HARTCROWSER

Earth and Environmental Technologies

SUPPLEMENTAL SITE ASSESSMENT

SHELL SERVICE STATION
4226 First Street
Pleasanton, California

PROJECT J-6006

HART CROWSER, INC.
December 11, 1990

353 Sacramento Street · Suite 1140 · San Francisco, California

1.0 EXECUTIVE SUMMARY

A Supplemental Site Assessment was performed by Hart Crowser, Inc., at the Shell service station located at 4226 First Street in Pleasanton, California during July 1990. Previous work by Hart Crowser includes two soil borings and well abandonment as documented in our April 23, 1990 report. Other activity at the site includes five soil borings and the installation of one monitoring well completed by other consultants.

Hart Crowser drilled two soil borings (SB-4 and SB-5) on July 17, 1990. Six soil samples (three from each boring) were selected for analysis of total petroleum hydrocarbons (TPH) with benzene, toluene, ethylbenzene and xylene (BTEX) distinction. All of the samples had TPH concentrations below the detection limit with the exception of one sample from boring SB-5, which contained a TPH concentration of 820 parts per million (ppm) at a depth of 35 feet below ground surface (BGS). Detectable BTEX concentrations were found in three of the samples submitted for analysis: SB-4-35; SB-4-50; and SB-5-35.

2.0 INTRODUCTION

This report presents the results of our most recent activity in the supplemental site assessment by Hart Crowser, Inc., at the Shell service station located at 4226 First Street in Pleasanton, California. A site location map is provided in Figure 1. The purpose of this assessment was to further delineate the horizontal and vertical extent of petroleum hydrocarbons in subsurface soil at the site.

5.0 SITE DESCRIPTION

The station is located at the southwest corner of First Street and Vineyard Avenue in Pleasanton, California. The site is at an approximate elevation of 370 feet above mean sea level (National Geodetic Vertical Datum of 1929). There is a gentle northeasterly slope onsite. The site is capped with asphalt except in the vicinity of the underground tanks and pumping islands, which are covered with concrete. There is one building (approximately 1800 square feet) onsite used for automobile repairs. A towing company is also based at this facility, with a large number of cars parked around the site. A site plan is provided in Figure 2.

6.0 METHODS AND PROCEDURES

6.1 Soil borings

Two soil borings (SB-4 and SB-5) were drilled on July 17, 1990 with a truck-mounted drilling rig using eight-inch outside diameter hollow stem augers. The locations of these borings are shown in Figure 2. The boring locations were selected on the basis of previous data and restricted by site access. The total depth of each boring was approximately 50 feet BGS.

Soil samples were collected at five-foot intervals using a California split-spoon sampler with stainless steel liners. All downhole equipment was steam-cleaned before beginning operations and between borings in order to minimize the potential for cross-contamination.

Each borehole was lithologically logged by a Hart Crowser geologist onsite using the Unified Soil Classification System. These logs provide a record of the subsurface materials encountered, hydrogeologic information and results

of field screening of soil samples for volatile organic compounds (Appendix A). Both borings were backfilled with cement grout to surface grade.

Soil collected in the bottom tube of each driven sample was sealed with teflon tape, covered with tight fitting plastic caps and placed in refrigerated storage for possible lab analysis. Material from the middle tube was screened for volatile hydrocarbons using an HNu photoionization detector (PID). Standard screening procedures are included in Appendix B. Between samples, the sampler was thoroughly cleaned using an Alconox detergent, rinsed in distilled water, and equipped with three clean sampling tubes. Strict chain-of-custody procedures were followed throughout sample acquisition, storage and transport (Appendix C).

7.0 RESULTS OF ASSESSMENT

7.1 Soil Characteristics

Sandy gravel interpreted as fill approximately two feet in thickness was encountered immediately beneath the asphalt surface. Below the fill, interbedded silty sands, clayey silts and sandy silts extended to a depth of about 15 feet BGS. A silt layer varying in thickness between three and ten feet was encountered at this depth. The silt was underlain by interbedded gravelly sands, gravelly silts, sandy gravels and silty sands which extended from approximately 25 to 50 feet BGS, where a consolidated silt unit was encountered. A minor amount of groundwater was encountered at the bottom of boring SB-5 just above the consolidated silt at a depth of approximately 50 feet BGS. Based on hydrogeologic information developed at this site, this water is believed to be perched. No free water was encountered in boring SB-4.

7.2 Laboratory Analysis

A total of six soil samples (three from each boring) were submitted to Sequoia Analytical Laboratory for analysis. The samples were analyzed for TPH as gasoline with BTEX distinction by EPA Methods 8015/8020. Laboratory results are listed in Table 1.

Of the six samples analyzed, only one contained TPH above the detected limit. Sample SB-5-35 had a TPH concentration of 820 ppm. BTEX was detected in samples SB-4-35, SB-4-50, and SB-5-35. Specific concentrations of the detected constituents are listed in Table 1.

8.0 CONCLUSIONS

Based on the results of this assessment, the following conclusions are made:

- Subsurface lithology encountered during this latest assessment is consistent with prior work onsite. A minor amount of perched groundwater was encountered near the bottom of boring SB-5.

- A slight to moderate petroleum hydrocarbon odor was noted during the drilling of both borings. The strongest odor was encountered during the drilling of boring SB-5 at a depth of about 35 feet BGS.

- Three soil samples analyzed contained detectable concentrations of petroleum hydrocarbons. TPH as gasoline was detected in the sample collected at a depth of 35 feet BGS from boring SB-5. BTEX was detected in soil samples from boring SB-5 at 35 feet BGS and from boring SB-4 at 35 and 50 feet BGS.

9.0 RECOMMENDATIONS

Based on the results of this assessment, the following recommendations are considered appropriate:

- Copies of this report should be forwarded to the Alameda Water Control Board, the San Francisco Bay Regional Water Quality Control Board and the Pleasanton Fire Department.

- Two additional soil borings should be drilled onsite to further delineate the horizontal and vertical extent of petroleum hydrocarbons in the subsurface soil.

10.0 LIMITATIONS

Work for this project was performed, and this technical report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. It was prepared for Shell Oil Company for specific application to the Shell service station located at 4226 First Street in Pleasanton, California. It should be understood that the interpretations and recommendations contained in this report are based upon a limited evaluation of soils onsite, and that variations in onsite soil conditions may not be reflected in the results obtained from this limited assessment. This report is not intended to represent a legal opinion. No other warranty, express or implied, is made.

TABLE 1

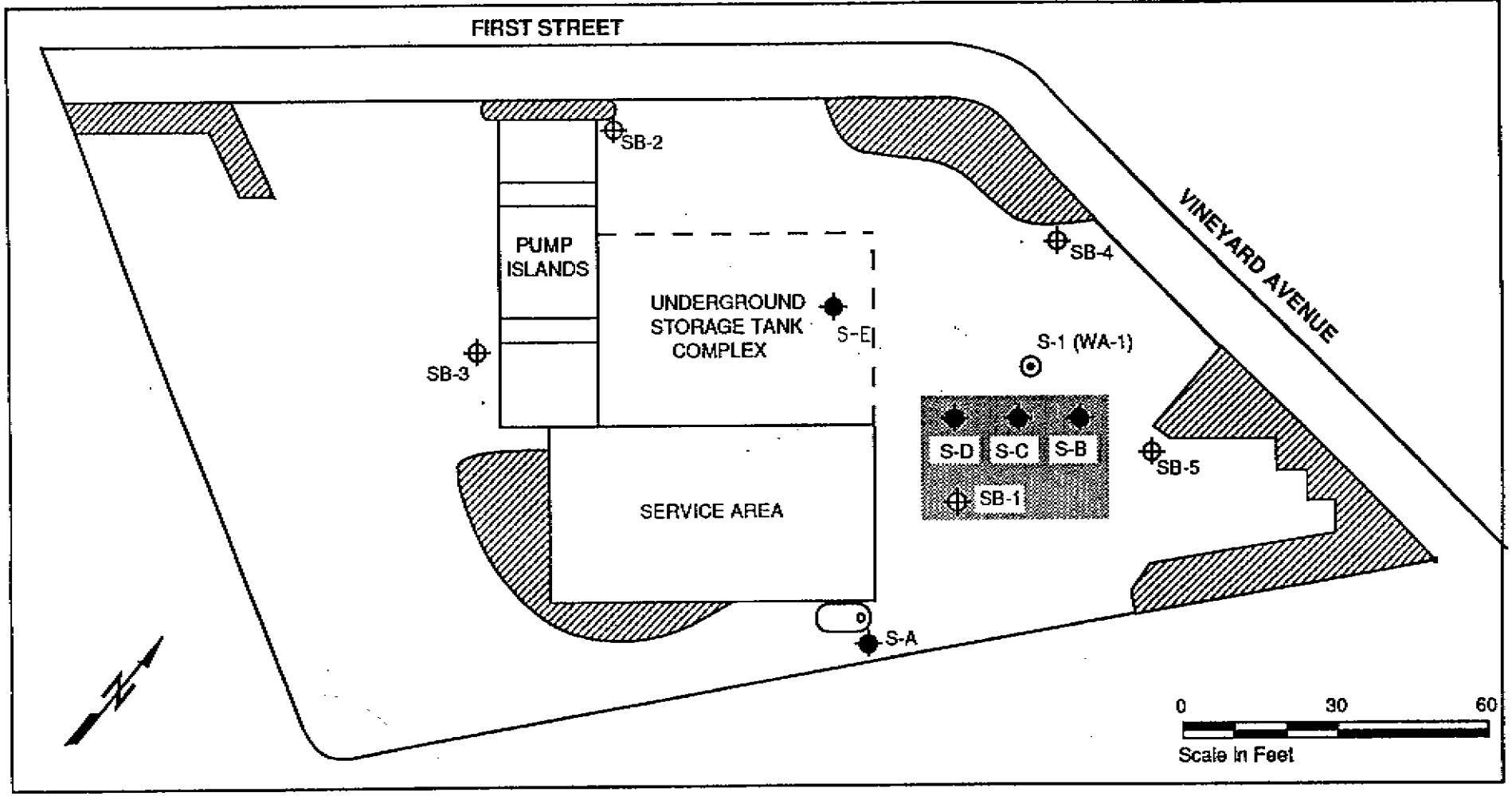
ANALYTICAL RESULTS OF SOIL SAMPLES

Concentrations in mg/kg (parts per million)

SHELL OIL COMPANY
4226 FIRST STREET
PLEASANTON, CALIFORNIA

Boring	TPH	Benzene	Toluene	Ethylbenzene	Xylenes
SB4-15	N.D.	N.D.	N.D.	N.D.	N.D.
SB4-35	N.D.	0.023	0.0071	N.D.	0.0055
SB4-50	N.D.	0.030	0.0059	N.D.	N.D.
SB5-35	820	65	3.7	6.5	65
SB5-40	N.D.	N.D.	N.D.	N.D.	N.D.
SB5-50	N.D.	N.D.	N.D.	N.D.	N.D.
DETECTION LIMITS:	1.0	0.0050	0.0050	0.0050	0.0050

NOTES:
1) TPH - Total Petroleum Hydrocarbons (Gasoline Range) analyzed by EPA Methods 5030/8015.
2) Benzene, Toluene, Ethylbenzene and Xylene analyzed by EPA Method 8020.
3) ND - Not detected.



LEGEND

- Location of Hart Crowser Borings
- Location of Emcon Borings
- Abandoned Monitoring Well
- Former location of underground gasoline storage tanks
- Waste Oil Tank Location
- Planter Area

SITE PLAN
4226 First Street
Pleasanton, California

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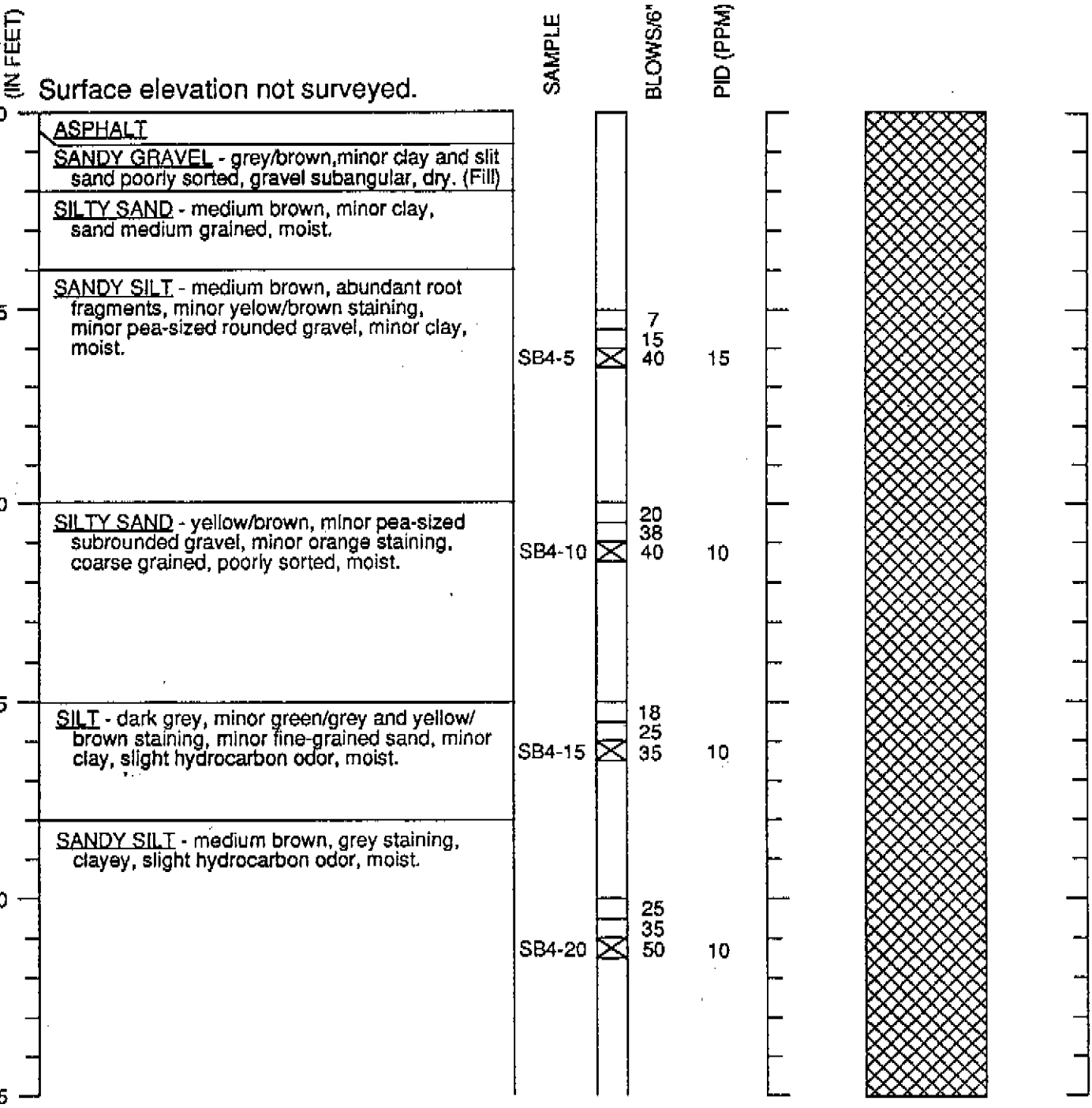
Figure 2

Boring Log SB-4

Geologic Log

Surface elevation not surveyed.



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. No free water encountered.

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Figure A-2

Boring Log SB-4

Geologic Log

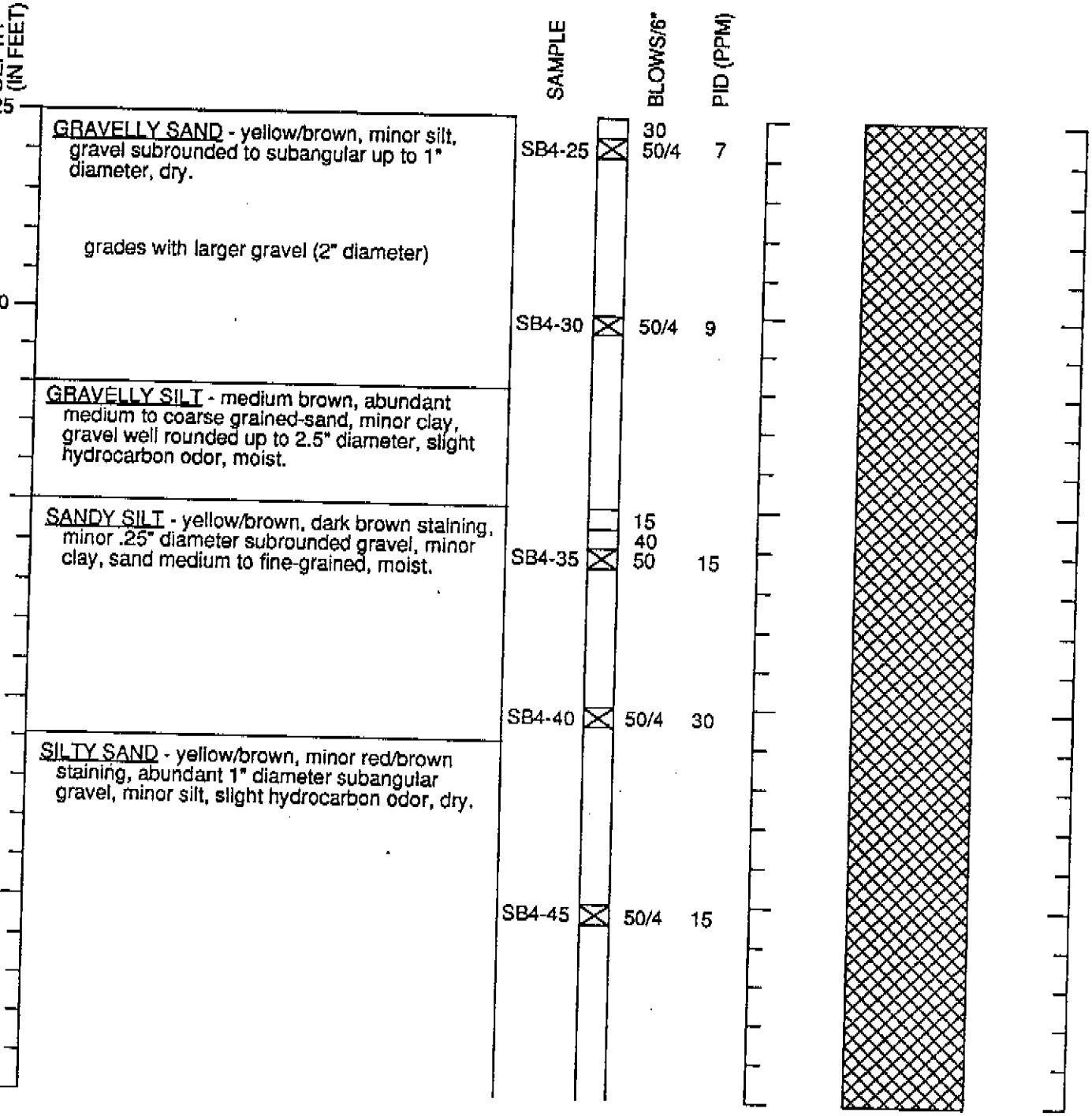

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Figure A-2
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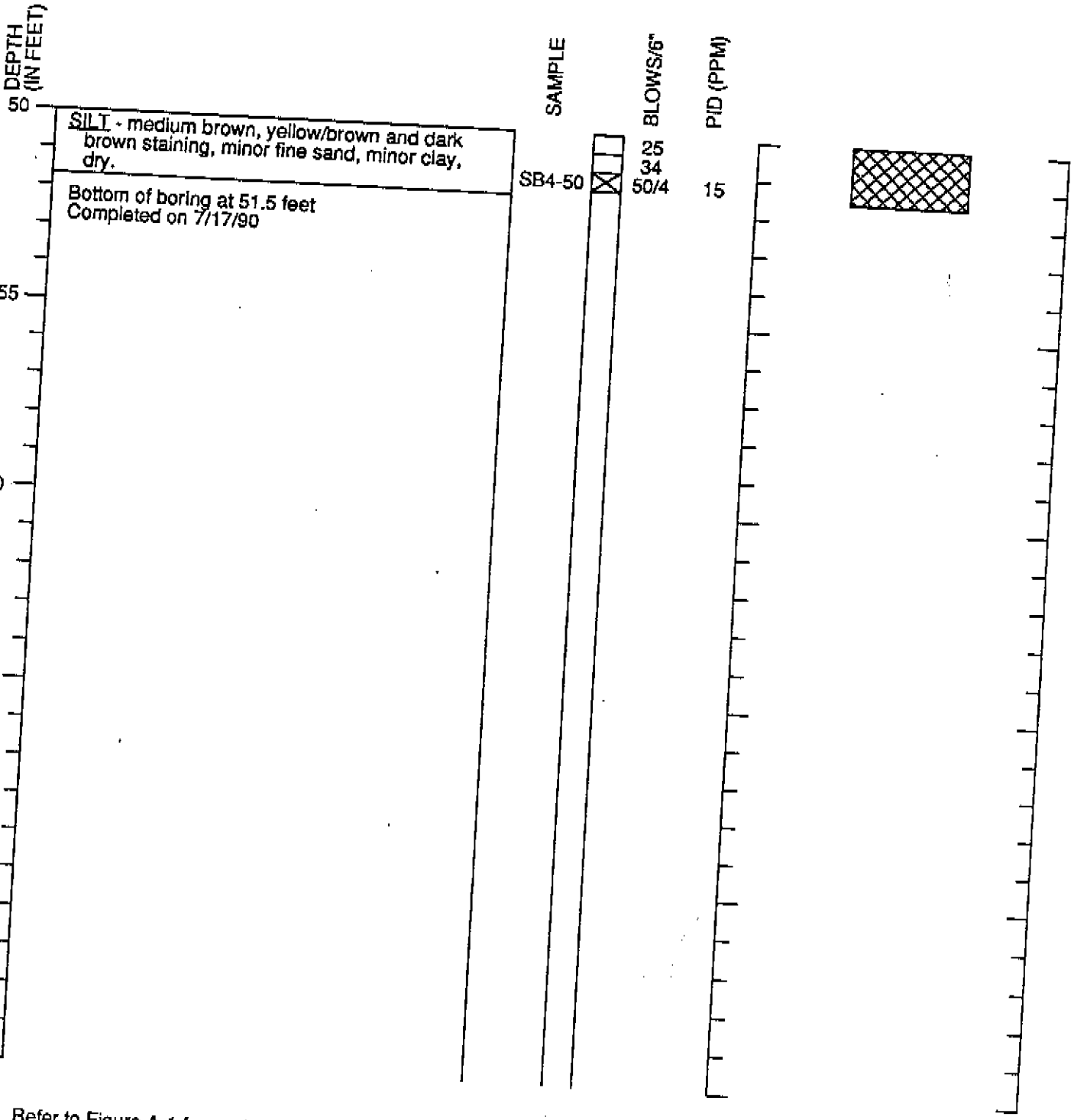
Boring Log SB-4

Geologic Log



Refer to Figure A-1 for explanation of descriptions and symbols.
Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
No free water encountered.

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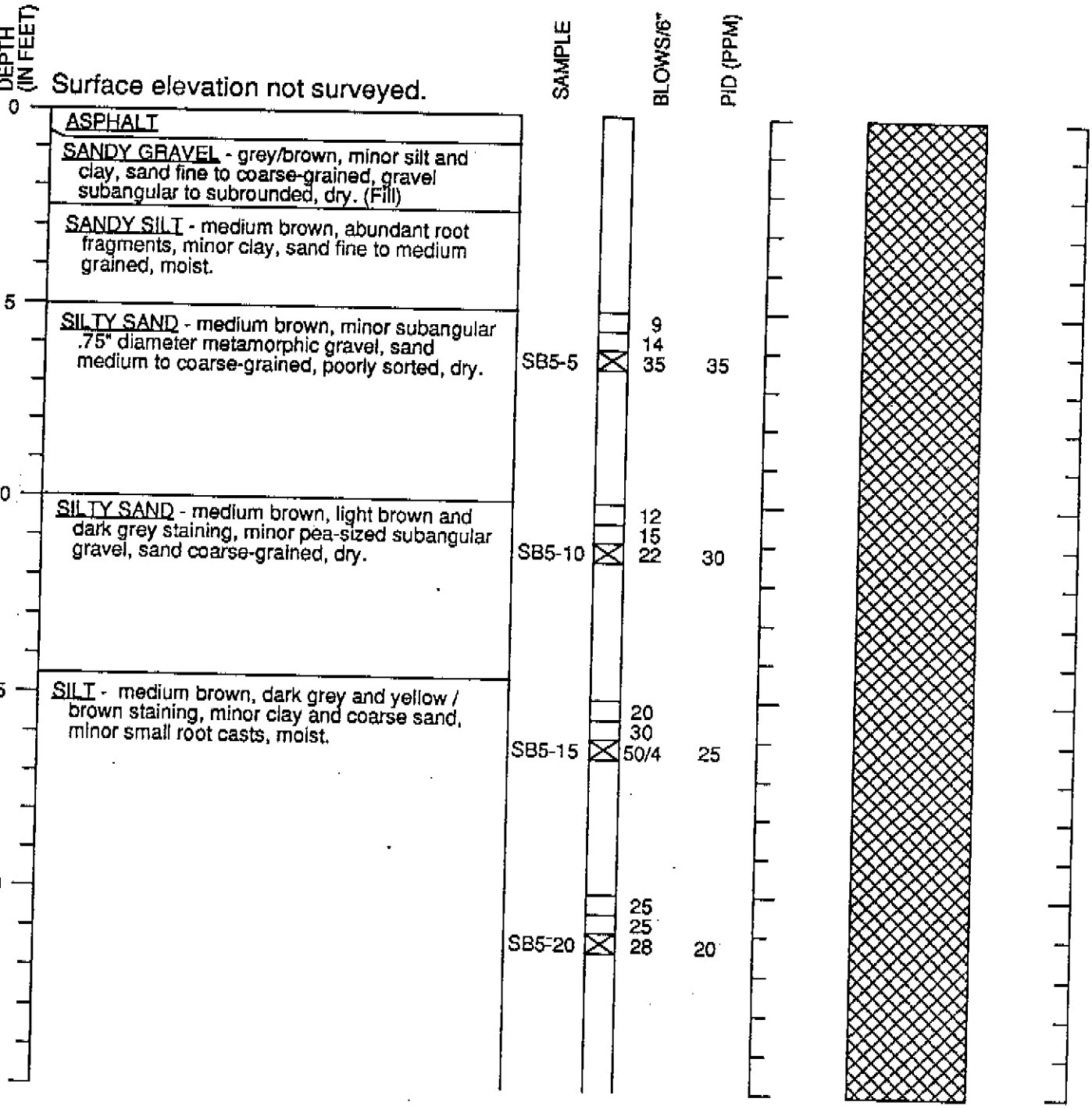
Figure A-2

Boring Log SB-5

Geologic Log



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Perched water encountered at 49.5 feet BGS.

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Figure A-3

Boring Log SB- 5

Geologic Log

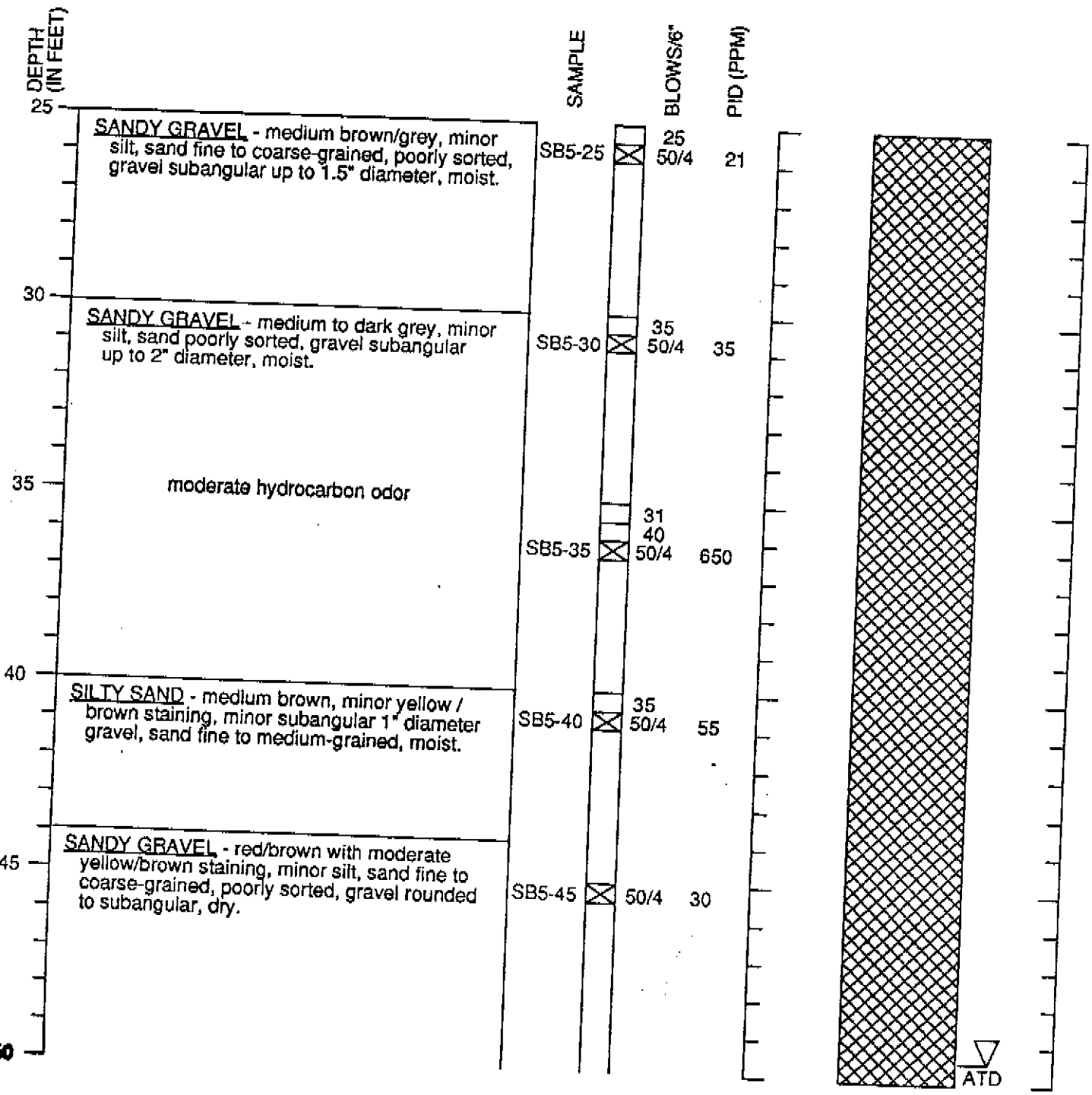

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Figure A-3
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Boring Log SB-5

Geologic Log

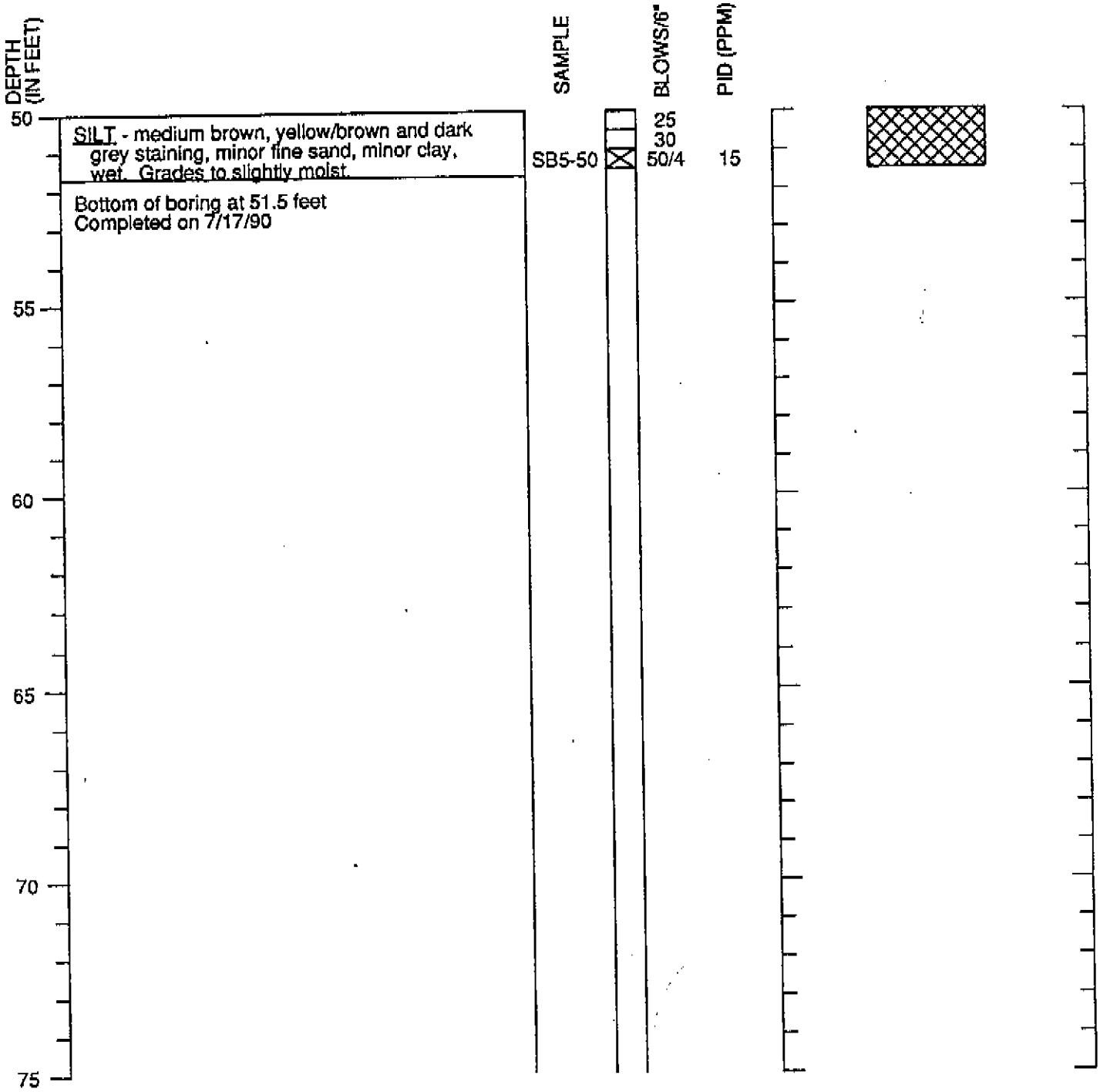

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Figure A-3
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