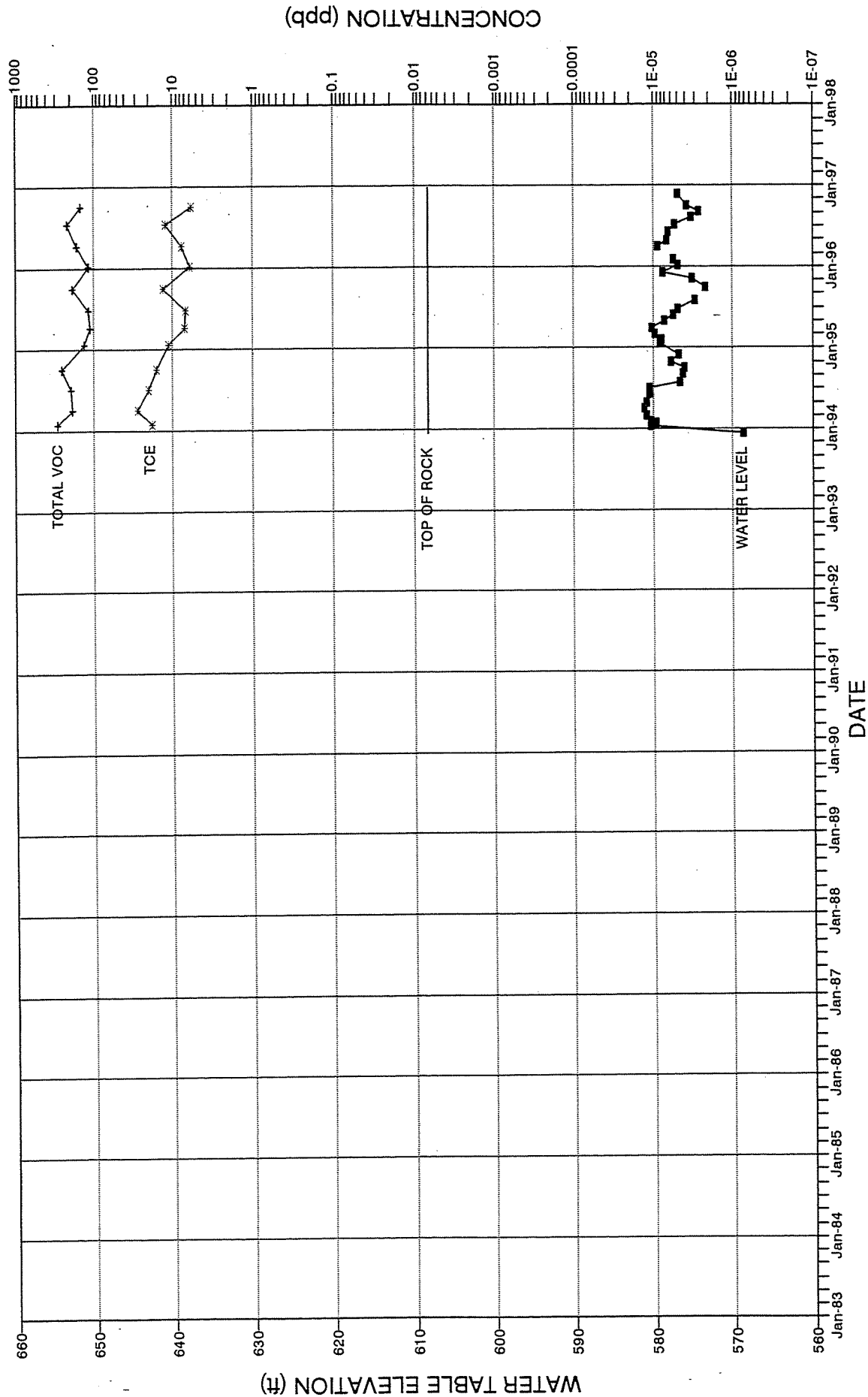


WATER LEVEL & CONTAMINANT CONCENTRATION WELL B37M

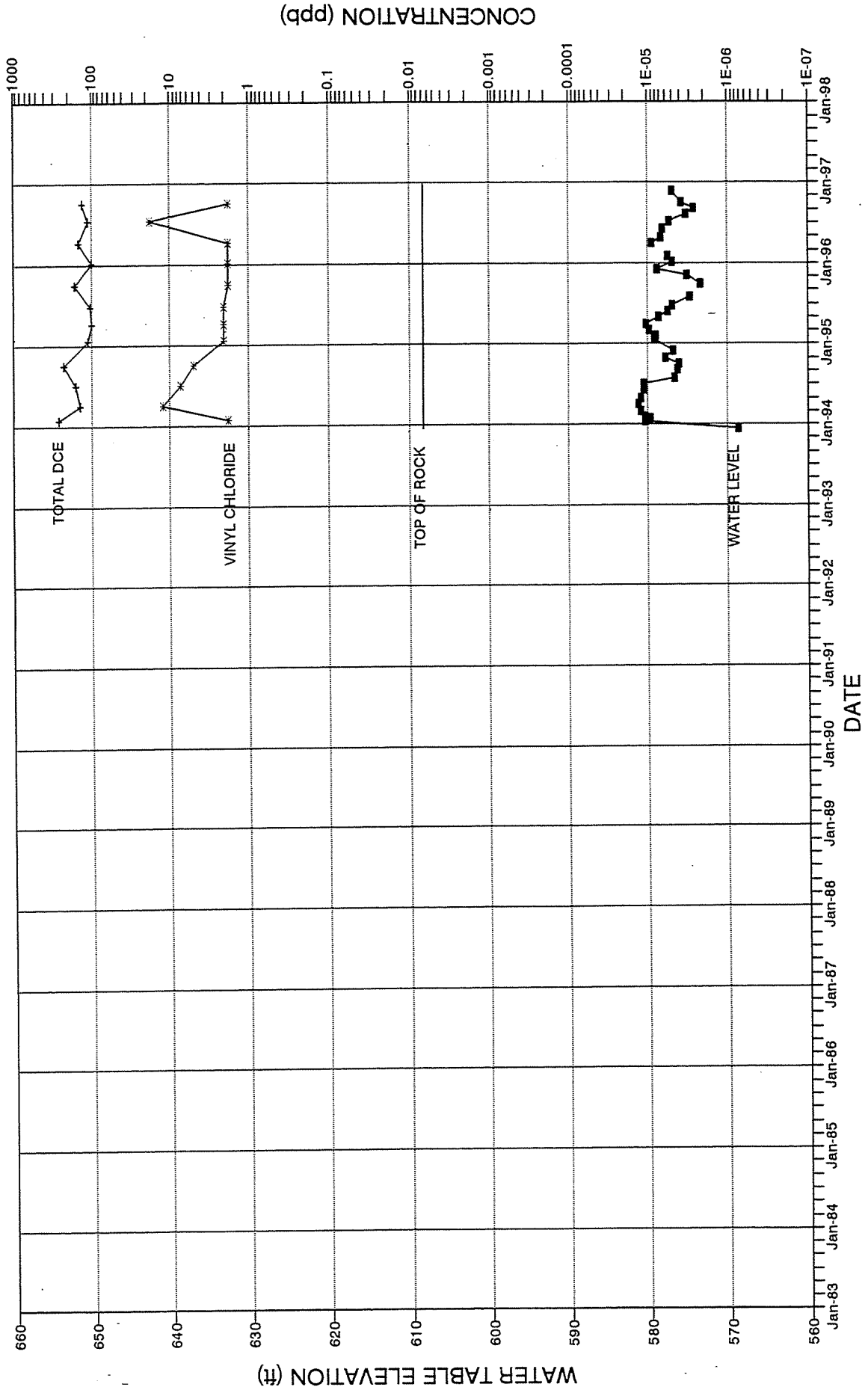


WATER LEVEL & CONTAMINANT CONCENTRATION

WELL B38M



WATER LEVEL & CONTAMINANT CONCENTRATION WELL B38M



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well

P2

CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)

REF ELEV 619.65
TOR ELEV 601

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
05/05/94	605.76	< 12	7.2	26	< 13	270	< 10	38	38	53	750	22	< 3	1194.2
06/04/94	600.18	< 1.2	< 0.5	3	< 1.3	J< 2.5	1	57	58	8.9	810	2.2	< 0.3	887.9
06/07/94	600.42	< 12	< 5	9.8	< 13	< 25	10	74	74	28	500	< 18	< 3	687.8
06/10/94	597.07	< 12	< 5	< 7	< 13	< 25	< 10	61	61	< 5	610	< 18	< 3	759
06/28/94	592.80	< 1	< 1	< 1	< 1	< 1	< 1	4.2	4.2	4.3	96	< 2	< 1	112.5
07/05/94	591.70	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	32	32	< 2.5	340	< 5	< 2.5	394.5
07/06/94	568.69	< 10	< 10	< 10	< 10	< 10	< 10	56	56	< 10	860	< 20	< 10	1006
08/01/94	568.36	< 12	< 5	18	< 7	< 25	< 10	130	130	32	790	< 18	< 7.9	1044.9
08/16/94	590.33	< 12	< 5	< 10	< 7	< 25	< 10	33	33	< 6.4	480	< 18	< 7.9	604.3
09/08/94	574.42	< 12	< 5	< 10	< 7	< 25	< 10	28	28	< 6.4	490	< 18	< 7.9	609.3
10/05/94	592.57	< 12	< 5	< 10	< 7	< 25	< 10	48	48	< 6.4	510	< 18	< 7.9	649.3
10/07/94	592.57	< 12	5.5	< 10	< 7	< 25	< 10	31	31	< 6.4	620	< 18	< 7.9	742.8
11/03/94	611.14	< 1	< 1	< 1	< 1	< 1	< 1							
12/01/94	597.75													
01/24/95	593.26													
01/25/95	593.19													
02/09/95	597.75													
03/06/95	593.26													
04/03/95	593.19													
04/04/95	590.09													
05/03/95	568.36													
06/01/95	566.94													
06/26/95	566.94													
06/27/95	599.32													
08/01/95	592.16													
09/11/95	566.97													
10/02/95	575.92													
10/10/95	603.45													
11/09/95	594.37													
12/04/95	600.70													
01/11/96	595.97													
02/06/96	598.35													
03/05/96	602.05													
04/02/96	596.07													
05/01/96	585.37													
06/04/96	572.35													
07/08/96	569.51													
07/11/96	591.30													
08/08/96	594.19													
09/05/96	596.17													
10/01/96														
10/04/96														
11/27/96														
12/24/96														



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well P-3

CARBORUNDUM SPECIALTY PRODUCTS RESULTS REPORTED IN ug/L (ppb)

REF ELEV 627.16
TOR ELEV 603.50

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
05/01/94	587.00	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	5.4	5.4	1.4	5.5	2.5	< 0.3	21.3
06/04/94	585.55	< 1.2	< 0.5	< 0.7	< 1.3	J<2.5	< 1	6.7	6.7	< 0.5	5.1	3	< 0.3	21.8
06/07/94	600.40	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	7	7	0.79	3.1	< 1.8	< 0.3	19.19
06/10/94	585.90	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	3.2	3.2	< 0.5	1.8	1.2	< 0.3	13.2
06/28/94	583.91	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	1.1	1.1	< 1	< 1	< 2	< 1	11.1
07/05/94	582.51	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	1.3	1.3	< 1	< 1	< 2	< 1	11.3
07/06/94	589.04	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	3.4	3.4	< 1	1.4	< 2	< 1	13.8
08/01/94	588.84	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	2.4	< 1.8	< 0.79	12.53
08/16/94	583.55	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
09/08/94	585.08	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	< 1.2	< 1.8	< 0.79	11.33
10/05/94	584.51	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
10/07/94	587.53	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	3	3	< 0.64	1.6	< 1.8	< 0.79	13.73
11/03/94	583.37	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
12/01/94	585.00	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
01/24/95	585.24	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
01/25/95	584.13	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
02/09/95	584.23	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
03/06/95	584.37	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
04/03/95	584.93	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
04/04/95	582.20	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
05/03/95	582.47	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
06/01/95	589.32	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
06/26/95	589.75	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
06/28/95	589.75	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
08/01/95	596.58	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
09/11/95	602.99	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
10/02/95	589.85	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
10/10/95	591.09	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
11/09/95	589.85	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
12/04/95	590.10	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
01/08/96	591.70	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
02/06/96	591.70	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
03/05/96	591.70	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
04/02/96	591.70	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
04/03/96	591.70	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
05/01/96	591.70	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
06/04/96	591.70	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
07/11/96	591.70	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
08/08/96	591.48	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
09/05/96	590.00	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
10/01/96	587.37	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
10/04/96	591.15	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
11/27/96	588.15	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73
12/24/96	588.15	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.64	1.6	< 1.8	< 0.79	13.73



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well

P-4

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 624.12
TOR ELEV 601.2

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
05/01/94	571.46	< 1.2	< 0.5	11	3.5	< 2.5	2.3	45	47	26	220	5.1	< 0.3	317.1
06/04/94	571.48	< 1.2	< 0.5	11	3.5	< 2.5	2.3	45	47	26	220	5.1	< 0.3	317.1
06/07/94	599.68	< 1.2	< 0.5	12	3.6	J< 2.5	2.3	78	80	28	200	15	< 0.3	343.1
06/10/94	571.12	< 1.2	< 0.5	2.1	2.0	< 2.5	2.8	37	40	3.5	68	7.0	< 0.3	127.1
06/28/94	571.49	< 1.2	< 0.5	< 1	< 1	< 1	< 1	18	18	< 1	49	< 2.0	< 1	76
07/05/94	571.50	< 1	< 1	< 1	< 1	< 1	< 1	18	18	< 1	49	< 2.0	< 1	76
07/06/94	589.54	< 1	< 1	1.2	< 1	< 1	< 1	33	33	2.3	74	3.7	< 1	119.2
08/01/94	596.06	< 1	< 1	1.2	< 1	< 1	< 1	20	20	2.8	31	2.2	< 1	62.2
09/08/94	571.54	< 1.2	< 0.5	2	< 0.7	< 2.5	1.2	35	36.2	2.2	56	< 1.8	< 0.79	103.89
10/05/94	571.42	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
11/03/94	571.48	< 1.2	< 0.5	< 1	< 0.7	< 2.5	1.6	46	48	1.6	180	< 1.8	< 0.79	238.09
12/01/94	608.03	< 1.2	< 0.5	< 1	< 0.7	< 2.5	1.1	31	32	0.9	97	3.5	< 0.79	140.09
01/24/95	571.52	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
01/25/95	571.41	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
02/09/95	571.62	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
03/03/95	571.49	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
04/03/95	571.65	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
05/03/95	572.28	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
06/01/95	572.51	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
06/26/95	591.81	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
06/28/95	571.57	< 1	< 1	< 1	< 0.7	< 2.5	< 1	34	34	0.93	56	4	< 0.79	101.62
08/01/95	590.20	< 1.2	< 0.5	2	< 0.7	< 2.5	1.2	35	36.2	2.2	56	< 1.8	< 0.79	103.89
09/11/95	602.35	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
10/02/95	579.75	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
10/10/95	587.25	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
11/09/95	595.82	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
12/04/95	587.30	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
01/08/96	601.87	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
01/11/96	584.65	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
02/06/96	588.65	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
03/05/96	588.65	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
04/02/96	587.74	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
04/03/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
05/01/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
06/04/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
07/08/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
07/11/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
08/08/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
09/05/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
10/01/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
10/04/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
11/27/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79
12/24/96	582.49	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	21	21	1.3	55	< 1.8	< 0.79	85.79



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well PW-1

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 617.03
TOR ELEV 608.5

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
05/01/94	584.99													
06/04/94	584.08													
06/07/94	600.34													
06/10/94		< 1.2	< 0.5	3.6	5	20	5.1	990	995	2.8	1600	87	< 0.3	2715.4
06/28/94	581.57													
07/05/94	590.25													
07/06/94	586.12	< 1.2	1	5.5	< 1.3	J<2.5	2.2	150	150	7.6	290	19	< 0.3	478.4
08/01/94	583.05	< 1.2	< 0.5	1.3	< 1.3	2.7	1.6	89	91	< 0.5	150	5.4	< 0.3	254.2
08/16/94														
09/08/94	582.79													
09/08/94	584.92	< 1.2	< 0.5	0.82	1.9	< 2.5	2.6	72	75	0.95	97	3.8	< 0.3	183.97
10/05/94														
10/07/94														
11/03/94	571.42													
12/01/94	571.48													
01/24/95	582.84	< 2	< 2	< 2	< 2	< 2	< 2	190	190	< 2	240	8.7	< 2	452.7
01/25/95														
02/09/95	619.78													
03/06/95	582.99													
04/03/95	582.92	< 2	< 2	< 2	< 2	< 2	< 2	58	58	< 2	220	< 4	< 2	296
04/04/95														
05/03/95	582.78													
06/01/95	582.85													
06/26/95	583.03													
06/27/95														
08/01/95	612.92	< 2	< 2	< 2	< 2	< 2	< 2	72	72	< 2	140	< 4	< 2	230
09/11/95	591.64													
10/02/95	582.67	< 2	< 2	< 2	< 2	< 2	< 2	200	200	< 2	880	< 18	< 7.9	1171.3
10/10/95														
11/09/95	582.48	< 12	< 5	< 10	< 7	< 25	< 10	200	200	< 6.4	880	< 18	< 7.9	1171.3
12/04/95	583.86													
01/08/96	582.81	< 12	< 5	< 10	< 7	< 25	< 10	100	100	< 6.4	330	< 18	< 7.9	521.3
01/11/96														
02/06/96	582.61													
03/05/96	582.55	< 12	< 5	< 10	< 7	< 25	< 10	160	160	< 6.4	890	< 18	< 7.9	1141.3
04/02/96	581.93													
05/01/96	601.58													
06/04/96	582.48													
07/08/96	582.68	< 12	6.9	< 10	< 7	< 25	< 10	110	110	< 6.4	270	< 18	< 7.9	473.2
07/11/96														
08/08/96	582.23													
09/05/96	582.40													
10/01/96	582.51	< 12	8.5	< 10	< 7	< 25	< 10	240	240	< 6.4	780	< 18	< 7.9	1114.8
10/04/96														
11/27/96	582.40													
12/24/96	585.28													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well PW-2

CARBORUNDUM SPECIALTY PRODUCTS RESULTS REPORTED IN ug/L (ppb)

REF ELEV 613.62
TOR ELEV 605.30

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
06/04/94	599.76	< 1.2	< 0.5	< 0.7	< 1.3	22	1.2	13	14	< 0.5	280	2.3	< 0.3	322.8
06/07/94	600.66	< 1.2	< 0.5	< 0.7	< 1.3	J< 2.5	1.2	38	39	0.67	260	2.4	< 0.3	308.57
06/10/94	594.97	< 12	5.2	< 7	< 13	< 25	< 10	120	120	5.2	760	< 18	< 3	968.4
07/05/94	589.37	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	0.86	39	40	< 0.5	26	2.2	< 0.3	75.2
07/06/94	590.15	< 1	< 1	< 1	< 1	< 1	< 1	4.7	4.7	< 1	38	< 2	< 1	51.7
08/01/94	591.62	< 1	< 1	< 1	< 1	< 1	< 1	48	48	< 1	160	< 2	< 1	217
08/16/94	591.45	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
09/08/94	592.54	< 12	< 5	< 10	< 7	< 25	< 10	110	110	< 6.4	900	< 18	< 7.9	1101.3
10/05/94	591.59	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	0.86	39	40	< 0.5	26	2.2	< 0.3	75.2
10/07/94	594.38	< 1	< 1	< 1	< 1	< 1	< 1	4.7	4.7	< 1	38	< 2	< 1	51.7
11/03/94	611.11	< 1	< 1	< 1	< 1	< 1	< 1	48	48	< 1	160	< 2	< 1	217
12/01/94	594.38	< 1	< 1	< 1	< 1	< 1	< 1	48	48	< 1	160	< 2	< 1	217
01/24/95	611.11	< 1	< 1	< 1	< 1	< 1	< 1	4.7	4.7	< 1	38	< 2	< 1	51.7
01/25/95	598.23	< 1	< 1	< 1	< 1	< 1	< 1	4.7	4.7	< 1	38	< 2	< 1	51.7
02/09/95	575.79	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
03/06/95	575.79	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
04/03/95	594.09	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
04/04/95	574.82	< 1	< 1	< 1	< 1	< 1	< 1	48	48	< 1	160	< 2	< 1	217
05/03/95	575.95	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
06/01/95	575.95	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
06/26/95	574.93	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
06/27/95	573.77	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
08/01/95	592.41	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
09/11/95	575.43	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
10/02/95	575.43	< 5	< 5	< 5	< 5	< 5	< 5	44	44	< 5	520	< 10	< 5	609
10/10/95	580.68	< 12	< 5	< 10	< 7	< 25	< 10	110	110	< 6.4	900	< 18	< 7.9	1101.3
12/04/95	603.18	< 12	< 5	< 10	< 7	< 25	< 10	110	110	< 6.4	900	< 18	< 7.9	1101.3
01/08/96	594.82	< 12	< 5	< 10	< 7	< 25	< 10	51	51	< 6.4	820	< 18	< 7.9	962.3
01/11/96	600.60	< 12	< 5	< 10	< 7	< 25	< 10	51	51	< 6.4	820	< 18	< 7.9	962.3
02/06/96	595.98	< 12	< 5	< 10	< 7	< 25	< 10	< 10	< 10	< 6.4	120	< 18	< 7.9	221.3
03/05/96	595.98	< 12	< 5	< 10	< 7	< 25	< 10	< 10	< 10	< 6.4	120	< 18	< 7.9	221.3
04/02/96	598.08	< 12	< 5	< 10	< 7	< 25	< 10	< 10	< 10	< 6.4	120	< 18	< 7.9	221.3
04/03/96	601.83	< 12	< 5	< 10	< 7	< 25	< 10	< 10	< 10	< 6.4	120	< 18	< 7.9	221.3
05/01/96	595.78	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	28	28	< 0.64	83	< 1.8	< 0.79	120.13
06/04/96	595.78	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	28	28	< 0.64	83	< 1.8	< 0.79	120.13
07/08/96	589.16	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	28	28	< 0.64	83	< 1.8	< 0.79	120.13
07/11/96	590.51	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	28	28	< 0.64	83	< 1.8	< 0.79	120.13
08/08/96	580.50	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	28	28	< 0.64	83	< 1.8	< 0.79	120.13
09/05/96	594.67	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	28	28	< 0.64	83	< 1.8	< 0.79	120.13
10/01/96	594.67	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	28	28	< 0.64	83	< 1.8	< 0.79	120.13
10/04/96	594.73	< 12	7.6	< 10	< 7	< 25	< 10	100	100	< 6.4	280	< 18	< 7.9	473.9
11/27/96	594.73	< 12	7.6	< 10	< 7	< 25	< 10	100	100	< 6.4	280	< 18	< 7.9	473.9
12/24/96	595.83	< 12	7.6	< 10	< 7	< 25	< 10	100	100	< 6.4	280	< 18	< 7.9	473.9



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B-3M

CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)

REF ELEV	625.59													
TOR ELEV	604.9													
Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
03/03/94	603.38													
03/11/94	603.29													
03/18/94	603.53													
03/25/94	605.19													
04/01/94	606.07													
04/08/94	606.30													
04/14/94	612.25													
04/21/94	606.15													
05/01/94	605.70													
06/04/94	603.49													
06/07/94	603.45													
06/28/94	603.00													
07/05/94	603.26													
07/06/94	603.28			89	44	J< 2.5	100	8900	9000	9.9	83	4900	< 0.3	14130.4
08/01/94	603.22	< 1.2	< 0.5	< 2	< 2	< 2	4	210	214	< 2	150	< 4	< 2	382
09/08/94	601.94													
10/05/94	601.87													
11/03/94	601.65													
12/01/94	602.13													
01/24/95	604.59													
02/09/95	603.23													
03/06/95	602.73													
04/03/95	601.96													
05/03/95	606.59													
06/01/95	605.95													
06/26/95	602.08													
08/27/95	608.48													
09/01/95	603.14													
09/11/95	603.14													
10/02/95	604.09													
11/09/95	606.19													
12/04/95	608.24													
01/08/96	606.49													
02/06/96	603.08													
03/05/96	602.80													
04/02/96	606.69													
05/01/96	606.89													
06/04/96	603.12													
07/08/96	603.29													
07/15/96	602.02	< 1.2	< 0.5	< 1	< 0.7	< 2.5	1.9	81	83	< 0.64	19	< 1.8	< 0.79	111.13
08/08/96	601.86													
09/05/96	601.86													
10/01/96	602.68													
11/27/96	605.59													
12/24/96	603.05													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B-4M

CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)

REF ELEV 622.24
TOR ELEV 598.8

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
03/03/94	598.81													
03/11/94	598.79													
03/18/94	599.04													
03/25/94	600.13													
04/01/94	599.95													
04/08/94	600.99													
04/14/94	604.12													
04/21/94	602.48													
05/01/94	600.53													
06/04/94	599.11													
06/07/94	599.02													
06/28/94	598.89													
07/05/94	598.69													
07/07/94	598.66													
08/01/94	598.33	< 1.2	< 0.5	1.4	< 1.3	J< 2.5	4.9	200	200	< 0.5	22	2.2	< 0.3	231.9
09/08/94	598.15													
10/05/94	598.03													
11/03/94	597.92													
12/01/94	598.20													
01/24/95	602.05													
02/09/95	599.79													
03/06/95	598.92													
04/03/95	598.76													
05/03/95	598.37													
06/01/95	598.11													
06/26/95	598.02													
06/27/95		< 1	4.2	< 1	< 1	< 1	3.3	120	123.3	< 1	14	< 2	< 1	149.5
08/01/95	597.87													
09/11/95	597.69													
10/02/95	597.60													
11/09/95	597.48													
12/04/95	598.75													
01/08/96	598.86													
02/06/96	599.23													
03/05/96	599.04													
04/02/96	599.03													
05/01/96	599.62													
06/04/96	599.00													
07/08/96	598.51													
07/15/96		< 12	< 5	< 10	< 7	< 25	< 10	310	310	< 6.4	38	< 18	< 7.9	439.3
08/08/96	598.56													
09/05/96	598.34													
10/01/96	598.56													
11/27/96	598.98													
12/24/96	599.64													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B-5M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 620.83
TOR ELEV 592.9

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
02/25/94	601.83													
03/03/94	594.90													
03/11/94	594.64													
03/18/94	602.39													
03/25/94	610.81													
04/01/94	606.41													
04/08/94	610.04													
04/21/94	609.94													
05/01/94	605.19													
06/04/94	599.35													
06/07/94	599.32													
06/28/94	597.37													
07/05/94	594.14													
07/06/94	593.90							9.7	9.7	< 0.5	41	< 1.8	< 0.3	59.5
08/01/94	591.69	< 1.2	< 0.5	< 0.7	< 1.3	J< 2.5	< 1							
09/08/94	591.35													
10/05/94	592.79													
11/03/94	591.48													
12/01/94	593.83													
01/24/95	610.88													
02/09/95	598.30													
03/06/95	594.16													
04/03/95	594.12													
05/03/95	592.71													
06/01/95	591.53													
06/26/95	590.99													
08/01/95	591.43	< 1	< 1	< 1	< 1	< 1	< 1	11	11	< 1	25	< 2	< 1	45
09/11/95	592.78													
10/02/95	590.45													
11/09/95	591.89													
12/04/95	603.09													
01/08/96	594.50													
02/06/96	599.48													
03/05/96	596.23													
04/02/96	598.40													
05/01/96	601.43													
06/04/96	595.71													
07/08/96	592.18													
07/11/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	23	23	< 0.64	37	< 1.8	< 0.79	69.13
08/08/96	591.74													
09/05/96	590.91													
10/01/96	593.04													
11/27/96	594.46													
12/24/96	596.14													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B6M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 615.27
TOR ELEV 599.2

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
04/21/94	608.75	< 1.2	< 0.5	< 0.7	< 1.3	J< 2.5	< 1	11	11	< 0.5	77	< 1.8	< 0.3	96.8
05/01/94	606.43	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	14	16	< 0.5	110	3.1	< 0.3	136.1
06/04/94	604.05	< 1	< 1	< 1	< 1	< 1	< 1	5.8	5.8	< 1	61	< 2	< 1	75.8
06/07/94	603.55	< 1	< 1	< 1	< 1	< 1	< 1	1.3	1.3	< 1	12	< 2	< 1	22.3
06/28/94	602.92	< 1	< 1	< 1	< 1	< 1	< 1	5.5	5.5	< 1	40	< 2	< 1	54.5
07/05/94	601.55	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	9	9	< 0.64	64	< 1.8	< 0.79	82.13
07/06/94	601.34	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	6	6	< 0.64	59	< 1.8	< 0.79	74.13
08/01/94	600.06	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	9	9	< 0.64	76	< 1.8	< 0.79	94.13
09/08/94	599.52	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	7	7	< 0.64	57	< 1.8	< 0.79	73.13
10/05/94	600.44	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
11/03/94	600.21	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
12/01/94	602.12	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
01/24/95	610.16	< 1	< 1	< 1	< 1	< 1	< 1	5.8	5.8	< 1	61	< 2	< 1	75.8
01/25/95	605.20	< 1	< 1	< 1	< 1	< 1	< 1	1.3	1.3	< 1	12	< 2	< 1	22.3
02/09/95	603.30	< 1	< 1	< 1	< 1	< 1	< 1	5.5	5.5	< 1	40	< 2	< 1	54.5
03/06/95	604.17	< 1	< 1	< 1	< 1	< 1	< 1	9	9	< 0.64	64	< 1.8	< 0.79	82.13
04/03/95	604.17	< 1	< 1	< 1	< 1	< 1	< 1	6	6	< 0.64	59	< 1.8	< 0.79	74.13
04/05/95	601.28	< 1	< 1	< 1	< 1	< 1	< 1	9	9	< 0.64	76	< 1.8	< 0.79	94.13
05/03/95	599.96	< 1	< 1	< 1	< 1	< 1	< 1	7	7	< 0.64	57	< 1.8	< 0.79	73.13
06/01/95	599.48	< 1	< 1	< 1	< 1	< 1	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
06/27/95	599.27	< 1	< 1	< 1	< 1	< 1	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
08/01/95	597.91	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	9	9	< 0.64	64	< 1.8	< 0.79	82.13
09/11/95	597.91	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	6	6	< 0.64	59	< 1.8	< 0.79	74.13
10/02/95	597.48	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	9	9	< 0.64	76	< 1.8	< 0.79	94.13
10/10/95	600.29	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	7	7	< 0.64	57	< 1.8	< 0.79	73.13
11/09/95	606.57	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
12/04/95	602.44	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
01/10/96	604.53	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	9	9	< 0.64	76	< 1.8	< 0.79	94.13
02/06/96	603.75	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	7	7	< 0.64	57	< 1.8	< 0.79	73.13
03/05/96	604.81	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
04/02/96	604.81	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
04/04/96	606.20	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	7	7	< 0.64	57	< 1.8	< 0.79	73.13
05/01/96	603.46	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
06/04/96	601.55	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
07/08/96	599.74	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
07/16/96	598.50	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
08/08/96	601.41	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
09/05/96	603.07	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
10/01/96	604.80	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
10/03/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
11/27/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13
12/24/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	5	5	< 0.64	50	< 1.8	< 0.79	64.13



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B7M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 616.22
TOR ELEV 598.6

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
04/21/94	609.37	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	1	< 0.5	41	< 1.8	< 0.3	50.8	
05/01/94	606.79	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	2.2	< 0.5	14	< 1.8	< 0.3	25	
06/04/94	603.80	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	2.2	< 0.5	14	< 2	< 1	25.3	
06/07/94	603.57	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	2.3	< 1	14	< 2	< 1	17.5	
06/28/94	602.80	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	7.5	< 2	< 1	16.8	
07/05/94	601.47	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	6.8	< 2	< 1	16.8	
07/07/94	601.27	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	3	< 0.64	13	< 1.8	< 0.79	25.13	
08/01/94	600.21	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	2	< 0.64	12	< 1.8	< 0.79	23.13	
09/08/94	599.68	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	2	< 0.64	14	< 1.8	< 0.79	25.13	
10/05/94	600.54	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	2	< 0.64	15	< 1.8	< 0.79	26.13	
10/06/94	600.52	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	2	< 0.64	15	< 1.8	< 0.79	26.13	
11/03/94	600.31	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
12/01/94	602.06	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
01/24/95	610.85	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
02/09/95	605.06	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
03/06/95	603.38	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
04/03/95	603.31	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
04/05/95	601.52	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
05/03/95	600.32	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
06/01/95	600.32	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
06/26/95	599.41	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
06/27/95	599.41	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
08/01/95	594.69	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
09/11/95	600.17	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
10/02/95	597.82	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
10/09/95	600.46	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
11/09/95	600.46	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
12/04/95	606.78	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
01/08/96	602.51	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
01/09/96	604.71	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
02/06/96	603.87	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
03/05/96	603.87	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
04/02/96	604.96	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
04/03/96	604.96	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
05/01/96	606.40	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
06/04/96	603.56	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
07/08/96	601.67	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
07/16/96	600.17	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
08/08/96	598.96	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
09/05/96	601.62	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
10/01/96	603.19	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
10/03/96	603.19	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
11/27/96	604.83	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	
12/24/96	604.83	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	5.6	< 1.8	< 0.79	15.73	



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B-8M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 618.57
TOR ELEV 603.6

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethene	Cis-1,2- Dichloroethene	Total-1,2- Dichloroethene	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
03/30/94	609.78	< 12	< 5	< 7	20	< 25	32	1500	1500	< 5	160000	< 18	< 3	161595
03/31/94	609.15													
04/01/94	608.38													
04/06/94	606.95													
04/14/94	615.88													
04/21/94	610.72													
05/01/94	607.51													
06/04/94	603.45													
06/07/94	603.54													
06/07/94	603.81													
06/28/94	602.24													
07/05/94	602.91	< 1.2	< 0.5	< 0.7	13	J< 2.5	15	1600	1600	0.72	E 52000	12	2.2	53632.82
07/07/94	601.91													
08/01/94	601.19													
09/08/94	602.74													
10/05/94	600.43													
11/03/94	600.52													
12/01/94	600.77													
01/24/95	612.06	< 200	< 200	< 200	< 200	< 200	< 200	390	390	< 200	27000	< 400	< 200	29190
01/25/95	605.70													
02/09/95	602.09													
03/06/95	604.27													
04/03/95	604.27													
04/05/95	602.15	< 200	< 200	< 200	< 200	< 200	< 200	430	430	< 200	24000	< 400	< 200	26230
05/03/95	NA													
06/01/95	Dry													
06/26/95	Dry													
08/01/95	601.05													
09/11/95	600.60													
10/02/95	600.52													
11/09/95	600.86													
12/04/95	607.28													
01/08/96	601.37													
02/06/96	607.20													
03/05/96	603.05													
04/02/96	603.20	< 1200	< 500	< 1000	< 700	< 2500	< 1000	< 1000	< 1000	< 640	27000	< 1800	< 790	37130
04/04/96	605.65													
05/01/96	602.28													
06/04/96	600.76													
07/08/96	600.76	< 1200	< 500	< 1000	< 700	< 2500	< 1000	< 1000	< 1000	< 640	18000	< 1800	< 790	28130
07/15/96	600.78													
08/08/96	600.78													
09/05/96	600.7													
10/01/96	601.5													
11/27/96	NA													
12/24/96	601.27													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B-9M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 623.03
TOR ELEV 611.26

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
06/28/93	606.89	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.5	2.5	< 1.8	2.3	14.3
08/04/93	DRY													
08/31/93	DRY													
10/01/93	DRY													
11/02/93	DRY													
12/03/93	DRY													
12/15/93	603.52													
12/27/93	604.07													
01/14/94	601.90													
03/03/94	604.25													
03/18/94	606.13													
05/01/94	609.50													
06/04/94	605.32													
06/07/94	605.27													
07/05/94	602.56													
07/07/94	602.72													
08/01/94	602.27													
09/08/94	DRY													
10/05/94	DRY													
11/03/94	602.65													
12/01/94	609.51													
01/24/95	612.92													
02/09/95	606.81													
03/06/95	603.52													
04/03/95	603.05													
05/03/95	603.72													
06/01/95	DRY													
06/26/95	DRY													
08/01/95	DRY													
09/11/95	DRY													
10/02/95	DRY													
11/09/95	DRY													
12/04/95	606.92													
01/08/96	602.19													
02/06/96	606.02													
03/05/96	603.08													
04/02/96	605.53													
05/01/96	608.74													
06/04/96	603.03													
07/08/96	DRY													
08/08/96	DRY													
09/05/96	DRY													
10/01/96	DRY													
11/27/96	NA													
12/24/96	604.22													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B10M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 625.99
TOR ELEV 609.11

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethylene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
03/03/94	612.49	< 1.2	< 0.5	1.5	< 1.3	J< 2.5	1.2	31	32	7.8	410	< 1.8	< 0.3	458.9
03/11/94	612.51													
03/18/94	614.51													
03/25/94	616.76													
04/01/94	617.07													
04/08/94	617.39													
04/14/94	619.35													
04/21/94	617.85													
05/01/94	613.51													
06/04/94	611.65													
06/07/94	611.33													
06/28/94	610.90													
07/05/94	610.28													
07/06/94	610.19													
08/01/94	607.82													
09/08/94	605.93													
10/05/94	609.02													
11/03/94	606.47													
12/01/94	609.51													
01/24/95	616.80													
02/09/95	613.12													
03/06/95	611.02													
04/03/95	611.09													
05/03/95	606.96													
06/01/95	605.03													
06/26/95	603.89													
06/27/95														
08/01/95	603.09													
09/11/95	601.86													
10/02/95	601.55													
11/09/95	604.75													
12/04/95	612.54													
01/08/96	609.82													
02/06/96	NA													
03/05/96	611.26													
04/02/96	611.85													
05/01/96	613.66													
06/04/96	611.63													
07/08/96	609.86													
07/16/96														
08/08/96	605.43													
09/05/96	602.95													
10/01/96	609.41													
11/27/96	611.23													
12/24/96	613.66													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B11M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 622.81
TOR ELEV 610.34

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
03/03/94	603.78													
03/11/94	604.25													
03/18/94	607.81													
03/25/94	612.80													
04/01/94	609.18													
04/08/94	610.23													
04/14/94	616.07													
04/21/94	611.19													
05/01/94	607.85													
06/04/94	603.21													
06/07/94	603.16													
06/28/94	602.99													
07/05/94	602.73													
07/06/94	602.73													
08/01/94	602.05	< 1.2	< 0.5	< 0.7	< 1.3	J< 2.5	2.1	37	38	0.75	460	2.9	5.9	513.75
09/08/94	600.40													
10/05/94	603.27													
11/03/94	606.47													
12/01/94	609.51													
01/24/95	612.97													
02/09/95	604.54													
03/06/95	607.78													
04/03/95	603.14													
05/03/95	601.94													
06/01/95	601.19													
06/26/95	604.26													
06/27/95	602.14	< 20	< 20	< 20	< 20	< 20	< 20	20	20	< 20	1700	< 40	< 20	1900
08/01/95	602.14													
09/11/95	602.26													
10/02/95	599.58													
11/09/95	602.73													
12/04/95	605.36													
01/08/96	603.10													
02/06/96	604.30													
03/05/96	603.65													
04/02/96	604.25													
05/01/96	605.12													
06/04/96	603.40													
07/08/96	602.87													
07/16/96	602.57	< 12	< 5	< 10	< 7	< 25	< 10	21	21	< 6.4	710	< 18	< 7.9	822.3
08/08/96	601.75													
09/05/96	603.94													
10/01/96	603.25													
11/27/96	603.25													
12/24/96	608.24													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B-12M

CARBORUNDUM SPECIALTY PRODUCTS RESULTS REPORTED IN ug/L (ppb)

REF ELEV 622.17
TOR ELEV 610.43

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
02/03/94	600.47													
02/17/94	DRY													
02/25/94	600.55													
03/03/94	600.45													
03/11/94	600.42													
03/18/94	600.66													
03/25/94	606.11													
04/01/94	606.46													
04/08/94	606.38													
04/14/94	613.44													
04/21/94	610.75													
05/01/94	605.77													
06/04/94	600.47													
06/07/94	600.61													
06/28/94	600.61													
07/05/94	DRY													
08/01/94	DRY													
09/08/94	DRY													
10/05/94	DRY													
11/03/94	DRY													
12/01/94	DRY													
01/24/95	606.30													
02/09/95	602.96													
03/06/95	600.85													
04/03/95	DRY													
05/03/95	DRY													
06/01/95	DRY													
06/26/95	DRY													
08/01/95	DRY													
09/11/95	DRY													
10/02/95	DRY													
11/09/95	602.94													
12/04/95	603.20													
01/08/96	601.29													
02/06/96	602.14													
03/05/96	601.37													
04/02/96	601.97													
05/01/96	602.59													
06/04/96	DRY													
07/08/96	DRY													
08/08/96	DRY													
09/05/96	DRY													
10/01/96	DRY													
11/27/96	603.07													
12/24/96	600.38													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B13M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 626.70
TOR ELEV 600.84

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
03/03/94	599.34													
03/11/94	599.31													
03/18/94	599.44													
03/25/94	600.65													
04/01/94	600.17													
04/08/94	605.63													
04/14/94	609.31													
04/21/94	606.68													
05/01/94	601.03													
06/04/94	599.52													
06/07/94	599.49													
06/28/94	599.50													
07/05/94	599.36													
07/07/94	599.31													
08/01/94	599.22													
09/08/94	599.16													
10/05/94	599.13													
11/03/94	599.15													
12/01/94	599.18													
01/24/95	606.61													
02/09/95	600.07													
03/06/95	599.35													
04/03/95	599.57													
05/03/95	599.29													
06/01/95	599.23													
06/26/95	598.99													
06/27/95		< 40	< 40	< 40	< 40	< 40	< 40	3200	< 40	< 40	< 80	< 40	3760	
08/01/95	599.38													
09/11/95	598.94													
10/02/95	599.00													
11/09/95	598.99													
12/04/95	599.57													
01/08/96	599.14													
02/06/96	599.42													
03/05/96	599.14													
04/02/96	599.38													
05/01/96	600.09													
06/04/96	599.21													
07/08/96	599.02													
07/16/96		< 120	< 50	< 100	< 70	< 250	< 100	4000	< 64	< 410	< 180	< 79	5323	
08/08/96	598.96													
09/05/96	598.83													
10/01/96	599.14													
11/27/96	NA													
12/24/96	599.21													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B14M

CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)

REF ELEV 618.25
TOR ELEV 607.47

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
02/17/94	602.54													
02/25/94	603.65													
03/03/94	603.04													
03/11/94	603.09													
03/18/94	603.75													
03/25/94	611.86													
04/01/94	607.27													
04/08/94	609.67													
04/14/94	615.81													
04/21/94	610.31													
05/01/94	605.93													
06/04/94	603.06													
06/07/94	602.95													
06/28/94	603.06													
07/05/94	602.76													
07/07/94	602.65	< 1.2	< 0.5	< 0.7	< 1.3	J< 2.5	< 1	26	26	0.63	890	< 1.8	2.4	927.03
08/01/94	602.85													
09/08/94	DRY													
10/05/94	602.91													
11/03/94	603.24													
12/01/94	602.64													
01/24/95	611.84													
02/09/95	603.25													
03/06/95	602.89													
04/03/95	602.93													
05/03/95	DRY													
06/01/95	DRY													
06/26/95	DRY													
08/01/95	DRY													
09/11/95	DRY													
10/02/95	DRY													
11/09/95	DRY													
12/04/95	604.06													
01/08/96	DRY													
02/06/96	603.15													
03/05/96	603.00													
04/02/96	603.10													
05/01/96	603.52													
06/04/96	602.89													
07/08/96	DRY													
08/08/96	DRY													
09/05/96	DRY													
10/01/96	602.98													
11/27/96	602.63													
12/24/96	603.70													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B15M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 623.98
TOR ELEV 611.3

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
03/03/94	610.66													
03/11/94	610.38													
03/18/94	612.52													
03/25/94	615.70													
04/01/94	614.01													
04/08/94	613.66													
04/14/94	618.40													
04/21/94	614.50													
05/01/94	611.78													
06/04/94	610.18													
06/07/94	610.31													
06/28/94	609.98													
07/05/94	609.77													
07/06/94	609.68	< 1.2	< 0.5	< 0.7	< 1.3	J<2.5	< 1	< 1	< 1	< 0.5	< 1.2	< 1.8	< 0.3	11
08/01/94	608.62													
09/08/94	607.92													
10/05/94	608.18													
11/03/94	607.92													
12/01/94	609.07													
01/24/95	615.84													
02/09/95	612.07													
03/06/95	610.74													
04/03/95	610.75													
05/03/95	608.98													
06/01/95	608.18													
06/26/95	607.35													
06/28/95		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.6	1.6	< 2	< 1	12.2
08/01/95	606.70													
09/11/95	605.86													
10/02/95	605.68													
11/09/95	606.90													
12/04/95	610.39													
01/08/96	609.59													
02/06/96	610.66													
03/05/96	610.70													
04/02/96	611.35													
05/01/96	612.67													
06/04/96	610.89													
07/08/96	609.05													
07/17/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	< 1	< 1	< 0.64	< 1.2	< 1.8	< 0.79	11.33
08/08/96	607.86													
09/05/96	607.68													
10/01/96	608.82													
11/27/96	609.76													
12/24/96	611.23													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B16M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 626.08
TOR ELEV 609.30

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
02/03/94	DRY													
02/17/94	DRY													
02/25/94	602.62													
03/03/94	DRY													
03/11/94	DRY													
03/18/94	603.12													
03/25/94	611.94													
04/01/94	607.30													
04/08/94	609.69													
04/14/94	616.09													
04/21/94	610.44													
05/01/94	605.92													
06/04/94	599.75													
06/07/94	600.09													
06/28/94	DRY													
07/05/94	DRY													
08/01/94	DRY													
09/08/94	DRY													
10/05/94	DRY													
11/03/94	DRY													
12/01/94	DRY													
01/24/95	612.01													
02/09/95	598.90													
03/06/95	598.79													
04/03/95	DRY													
05/03/95	DRY													
06/01/95	DRY													
06/26/95	DRY													
08/01/95	DRY													
09/11/95	DRY													
10/02/95	DRY													
11/09/95	DRY													
12/04/95	603.76													
01/08/96	DRY													
02/06/96	599.97													
03/05/96	DRY													
04/02/96	DRY													
05/01/96	602.10													
06/04/96	DRY													
07/08/96	DRY													
08/08/96	DRY													
09/05/96	DRY													
10/01/96	DRY													
11/27/96	DRY													
12/24/96	DRY													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B17M

CARBORUNDUM SPECIALTY PRODUCTS RESULTS REPORTED IN ug/L (ppb)

REF ELEV 621.97
TOR ELEV 607.7

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
04/08/94	605.41	< 1.2	< 0.5	2.9	16	< 2.5	17	2200	2200	2.4	8100	430	< 0.3	10755.8
04/14/94	610.03													
04/21/94	603.94													
05/01/94	605.66													
06/04/94	600.67													
06/07/94	600.84													
06/28/94	600.94													
07/05/94	600.09													
07/06/94	600.04													
08/01/94	599.95													
09/08/94	599.77													
10/05/94	598.78													
10/07/95	599.11													
11/03/94	598.32													
12/01/94	599.04													
01/24/95	601.87													
01/25/95														
02/09/95	600.52													
03/06/95	599.96													
04/03/95	599.19													
04/05/95														
05/03/95	601.64													
06/01/95	602.29													
06/26/95	DRY													
08/01/95	601.75													
09/11/95	599.42													
10/02/95	600.82													
10/10/95														
11/09/95	600.92													
12/04/95	601.76													
01/08/96	600.65													
01/11/96														
02/06/96	600.25													
03/05/96	600.41													
04/02/96	601.37													
05/01/96	601.53													
06/04/96	600.50													
07/08/96	600.17													
07/15/96														
08/08/96	599.61													
09/05/96	599.54													
10/01/96	600.26													
10/04/96														
11/27/96	603.29													
12/24/96	600.78													

FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B18M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 618.69
TOR ELEV 606.4

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
02/25/94	601.38	< 1.2	< 0.5	< 0.7	< 1.3	J< 2.5	1.3	40	41	< 0.5	120	2.8	< 0.3	170.8
03/03/94	586.41													
03/11/94	584.94													
03/18/94	601.47													
03/25/94	609.98													
04/01/94	605.16													
04/08/94	610.27													
04/14/94	614.16													
04/21/94	609.39													
05/01/94	604.44													
06/04/94	599.39													
06/07/94	600.36													
07/05/94	591.01													
07/07/94	594.76													
08/01/94	591.19													
09/08/94	590.96													
10/05/94	592.35													
11/03/94	590.97													
12/01/94	593.93													
01/24/95	610.69													
02/09/95	598.46													
03/06/95	583.87													
04/03/95	594.13													
05/03/95	581.10													
06/01/95	579.08													
06/26/95	579.31													
06/27/95	580.50													
08/01/95	580.50													
09/11/95	592.28													
10/02/95	578.59													
11/09/95	579.92													
12/04/95	602.93													
01/08/96	594.54													
02/06/96	599.52													
03/05/96	596.45													
04/02/96	598.27													
05/01/96	601.88													
06/04/96	596.14													
07/08/96	589.17													
07/16/96	590.46													
08/08/96	585.37													
09/05/96	590.75													
10/01/96	601.75													
11/27/96	596.23													
12/24/96	596.23													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B19M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 626.01
TOR ELEV 601.1

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
02/25/94	597.19													
03/03/94	591.80													
03/11/94	591.45													
03/18/94	597.01													
03/25/94	601.70													
04/01/94	598.97													
04/08/94	607.43													
04/14/94	608.90													
04/21/94	608.26													
05/01/94	596.48													
06/04/94	592.10													
06/07/94	597.40													
07/05/94	589.29													
07/07/94	594.52	< 1.2	< 0.5	1.1	< 1.3	< 2.5	< 1	7.8	7.8	1.5	8	1.8	< 0.3	26
08/01/94	589.10													
09/08/94	586.46													
10/05/94	589.75													
11/03/94	587.07													
12/01/94	590.88													
01/24/95	606.25													
02/09/95	593.91													
03/06/95	589.62													
04/03/95	589.59													
05/03/95	587.16													
06/01/95	582.99													
06/26/95	582.54													
06/27/95		< 1	< 1	< 1	< 1	< 1	< 1	2.9	2.9	< 1	1.3	< 2	< 1	13.2
08/01/95	586.47													
09/11/95	591.79													
10/02/95	581.59													
11/09/95	589.69													
12/04/95	600.00													
01/08/96	592.64													
02/06/96	597.79													
03/05/96	596.84													
04/02/96	595.15													
05/01/96	599.83													
06/04/96	592.99													
07/08/96	590.58													
07/16/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	11	11	1.2	1.6	< 1.8	< 0.79	22.29
08/08/96	588.21													
09/05/96	584.83													
10/01/96	589.71													
11/27/96	593.11													
12/24/96	594.61													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B20M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 615.4
TOR ELEV 599.7

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
03/03/94	603.45													
03/11/94	603.12													
03/18/94	606.58													
03/25/94	609.53													
04/01/94	607.50													
04/08/94	609.00													
04/14/94	610.75													
04/21/94	608.41													
05/01/94	605.67													
06/04/94	603.15													
06/07/94	602.88													
06/28/94	602.33													
07/05/94	600.60													
07/06/94	600.30	< 1.2	< 0.5	< 0.7	< 1.3	J< 2.5	< 1	< 1	< 1	< 0.5	< 1.2	< 1.8	< 0.3	11
08/01/94	598.67													
09/08/94	598.23													
10/05/94	599.97													
11/03/94	599.25													
12/01/94	601.45													
01/24/95	609.34													
02/09/95	604.16													
03/06/95	602.27													
04/03/95	602.35													
05/03/95	600.24													
06/01/95	598.00													
06/26/95	597.23													
06/27/95		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	11
08/01/95	597.78													
09/11/95	597.54													
10/02/95	595.47													
11/09/95	598.88													
12/04/95	606.21													
01/08/96	602.07													
02/06/96	605.55													
03/05/96	603.76													
04/02/96	604.84													
05/01/96	606.09													
06/04/96	603.65													
07/08/96	600.83													
07/11/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	< 1	< 1	< 0.64	< 1.2	< 1.8	< 0.79	11.33
08/08/96	598.62													
09/05/96	597.28													
10/01/96	601.05													
11/27/96	602.84													
12/24/96	604.93													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B33M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 612.43
TOR ELEV 594.7

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethen	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
08/04/93	588.65													
08/31/93	589.53													
10/01/93	588.86													
10/06/93		< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.5	< 1.2	< 1.8	< 0.3	11
11/02/93	588.00													
12/03/93	589.11													
12/16/93	589.65													
01/14/94	589.61													
02/03/94	590.44													
03/03/94	590.53													
05/01/94	591.16													
06/07/94	590.55													
07/05/94	590.15													
07/08/94	590.12													
08/01/94	589.06	< 1.2	< 0.5	< 0.7	< 1.3	J<2.5	< 1	1.5	1.5	< 0.5	5	< 1.8	< 0.3	15.3
09/08/94	588.71													
10/05/94	589.35													
11/03/94	589.32													
12/01/94	590.19													
01/24/95	594.02													
02/09/95	591.44													
03/06/95	590.81													
04/03/95	590.91													
05/03/95	590.04													
06/01/95	590.22													
06/26/95	589.99													
08/28/95		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	11
08/01/95	589.01													
09/11/95	587.76													
10/02/95	587.60													
11/09/95	588.99													
12/04/95	591.03													
01/08/96	589.58													
02/06/96	590.31													
03/05/96	590.52													
04/02/96	591.25													
05/01/96	591.63													
06/04/96	590.49													
07/08/96	589.32													
07/10/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	< 1	< 1	< 0.64	< 1.2	< 1.8	< 0.79	11.33
08/08/96	588.10													
09/05/96	587.53													
10/01/96	588.85													
11/27/96	589.89													
12/24/96	591.83													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B34M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 612.72
TOR ELEV 598.8

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
06/29/93		< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	1.2	< 1.2	< 1.8	< 0.3	11.7
08/04/93	600.57													
08/31/93	599.57													
10/01/93	598.39													
10/06/93		< 1.2	< 0.5	< 0.7	< 1.3	2.6	< 1	< 1	< 1	< 0.5	< 1.2	< 1.8	< 0.3	11.1
11/02/93	597.88													
12/03/93	599.05													
01/14/94	602.05													
02/03/94	601.44													
03/03/94	601.59													
05/01/94	604.24													
06/07/94	602.39													
07/05/94	601.02													
07/08/94	600.91					2.6	< 1	< 1	< 1	< 0.5	< 1.2	< 1.8	< 0.3	11.1
08/01/94	600.22													
09/08/94	599.51													
10/05/94	599.36													
11/03/94	599.31													
12/01/94	602.45													
01/24/95	608.30													
02/09/95	605.84													
03/06/95	603.77													
04/03/95	604.76													
05/03/95	602.90													
06/01/95	601.72													
06/28/95	600.75													
06/28/95		< 1	< 1	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1	< 2	< 1	11
09/01/95	599.65													
09/11/95	598.58													
10/02/95	598.31													
11/09/95	602.69													
12/04/95	606.80													
01/08/96	603.34													
02/06/96	604.42													
03/05/96	604.17													
04/02/96	606.22													
05/01/96	607.39													
06/04/96	605.49													
07/08/96	603.10													
07/10/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	< 1	< 1	< 0.64	< 1.2	< 1.8	< 0.79	11.33
08/08/96	601.34													
09/05/96	600.13													
10/01/96	600.96													
11/27/96	604.56													
12/24/96	608.25													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B35M

CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)

REF ELEV 602.69
TOR ELEV 583.1

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
06/28/93	588.97	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	< 0.5	< 1.2	< 1.8	< 0.3	11
07/01/93														
08/04/93	587.41													
08/31/93	586.71													
10/01/93	586.22													
10/04/93		< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	< 1	< 1	< 1	* 1.2	< 1.2	< 1.8	< 0.3	11.7
11/02/93	586.71													
12/03/93	586.94													
12/15/93	591.46													
01/14/94	586.50													
03/03/94	589.97													
05/01/94	590.07													
06/07/94	589.70													
07/05/94	589.08													
08/01/94	588.92													
09/08/94	587.80													
10/05/94	589.74													
11/03/94	589.42													
12/01/94	590.93													
01/24/95	593.17													
02/09/95	591.57													
03/06/95	590.89													
04/03/95	591.26													
05/03/95	589.72													
06/01/95	588.84													
06/26/95	587.70													
08/01/95	586.81													
09/11/95	587.56													
10/02/95	587.24													
11/09/95	589.67													
12/04/95	592.51													
01/08/96	589.66	< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	< 1	< 1	< 0.64	< 1.2	< 1.8	< 0.79	11.33
01/11/96														
02/06/96	590.67													
03/05/96	591.09													
04/02/96	591.85													
05/01/96	592.35													
06/04/96	591.14													
07/08/96	589.52													
07/17/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	< 1	< 1	< 1	< 0.64	< 1.2	< 1.8	< 0.79	11.33
08/08/96	586.29													
09/05/96	587.48													
10/01/96	590.64													
11/27/96	591.16													
12/24/96	593.16													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B37M

**CARBORUNDUM SPECIALTY PRODUCTS
RESULTS REPORTED IN ug/L (ppb)**

REF ELEV 619.90
TOR ELEV 606.70

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
12/03/93	597.45													
12/15/93	596.04													
12/17/93	596.03													
12/24/93	596.80													
12/27/93	596.42													
12/31/93	597.00													
01/02/94	600.57													
01/12/94	DRY													
01/14/94	595.84													
02/03/94	DRY													
03/03/94	599.95													
04/14/94	609.97													
05/01/94	600.63													
06/07/94	DRY													
07/05/94	DRY													
07/07/94	603.50	< 1.2	< 0.5	< 0.7	2.4	J< 2.5	2.1	460	460	0.7	4900	3.8	< 0.3	5372.1
08/01/94	DRY													
09/08/94	DRY													
10/05/94	DRY													
11/03/94	DRY													
12/01/94	DRY													
01/24/95	597.26													
02/09/95	DRY													
03/06/95	595.50													
04/03/95	595.63													
05/03/95	595.91													
06/01/95	596.89													
06/26/95	DRY													
08/01/95	597.08													
09/11/95	NA													
10/02/95	595.92													
11/09/95	596.80													
12/04/95	598.11													
01/08/96	596.44													
02/06/96	597.65													
03/05/96	596.97													
04/02/96	598.04													
05/01/96	598.04													
06/04/96	604.14													
07/08/96	596.48													
08/08/96	DRY													
09/05/96	DRY													
10/01/96	597.35													
11/27/96	605.50													
12/24/96	610.18													



FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

Well B38M

CARBORUNDUM SPECIALTY PRODUCTS
 AUGUST 1984 THROUGH DECEMBER 1992 SAMPLING PROGRAM COMPARISON
 RESULTS REPORTED IN ug/L (ppb)

REF ELEV 609.81
 TOR ELEV 608.20

Date	Compound: Water Level	Carbon Tetrachloride	Chloroform	1,1-Dichloro- ethane	1,1-Dichloro- ethene	Methylene Chloride	Trans-1,2- Dichloroethen	Cis-1,2- Dichloroethen	Total-1,2- Dichloroethen	1,1,1-Tri- chloroethane	Trichloro- ethene	Vinyl Chloride	Tetrachloro- ethene	Total
02/03/94	580.43													
03/03/94	580.80	< 1.2	< 0.5	< 0.7	< 1.3	< 2.5	2.3	140	140	< 0.5	27	12	< 0.3	186
04/07/94	581.20													
05/01/94	580.83													
06/07/94	580.60													
07/05/94	580.48													
07/06/94	580.49	< 1.2	< 0.5	1.1	< 1.3	J<2.5	3.5	160	160	< 0.5	20	7.4	< 0.3	194.8
08/01/94	576.59													
09/08/94	576.30													
10/05/94	576.13	< 1.2	< 0.5	1.5	< 2.5	< 2.5	4.1	220	220	< 0.5	16	4.9	< 0.3	249.9
10/06/94	576.10													
12/01/94	576.78													
01/24/95	579.25	< 1	< 1	< 1	< 1	< 1	1.1	110	111.1	< 1	11	< 2	< 1	131.1
01/26/95	579.07													
02/09/95	578.80													
03/06/95	578.80													
04/03/95	580.16	< 1	< 1	< 1	< 1	< 1	1	96	97	< 1	7	< 2	< 1	113
04/04/95														
05/03/95	576.59													
06/01/95	577.43													
06/26/95	577.00													
06/28/95		< 1	< 1	< 1	< 1	< 1	1.5	100	101.5	< 1	6.8	< 2	< 1	117.3
08/01/95	574.78													
09/11/95	NA													
10/02/95	573.39													
10/04/95		< 1.2	< 0.5	< 1	< 0.7	< 2.5	2.7	160	162.7	< 0.64	13	< 1.8	3	187.04
11/09/95	575.07													
12/04/95	578.89													
01/08/96	577.01													
01/10/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	1	98	99	< 0.64	6.1	< 1.8	< 0.79	114.23
02/06/96	577.51													
03/05/96	NA													
04/02/96	579.53													
04/10/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	2	142	144	< 0.64	7.7	< 1.8	< 0.79	160.83
05/01/96	576.30													
06/04/96	578.13													
07/08/96	577.34													
07/17/96		< 12	< 5	< 10	< 7	< 25	< 10	110	110	< 6.4	< 12	< 18	< 7.9	213.3
08/08/96	575.35													
09/05/96	574.20													
10/01/96	575.76													
10/02/96		< 1.2	< 0.5	< 1	< 0.7	< 2.5	1.7	130	132	< 0.64	5.8	< 1.8	< 0.79	146.93
11/27/96	577.06													
12/24/96	NA													



APPENDIX B

POTW Data

CARBORUNDUM FACILITY, WHEATFIELD, NY
 SITE NUMBER 932102
 ANALYTICAL RESULTS - POTW OUTFALL
 Method 8010

Constituent	Action Level lbs/day	QL ug/l	01-May-96							
			07-Nov-95 lbs/day	06-Dec-95 lbs/day	09-Jan-96 lbs/day	06-Feb-96 lbs/day	07-Mar-96 lbs/day	02-Apr-96 lbs/day	01-May-96 lbs/day	
Carbon tetrachloride	0.2	<1.2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chloroform	0.2	<0.50	0.005	<0.001	0.007	0.002	0.001	0.003	0.003	<0.001
1,1-Dichloroethane	0.2	<0.70	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
1,1-Dichloroethene	0.2	<1.3	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Methylene chloride	0.5	<2.5	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
cis-1,2-Dichloroethene	NA	<1.0	0.003	<0.002	<0.002	0.002	0.002	0.003	0.003	0.003
trans-1,2-Dichloroethene	NA	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
total-1,2-Dichloroethene	2.6	<1.0	0.003	<0.002	<0.002	0.002	0.002	0.003	0.003	0.003
1,1,1-Trichloroethane	0.5	<0.30	0.004	0.002	0.002	<0.001	0.001	0.001	0.001	<0.001
Trichloroethene	6.8	<1.2	<0.002	<0.002	<0.002	<0.002	0.003	0.004	0.004	0.005
Vinyl chloride	0.8	<1.8	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Bromomethane	NA	<12.0	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Bromoform	NA	<2.0	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorobenzene	NA	<2.5	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Chloroethane	NA	<5.2	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
2-Chloroethylvinyl ether	NA	<1.3	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Chloromethane	NA	<0.80	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dibromochloromethane	0.02	<0.90	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
1,2-Dichlorobenzene	NA	<1.5	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1,1,2-Trichloroethane	NA	<0.20	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-Dichlorobenzene	NA	<3.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,2-Dichloroethane	NA	<0.30	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
1,2-Dichloropropane	NA	<0.40	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	NA	<2.4	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
trans-1,3-Dichloropropene	NA	<3.4	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
1,1,2,2-Tetrachloroethane	NA	<0.30	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Tetrachloroethene	0.02	<0.30	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Average Flow Rate (gpm)	480		223.8	431.9	289.5	408.6	400.3	438.5	414.4	

1. Action Levels are set forth in the NCSD industrial waste discharge permit for the facility.
2. NA - Not Applicable, no permit limit for this constituent.
3. Average Flow Rate is calculated by averaging the four readings obtained during the sampling period.
4. NR - No reading obtained.

CARBORUNDUM FACILITY, WHEATFIELD, NY
 SITE NUMBER 932102
 ANALYTICAL RESULTS - POTW OUTFALL
 Method 8010

Constituent	Action Level lbs/day	QL ug/l	03-Jun-96	08-Jul-96	08-Aug-96	03-Sep-96	03-Jun-96	08-Jul-96	08-Aug-96	03-Sep-96
			lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
Carbon tetrachloride	0.2	<1.2	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chloroform	0.2	<0.50	0.003	0.001	0.002	0.003	0.003	0.002	0.003	0.003
1,1-Dichloroethane	0.2	<0.70	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
1,1-Dichloroethene	0.2	<1.3	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Methylene chloride	0.5	<2.5	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
cis-1,2-Dichloroethene	NA	<1.0	0.003	0.002	0.003	0.002	0.003	0.002	0.003	0.002
trans-1,2-Dichloroethene	NA	<1.0	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
total-1,2-Dichloroethene	2.6	<1.0	0.003	0.002	0.003	0.002	0.003	0.002	0.003	0.002
1,1,1-Trichloroethane	0.5	<0.30	0.022	0.003	0.002	0.003	0.003	0.002	0.003	0.005
Trichloroethene	6.8	<1.2	0.004	0.003	0.004	0.003	0.003	0.004	0.004	0.012
Vinyl chloride	0.8	<1.8	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Bromomethane	NA	<12.0	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Bromoform	NA	<2.0	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorobenzene	NA	<2.5	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Chloroethane	NA	<5.2	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
2-Chloroethylvinyl ether	NA	<1.3	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Chloromethane	NA	<0.80	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dibromochloromethane	0.02	<0.90	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
1,2-Dichlorobenzene	NA	<1.5	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1,1,2-Trichloroethane	NA	<0.20	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-Dichlorobenzene	NA	<3.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,2-Dichloroethane	NA	<0.30	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
1,2-Dichloropropane	NA	<0.40	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	NA	<2.4	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
trans-1,3-Dichloropropene	NA	<3.4	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
1,1,2,2-Tetrachloroethane	NA	<0.30	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Tetrachloroethene	0.02	<0.30	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Average Flow Rate (gpm)	480		377.4	192.2	239.0	135.8				

- Action Levels are set forth in the NCSID industrial waste discharge permit for the facility.
- NA - Not Applicable, no permit limit for this constituent.
- QL - Contract Required Quantitation Limit
- Average Flow Rate is calculated by averaging the four readings obtained during the sampling period.
- NR - No reading obtained.

FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

APPENDIX C

1996 Quarry Seep and Pond Sampling Results



American Environmental Network, Inc.

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CASE NARRATIVE

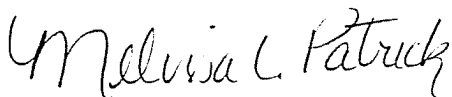
LABORATORY NAME: American Environmental Network of Florida
PROJECT NAME: Former Carborundum Site
PROJECT NUMBER: 79002-087

H&A of NY SAMPLE ID	AEN LABORATORY ACCESSION NUMBER
POOL	604213-001
EAST STEEP	604213-002
B-38 (M)	604213-003
REAGENT SPIKE	604213-004
REAGENT SPIKE DUPLICATE	604213-006
MS EAST STEEP	604213-006
MSD EAST STEEP	604213-007
INSTRUMENT BLANK #1	604213-008
INSTRUMENT BLANK #2	604213-009

Samples from the above listed site were received in good condition on April 11, 1996. The cooler was 2°C. Please note the relinquish date was incorrectly submitted as 4/11/96.

On April 12, 1996 2-chloroethylvinylether was below the established recovery range for the QC check. The range was 24-52 and the recovery was 22.2. This compound was not found in the samples associated with this QC check. Our historical data also shows that this compound has not been detected in previous sampling events.

Sample B-38 (M) has cis 1,2-dichloroethene present at a level which is above the high end of the calibration curve. A linearity curve is submitted with this package which proves this compound is linear to 200 ug/l.



Melissa L. Patrick
Project Manager

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MAY 08 1996

Haley & Aldrich, Inc.

May 6, 1996



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Haley & Aldrich, inc.

Reviewed by:


AEN Project Manager

Client: BP OIL COMPANY
CLEVELAND, OHIO

Project Name: FORMER CARBORUNDUM SITE
Project Number: 79002-087
Project Location: CORY RD, SANBORN, NY
Accession Number: 604213

Project Manager: D. LANGSHAW (H&A OF NY, NY), M. COLEMAN (BP)
Sampled By: DAVID M. NOSTRANT

ANALYTICAL SERVICES FOR THE ENVIRONMENT

Analysis Report

Analysis: HALOGENATED VOLATILES (8010)

Accession: 604213
Client: BP OIL COMPANY
Project Number: 79002-087
Project Name: FORMER CARBORUNDUM SITE
Project Location: CORY RD, SANBORN, NY
Department: GC/VOA

"FINAL REPORT FORMAT - SINGLE"

Accession: 604213
 Client: BP OIL COMPANY
 Project Number: 79002-087
 Project Name: FORMER CARBORUNDUM SITE
 Project Location: CORY RD, SANBORN, NY
 Test: HALOGENATED VOLATILES (8010)
 Analysis Method: 8010/SW 846, 3rd Edition, September 1986 and Revision 1, July
 Extraction Method: N/A
 Matrix: WATER
 QC Level: N

Lab Id: 001 Sample Date/Time: 10-APR-96 0925
 Client Sample Id: POOL Received Date: 11-APR-96
 Batch: LUW041 Extraction Date: N/A
 Blank: A Dry Weight %: N/A Analysis Date: 13-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BROMODICHLOROMETHANE	UG/L	ND	1	
BROMOFORM	UG/L	ND	2.0	
BROMOMETHANE	UG/L	ND	12	
CARBON TETRACHLORIDE	UG/L	ND	1.2	
CHLOROETHANE	UG/L	ND	2.5	
CHLOROETHANE	UG/L	ND	5.2	
2-CHLOROETHYLVINYLEETHER	UG/L	ND	2.1	
CHLOROFORM	UG/L	ND	0.5	
CHLOROMETHANE	UG/L	ND	0.8	
DIBROMOCHLOROMETHANE	UG/L	ND	0.9	
1,2-DICHLOROETHANE	UG/L	ND	1.5	
1,3-DICHLOROETHANE	UG/L	ND	3.2	
1,4-DICHLOROETHANE	UG/L	ND	2.4	
DICHLORODIFLUOROMETHANE	UG/L	ND	5	
1,1-DICHLOROETHANE	UG/L	ND	1	
1,2-DICHLOROETHANE	UG/L	ND	1	
1,1-DICHLOROETHENE	UG/L	ND	0.7	
TRANS 1,2 DICHLOROETHENE	UG/L	ND	1.0	
1,2-DICHLOROPROPANE	UG/L	ND	0.4	
CIS-1,3-DICHLOROPROPENE	UG/L	ND	1.0	
TRANS-1,3-DICHLOROPROPENE	UG/L	ND	3.4	
METHYLENE CHLORIDE	UG/L	ND	2.5	
1,1,2,2-TETRACHLOROETHANE	UG/L	ND	0.54	
TETRACHLOROETHENE	UG/L	ND	0.79	
1,1,1-TRICHLOROETHANE	UG/L	ND	0.64	
1,1,2-TRICHLOROETHANE	UG/L	ND	0.59	
TRICHLOROETHENE	UG/L	ND	1.2	
TRICHLOROFLUOROMETHANE	UG/L	ND	2	
VINYL CHLORIDE	UG/L	ND	1.8	
BENZYL CHLORIDE	UG/L	ND	5	
BROMOBENZENE	UG/L	ND	3	
DIBROMOMETHANE	UG/L	ND	5	
1,1,1,2-TETRACHLOROETHANE	UG/L	ND	1	
1,2,3 TRICHLOROPROPANE	UG/L	ND	5	
TOTAL 1,2-DICHLOROETHENE	UG/L	31	1	
CIS 1,2 DICHLOROETHENE	UG/L	31	1	
BROMOFLUOROBENZENE (ELCD)	%REC/SURR	104	76-125	
BROMOCHLOROMETHANE	%REC/SURR	101	50-150	
ANALYST	INITIALS	LKD		

Comments:

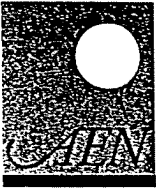
"FINAL REPORT FORMAT - SINGLE"

Accession: 604213
 Client: BP OIL COMPANY
 Project Number: 79002-087
 Project Name: FORMER CARBORUNDUM SITE
 Project Location: CORY RD, SANBORN, NY
 Test: HALOGENATED VOLATILES (8010)
 Analysis Method: 8010/SW 846, 3rd Edition, September 1986 and Revision 1, July
 Extraction Method: N/A
 Matrix: WATER
 QC Level: N

Lab Id: 002 Sample Date/Time: 10-APR-96 0930
 Client Sample Id: EAST STEEP Received Date: 11-APR-96
 Batch: LUW041 Extraction Date: N/A
 Blank: A Dry Weight %: N/A Analysis Date: 13-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BROMODICHLOROMETHANE	UG/L	ND	1	
BROMOFORM	UG/L	ND	2.0	
BROMOMETHANE	UG/L	ND	12	
CARBON TETRACHLORIDE	UG/L	ND	1.2	
CHLOROENZENE	UG/L	ND	2.5	
CHLOROETHANE	UG/L	ND	5.2	
2-CHLOROETHYLVINYLEETHER	UG/L	ND	2.1	
CHLOROFORM	UG/L	ND	0.5	
CHLOROMETHANE	UG/L	ND	0.8	
DIBROMOCHLOROMETHANE	UG/L	ND	0.9	
1,2-DICHLOROENZENE	UG/L	ND	1.5	
1,3-DICHLOROENZENE	UG/L	ND	3.2	
1,4-DICHLOROENZENE	UG/L	ND	2.4	
DICHLORODIFLUOROMETHANE	UG/L	ND	5	
1,1-DICHLOROETHANE	UG/L	ND	1	
1,2-DICHLOROETHANE	UG/L	ND	1	
1,1-DICHLOROETHENE	UG/L	ND	0.7	
TRANS 1,2 DICHLOROETHENE	UG/L	ND	1.0	
1,2-DICHLOROPROPANE	UG/L	ND	0.4	
CIS-1,3-DICHLOROPROPENE	UG/L	ND	1.0	
TRANS-1,3-DICHLOROPROPENE	UG/L	ND	3.4	
METHYLENE CHLORIDE	UG/L	ND	2.5	
1,1,2,2-TETRACHLOROETHANE	UG/L	ND	0.54	
TETRACHLOROETHENE	UG/L	ND	0.79	
1,1,1-TRICHLOROETHANE	UG/L	ND	0.64	
1,1,2-TRICHLOROETHANE	UG/L	ND	0.59	
TRICHLOROETHENE	UG/L	ND	1.2	
TRICHLOROFLUOROMETHANE	UG/L	ND	2	
VINYL CHLORIDE	UG/L	ND	1.8	
BENZYL CHLORIDE	UG/L	ND	5	
BROMOENZENE	UG/L	ND	3	
DIBROMOMETHANE	UG/L	ND	5	
1,1,1,2-TETRACHLOROETHANE	UG/L	ND	1	
1,2,3 TRICHLOROPROPANE	UG/L	ND	5	
TOTAL 1,2-DICHLOROETHENE	UG/L	ND	1	
CIS 1,2 DICHLOROETHENE	UG/L	ND	1	
BROMOFLUROENZENE (ELCD)	%REC/SURR	109	76-125	
BROMOCHLOROMETHANE	%REC/SURR	78	50-150	
ANALYST	INITIALS	LKD		

Comments:



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Reviewed by:

AEN Project Manager

Client: BP OIL COMPANY
CLEVELAND, OHIO

Project Name: BP SITE QUARRY SEEP SAMPLES
Project Number: 79002-087
Project Location: CORY RD., SANBORN, NY
Accession Number: 610186

Project Manager: DAVE HAGEN (H&A, OH), W. SICVOL (BP)
Sampled By: DENNIS KREITZBURG

Analysis Report

Analysis: HALOGENATED VOLATILES (8010)

Accession:	610186
Client:	BP OIL COMPANY
Project Number:	79002-087
Project Name:	BP SITE QUARRY SEEP SAMPLES
Project Location:	CORY RD., SANBORN, NY
Department:	GC/VOA

"FINAL REPORT FORMAT - SINGLE"

Accession: 610186
 Client: BP OIL COMPANY
 Project Number: 79002-087
 Project Name: BP SITE QUARRY SEEP SAMPLES
 Project Location: CORY RD., SANBORN, NY
 Test: HALOGENATED VOLATILES (8010)
 Analysis Method: 8010/Test Methods for Evaluating Solid Waste. SW-846, 3rd ed.
 Extraction Method: N/A
 Matrix: WATER
 QC Level: N

Lab Id: 007 Sample Date/Time: 02-OCT-96 1130
 Client Sample Id: QUARRY POND Received Date: 05-OCT-96
 Batch: PHW088 Extraction Date: N/A
 Blank: C Dry Weight %: N/A Analysis Date: 08-OCT-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BROMODICHLOROMETHANE	UG/L	ND	1	
BROMOFORM	UG/L	ND	2.0	
BROMOMETHANE	UG/L	ND	12	
CARBON TETRACHLORIDE	UG/L	ND	1.2	
CHLOROBENZENE	UG/L	ND	2.5	
CHLOROETHANE	UG/L	ND	5.2	
2-CHLOROETHYLVINYLETHER	UG/L	ND	2.1	
CHLOROFORM	UG/L	ND	0.5	
CHLOROMETHANE	UG/L	ND	0.8	
DIBROMOCHLOROMETHANE	UG/L	ND	0.9	
1,2-DICHLOROBENZENE	UG/L	ND	1.5	
1,3-DICHLOROBENZENE	UG/L	ND	3.2	
1,4-DICHLOROBENZENE	UG/L	ND	2.4	
DICHLORODIFLUOROMETHANE	UG/L	ND	5	
1,1-DICHLOROETHANE	UG/L	ND	1	
1,2-DICHLOROETHANE	UG/L	ND	1	
1,1-DICHLOROETHENE	UG/L	ND	0.7	
TRANS 1,2 DICHLOROETHENE	UG/L	ND	1.0	
1,2-DICHLOROPROPANE	UG/L	ND	0.4	
CIS-1,3-DICHLOROPROPENE	UG/L	ND	1.0	
TRANS-1,3-DICHLOROPROPENE	UG/L	ND	3.4	
METHYLENE CHLORIDE	UG/L	ND	2.5	
1,1,2,2-TETRACHLOROETHANE	UG/L	ND	0.54	
TETRACHLOROETHENE	UG/L	ND	0.79	
1,1,1-TRICHLOROETHANE	UG/L	ND	0.64	
1,1,2-TRICHLOROETHANE	UG/L	ND	0.59	
TRICHLOROETHENE	UG/L	ND	1.2	
TRICHLOROFUOROMETHANE	UG/L	ND	2	
VINYL CHLORIDE	UG/L	ND	1.8	
BENZYL CHLORIDE	UG/L	ND	5	
BROMOBENZENE	UG/L	ND	3	
DIBROMOMETHANE	UG/L	ND	5	
1,1,1,2-TETRACHLOROETHANE	UG/L	ND	1	
1,2,3 TRICHLOROPROPANE	UG/L	ND	5	
TOTAL 1,2-DICHLOROETHENE	UG/L	ND	1	
CIS 1,2 DICHLOROETHENE	UG/L	ND	1	
BROMOFUOROENZENE (ELCD)	%REC/SURR	107	76-125	
BROMOCHLOROMETHANE	%REC/SURR	110	50-150	
ANALYST	INITIALS	BB		

Comments:

FORMER CARBORUNDUM FACILITY

WHEATFIELD, NEW YORK

APPENDIX D

Soil Vapor Sampling Results



**PIEZOMETER VAPOR SAMPLING - JULY 1996
RESULT SUMMARY**

Northeast Area					Northeast Area						
	Port 1	Port 2	Port 3	Port 4	Port 5		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-1		0.9		ND		PZ-16		NS	ND		
PZ-2		ND		ND		PZ-21		ND	ND		
PZ-8		ND		ND		PZ-24		ND	ND		
PZ-9	ND	NS	ND			PZ-28		277.0		ND	
PZ-10		ND		ND		PZ-29		ND	ND		
PZ-11		ND		34 *		PZ-32		ND	19.2 *		
PZ-14		1775.0		ND							

West Area					West Area						
	Port 1	Port 2	Port 3	Port 4	Port 5		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-36		ND	27.2			PZ-52		NS		NS	
PZ-37		ND		ND		PZ-53			ND		ND
PZ-40		29.7	0.1			PZ-55		ND		131.0	
PZ-43		0.7	ND			PZ-56		ND		ND	
PZ-45		NS		NS		PZ-58		ND		ND	
PZ-48		NA	ND			PZ-59		1000 *		ND	
PZ-49		NS		NS		PZ-61		ND		32.5	
PZ-50		0.2		0.3							

South Area					South Area						
	Port 1	Port 2	Port 3	Port 4	Port 5		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-62		ND		ND		PZ-116		402.0		22.3	
PZ-65		ND		277.0		PZ-118		ND		206.0	
PZ-67		ND	ND			PZ-124			ND		ND
PZ-68		ND	ND			PZ-130			ND		57 *
PZ-109		ND	ND			PZ-136	ND	ND		7.8 *	
PZ-110		ND		ND		PZ-141		ND		1.3	
PZ-111		3.2		ND		PZ-143			ND		ND
PZ-113		43.1		ND		PZ-147			ND		155 *
PZ-115			ND		ND						

East Area					East Area						
	Port 1	Port 2	Port 3	Port 4	Port 5		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-108		ND	ND			PZ-140			ND		ND
PZ-122		ND		ND		PZ-144			290.0		90.5
PZ-123		5.7		ND		PZ-145			ND *		> 2500
PZ-127			ND		ND	PZ-149			ND		> 2500
PZ-129			27.2		ND	PZ-152		ND		ND	
PZ-135			ND		ND						

Filters Building					Filters Building						
	Port 1	Port 2	Port 3	Port 4	Port 5		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-70		575.0		ND		PZ-82		ND *		> 2500 *	
PZ-71		ND		ND		PZ-84		49.5		216.9	
PZ-73		ND		ND		PZ-85	72	479.0	ND		
PZ-74		0.6		ND		PZ-87	0.5	ND	ND		
PZ-76		ND		ND		PZ-89		NA		NA	
PZ-77		105.0		ND		PZ-90		32.9		ND	
PZ-79		ND		> 2500		PZ-91		ND		1561.0	
PZ-81				ND > 2500 *							

Courtyard					Courtyard						
	Port 1	Port 2	Port 3	Port 4	Port 5		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-92		ND	ND			PZ-100	ND	ND	ND	ND	
PZ-97		ND *		2 *		PZ-105		ND		ND	

- Notes:**
1. Piezometers were sampled by H&A personnel on 18 July 1996 with a MicroTip PID.
 2. Vapor sampling results represent approximate vapor concentrations in ppmV.
 3. NA indicates piezometer port could not be sampled due to the presence of water. A * indicates water vapor interference suspected in sample port, but reading obtained. NS indicates piezometer port could not be sampled due to above ground obstruction. ND indicates below detection limit.

**PIEZOMETER VAPOR SAMPLING - NOVEMBER 1996
RESULT SUMMARY**

Northeast Area		Port 1	Port 2	Port 3	Port 4	Port 5	Northeast Area		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-1			ND		ND		PZ-16			NS	NS		
PZ-2			ND		ND		PZ-21			ND	ND		
PZ-8			2.4		3.3		PZ-24			ND	ND		
PZ-9	ND		ND	ND			PZ-28			ND		ND	
PZ-10			ND		ND		PZ-29			ND	ND		
PZ-11			ND		ND		PZ-32			NS	NS		
PZ-14			NS		NS								

West Area		Port 1	Port 2	Port 3	Port 4	Port 5	West Area		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-36			NS	NS			PZ-52			NS		NS	
PZ-37			ND		ND		PZ-53				ND		ND
PZ-40			NS	NS			PZ-55			NS		NS	
PZ-43			ND	ND			PZ-56			NS		NS	
PZ-45			NS		NS		PZ-58			ND		ND	
PZ-48			NS	NS			PZ-59			ND		ND	
PZ-49			NS		NS		PZ-61			ND		ND	
PZ-50			ND		ND								

South Area		Port 1	Port 2	Port 3	Port 4	Port 5	South Area		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-62			ND		ND		PZ-116			4.0		ND	
PZ-65			ND		ND		PZ-118			607.0		1855.0	
PZ-67			ND	ND			PZ-124				ND		ND
PZ-68			ND	ND			PZ-130				NS		NS
PZ-109			ND	ND			PZ-136	ND	ND			ND	
PZ-110			ND		ND		PZ-141		ND			ND	
PZ-111			ND		ND		PZ-143				NS		NS
PZ-113			ND		ND		PZ-147				ND		ND
PZ-115				ND		1.8							

East Area		Port 1	Port 2	Port 3	Port 4	Port 5	East Area		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-108			ND	ND			PZ-140				ND		ND
PZ-122			ND		ND		PZ-144				1.4		ND
PZ-123			NS		NS		PZ-145				3.0		1031.0
PZ-127				ND		ND	PZ-149				ND		ND
PZ-129				NS		NS	PZ-152			ND		ND	
PZ-135				ND		ND							

Filters Building		Port 1	Port 2	Port 3	Port 4	Port 5	Filters Building		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-70			190.0		ND		PZ-82			5.4		1922.0	
PZ-71			ND		ND		PZ-84			12.8		ND	
PZ-73			ND		ND		PZ-85	1.3	59.0		ND		
PZ-74			ND		ND		PZ-87	ND	ND		ND		
PZ-76			ND		ND		PZ-89		NA			NA	
PZ-77			72.0		101.0		PZ-90		1.5			2.8	
PZ-79			ND		2.6		PZ-91		ND			ND	
PZ-81				ND	ND								

Courtyard		Port 1	Port 2	Port 3	Port 4	Port 5	Courtyard		Port 1	Port 2	Port 3	Port 4	Port 5
PZ-92			ND	ND			PZ-100		ND	2.0	21.0	20.0	
PZ-97			ND	ND	ND		PZ-105			ND		ND	

Notes:

1. Piezometers were sampled by H&A personnel on 25 November 1996 with a MicroTip PID. Vacuum extraction system was off between 22 and 25 November 1996.
2. Vapor sampling results represent approximate vapor concentrations in ppmV.
3. NA indicates piezometer port could not be sampled due to the presence of water. A * indicates water vapor interference suspected in sample port, but reading obtained. NS indicates piezometer port could not be sampled due to above ground obstruction or could not be located due to snow. ND indicates below detection limit.