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# Geotechnical Properties and Slope Stability Analysis of Surficial Sediments on the Baltimore Canyon Continental Slope: U.S. Geological Survey Open-File Report 81-733

J. S. Booth

R. A. Farrow

Thomas L. Rice

Cedarville University, [trice@cedarville.edu](mailto:trice@cedarville.edu)

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UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

GEOTECHNICAL PROPERTIES AND SLOPE STABILITY ANALYSIS  
OF SURFICIAL SEDIMENTS ON THE  
BALTIMORE CANYON CONTINENTAL SLOPE

By James S. Booth, Richard A. Farrow, and Thomas L. Rice

Prepared in cooperation with the  
U.S. BUREAU OF LAND MANAGEMENT  
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U.S. Geological Survey  
Open-File Report 81-733

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS or the Bureau of Land Management.

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## INTRODUCTION

Evidence of a major episode of mass movement northeast of Wilmington Canyon (McGregor, 1977) has underscored the need for research on potential geologic hazards in the Baltimore Canyon lease area. However, despite the fact that this mass movement event has focused attention on the possibility of future events, it is not necessarily a precursor to them. That is, the central question of whether the slope is unstable may not find its answer from the study of past events, but rather from studies of current slope conditions.

The geologic setting bears directly on the question of current conditions, and it has been thoroughly investigated. In addition to the aforementioned study by McGregor (1977), seismic studies by Emery and Uchupi (1972), Embley and Jacobi (1977), and Robb and others (1981) have shown that this portion of the Continental Slope is relatively steep (gradients of  $10^{\circ}$  are common), is incised by numerous major canyons and lesser valleys, and may contain a Pleistocene sediment section up to a few hundred meters thick. In addition, the slope is frequently marked by evidence suggesting mass movement. As pointed out by Robb and others (1981), however, mass movement may not be as ubiquitous as some other studies have implied.

It is likely, though, that rapid deposition, a common predecessor of mass movement, occurred over the whole Mid Atlantic Continental Slope area during times of lowered sea level. At those times stream discharge was greater because of glacial meltwater runoff. The associated greater sediment load was carried across the present shelf directly to the slope (e.g., Twichell and others, 1977). The high rate of deposition, particularly as it involved the fine-grain sediments that characterize

the area (Doyle and others, 1979; Keller and others, 1979), may have generated excess pore pressures within the sediment section and, hence, created a condition of instability on the slope. Although sedimentation rates are probably lower at present than they were during the past, the dissipation of these excess pore pressures may be incomplete. If this is the case, the slope would still be underconsolidated and thus be prone to fail - especially in conjunction with the rather steep gradients.

Results of analyses of samples from this and adjacent slope areas are mixed. In a study south of Baltimore Canyon, for example, McGregor and others (1979) noted the presence of underconsolidated sediment and other conditions suggesting instability. Within the lease area itself, however, similar conditions have not been identified. Slope stability analyses by Keller and others (1979) indicated that the surficial sediments were generally stable, and piston cores examined by Doyle and others (1979) showed no evidence of mass movement. Samples from a 300 m drill hole (AMCOR 6021) near Toms Canyon also indicated stability (Sangrey and others, 1979), although the large quantities of methane found at that site were not considered in the calculations as instability due to excess pore pressures generated by gas accumulation has not been investigated in the area. The massive slide deposit northeast of Wilmington Canyon, which is up to 300-m thick and involves  $11 \text{ km}^3$  of sediment (McGregor, 1977), has been examined by Bennett and others (1977) for its geotechnical properties. Their evidence does not refute the hypothesis that the feature is a slide deposit, and they present additional evidence that creep is occurring upslope from the apparent mass movement scar.

The previous acoustic and sampling studies established the

framework for the research of hazard-related problems in the Baltimore Canyon lease area. It was our objective to provide quantitative information regarding slope stability and other potential hazards, and establish the general geotechnical properties of the sediment. Piston cores were the principal research tool used in the investigation. Site selection for these cores was based on the need to achieve geographic and geologic coverage, and thus a variety of environments from different locales were sampled. These included open slope areas, valley walls, valley floors, lobate sediment masses, and others. Locations are shown in Figure 1. The scope of our investigations is limited by the generally less than 10 m penetration of piston coring. Nonetheless, data from the surficial sediments is an important part of an overall evaluation.

## METHODS

### Shipboard

The piston cores used for the geotechnical studies were collected aboard the R/V ENDEAVOR in August 1979 and October 1980. The coring system was designed to obtain cores with minimal mechanical disturbance because many geotechnical properties, especially those related to strength, are vulnerable to the effects of disturbance. The system thus differed from conventional systems in many respects. Core sample diameter was 89 mm, which is larger than normal piston cores. This extra size not only reduces disturbance during the act of coring, but, in the event of distortion on the core edge due to wall friction, permits removal of a relatively undisturbed inner core (subcore) for triaxial and consolidation testing. The liner was protected against

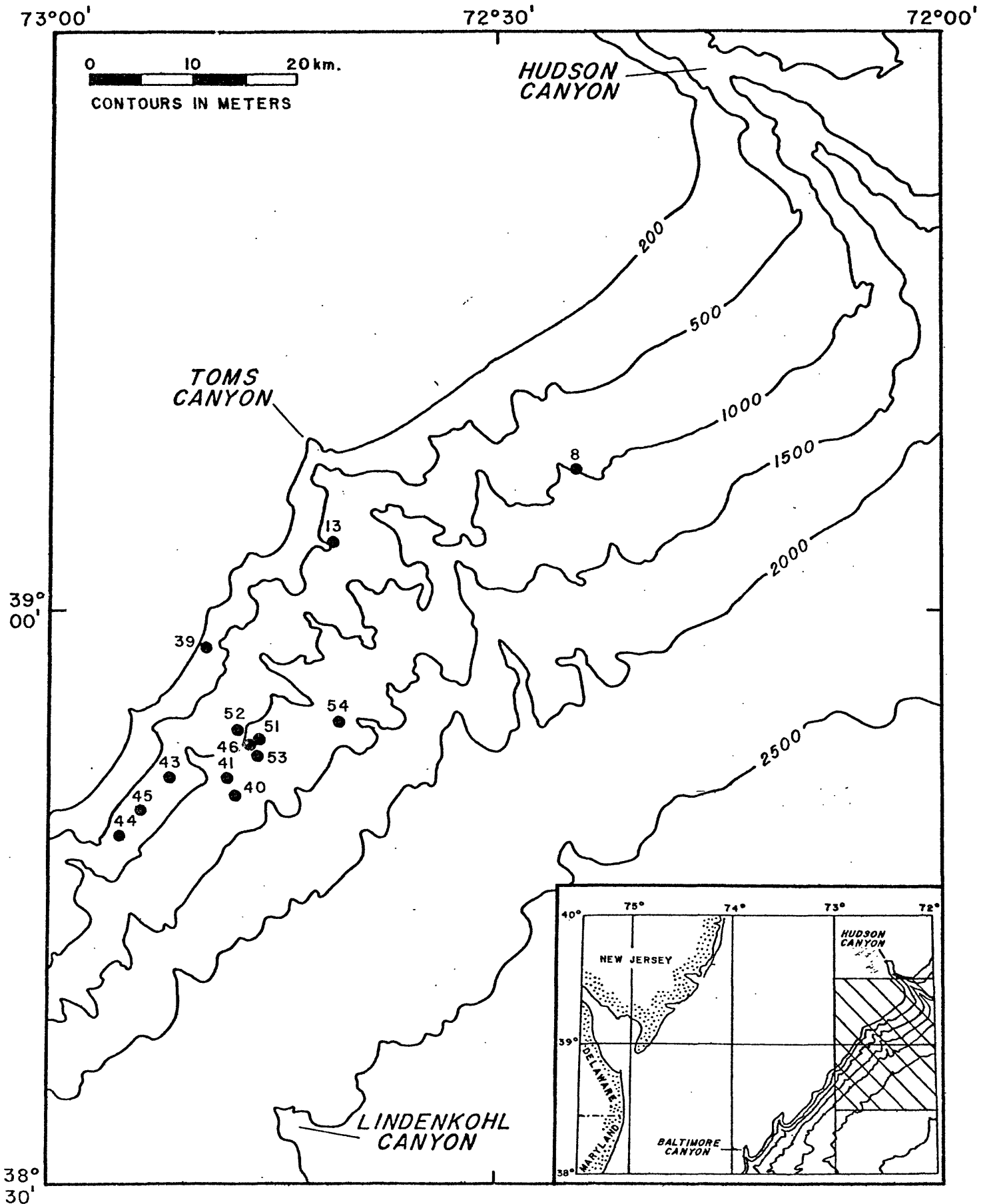


Fig. 1. Core locations. Labeling refers to core number, not site number.

collapse from differential pressure by a special sleeve and O-ring assembly at the joints between the outer barrels. The cutter unit had a cutting angle of less than  $10^{\circ}$ , which assured optimum penetration with a minimum of disturbance. Liner sections (up to 4, 3 m long sections per core) were taped at the ends in order to achieve a snug fit against the barrel and were beveled inside each end to promote a smooth piston action. Using this system, 13 cores up to 10 m long were recovered.

As was the case during the sampling operation, avoiding disturbance was the prime consideration during core processing and storage. Once on board, the cores were cut into 1-1/2 m sections by using a tube cutter to sever the liner and wire saw to part the sediments. Two 40 cm subsections were also cut for later triaxial testing, and a 15 cm subsection was removed for consolidation testing. All subsections, which were cut from the bottom portions of the cores, were X-rayed in order to judge the condition of the sample; only "undisturbed" samples were retained for later testing. Finally, the subsections were capped, taped, sealed with wax, and stored under refrigeration. They were kept in the in situ position in specially fabricated boxes padded with foam rubber.

The remaining core sections were split lengthwise: one part of each section served as an archive half, the other as a working half. The archive half was placed in a D-tube and stored in a refrigerated van. The working half was taken to the shipboard laboratory for description, strength testing, and subsampling.

After a cursory description, "undisturbed" shear strength was measured. A four-bladed, 12.7-mm-square laboratory vane was used at intervals of 0.50 m and at lithologic changes. Obvious sand layers, which are cohesionless and therefore inappropriate for this type of



test, were avoided. The blade was inserted normal to the long direction of the core and buried at least 20 mm into the sample. In order to guard against sample drainage during the application of torque, a rotation rate of 0.0262 rad/s (90<sup>o</sup>/min) was used. Because of potential disturbance associated with prolonged exposure to ship motion and vibrations, this rapid rate also serves the function of allowing the test to be completed quickly, thus reducing the probability of this type of disturbance. The accuracy of the vane shear measurements is  $\pm 0.30$  kiloPascals (kPa). It is assumed on the basis of previous experience (e.g., Booth, 1979) that strength reduction due to the release of in situ stresses and mechanical disturbance is generally between 15 and 30 percent. Remolded strength (strength of thoroughly kneaded sample) was also determined with the vane apparatus. Subsamples for index property testing were taken at the locations of strength measurements, placed in plastic bags, and sealed in cans for later laboratory testing. These samples, and those taken for triaxial and consolidation testing, were transported to the laboratory in a refrigerated (4<sup>o</sup>C.) van.

## Laboratory

### Index Properties

The suite of index property tests (bulk density, water content, liquid and plastic limits, and grain specific gravity) was conducted according to procedures recommended by ASTM (1977), with two exceptions. Grain specific gravity was measured with an air comparison pycnometer and all water content data were corrected for salt content. Precisions were: water content,  $\pm 3\%$  (relative); liquid limit,  $\pm 3\%$  (absolute); plastic limit,  $\pm 2\%$  relative. Derived from this basic data set were

plasticity index, liquidity index, and porosity. The values of the index properties are presented in Appendix II.

### Triaxial Testing

Consolidated undrained triaxial tests with pore pressure measurements were conducted in accordance with procedures given by Bishop and Henkel (1957). Briefly, for each set of tests three specimens were cut from the prime core sample and trimmed to a right cylinder 50 mm in diameter and 100 mm in height. The specimens were then placed in triaxial cells, saturated, and consolidated to approximately 1.0, 2.0, and 4.0 times the assumed in situ overburden pressure. After consolidation was complete, the specimens were sheared: generally at a rate of 0.015 mm/min. Data from all phases of the tests were logged by an automatic data acquisition system.

The test results are presented in tables and graphs in Appendix III. Information about each sample, including index properties, test conditions, and laboratory data are given in that appendix along with a full explanation of symbols and graphs.

The angle of internal friction with respect to effective stress ( $\phi'$ ), which is necessary for evaluating slope stability, was derived from  $p'$ - $q$  diagrams. Specifically, a continuous plot of  $p' = (\sigma'_1 + \sigma'_2)/2$  versus  $q = (\sigma_1 - \sigma_2)/2$  each of the three levels of confining pressure results in three stress paths, where  $\sigma_1$  and  $\sigma_3$  are the major and minor principal stresses and  $\sigma'_1$  and  $\sigma'_3$  are the major and minor effective principal stresses. The line that best encloses these stress paths is drawn, and its slope and its intercept  $a$  are calculated. The values of internal friction  $\phi'$  and cohesion  $C'$  are calculated from the following relationships:  $\sin\phi' = \tan\alpha$  and  $C' = a/\cos\phi'$ .

## RESULTS AND INTERPRETATIONS

Analyses of the 13 cores recovered are still underway, as are the analyses of the 21 piston cores recovered during sampling operations during 1980. The results presented herein are thus partial, and generalizations or interpretations based on them are subject to change. All types of analyses that are complete or nearly complete for an entire core are included in this report.

### Shear Strength

The widespread occurrence of discrete sand layers, variable sand percentages, and other lithologic inconsistencies observed during cursory core descriptions indicate a complex depositional environment which is reflected in the strength profiles (figs. 2a-21). In particular, variations in sand percentage contribute to the sawtooth nature of some of the plots (e.g., fig. 2e). Such textured variations can greatly influence the strength even within a basically cohesive sediment. Despite these variations the usual strength increase with depth is seen in most of the cores. A lack of strength increase with depth is not unusual in such short cores, and it is not surprising that this relationship did not show in all cases. Although strength usually increases with depth, absolute strength values and the rates of strength increase in the tested cores are quite variable. As examples, cores PC-46 and PC-53 (figs. 2i and 2k) have an initial low shear strength and increase gradually to a strength of about 6 pKa. The low rate of increase along with the low absolute values indicate that these cores are abnormally weak. In contrast, core PC-8 (fig. 2a) shows a rapid

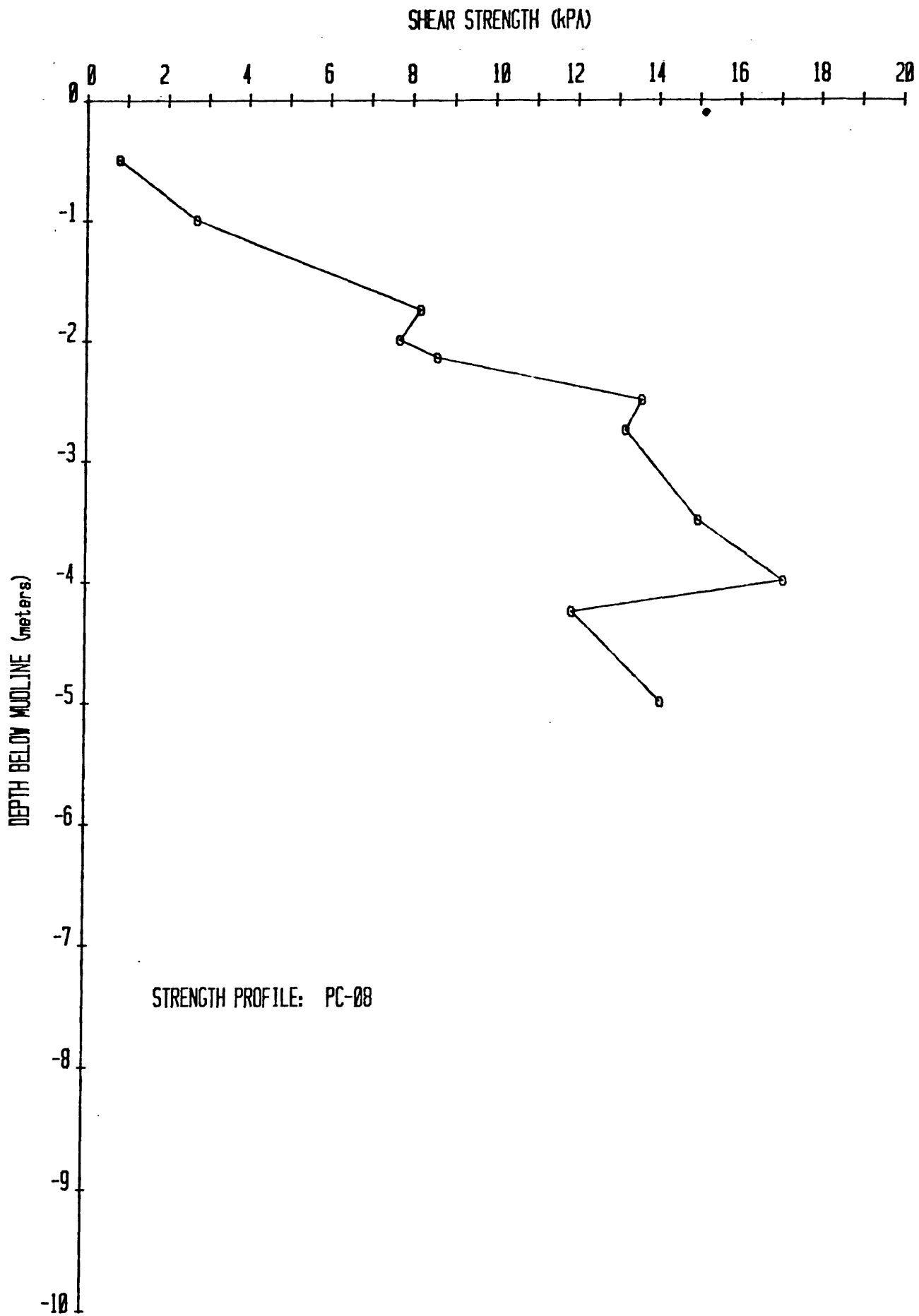


Figure 2a. Shear strength ( $S_u$ ) vs. depth in core.

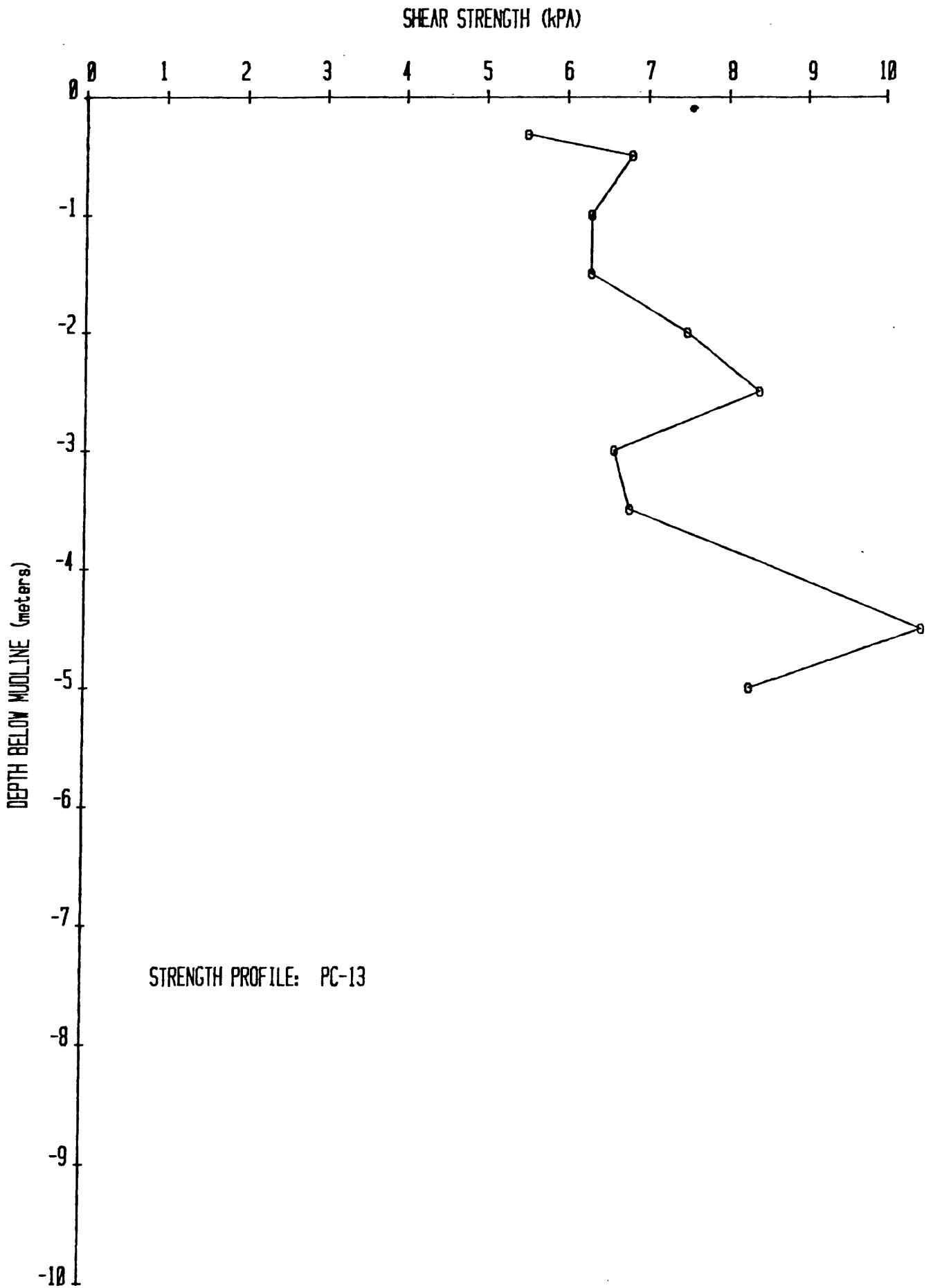


Figure 2b. Shear strength ( $S_u$ ) vs. depth in core.

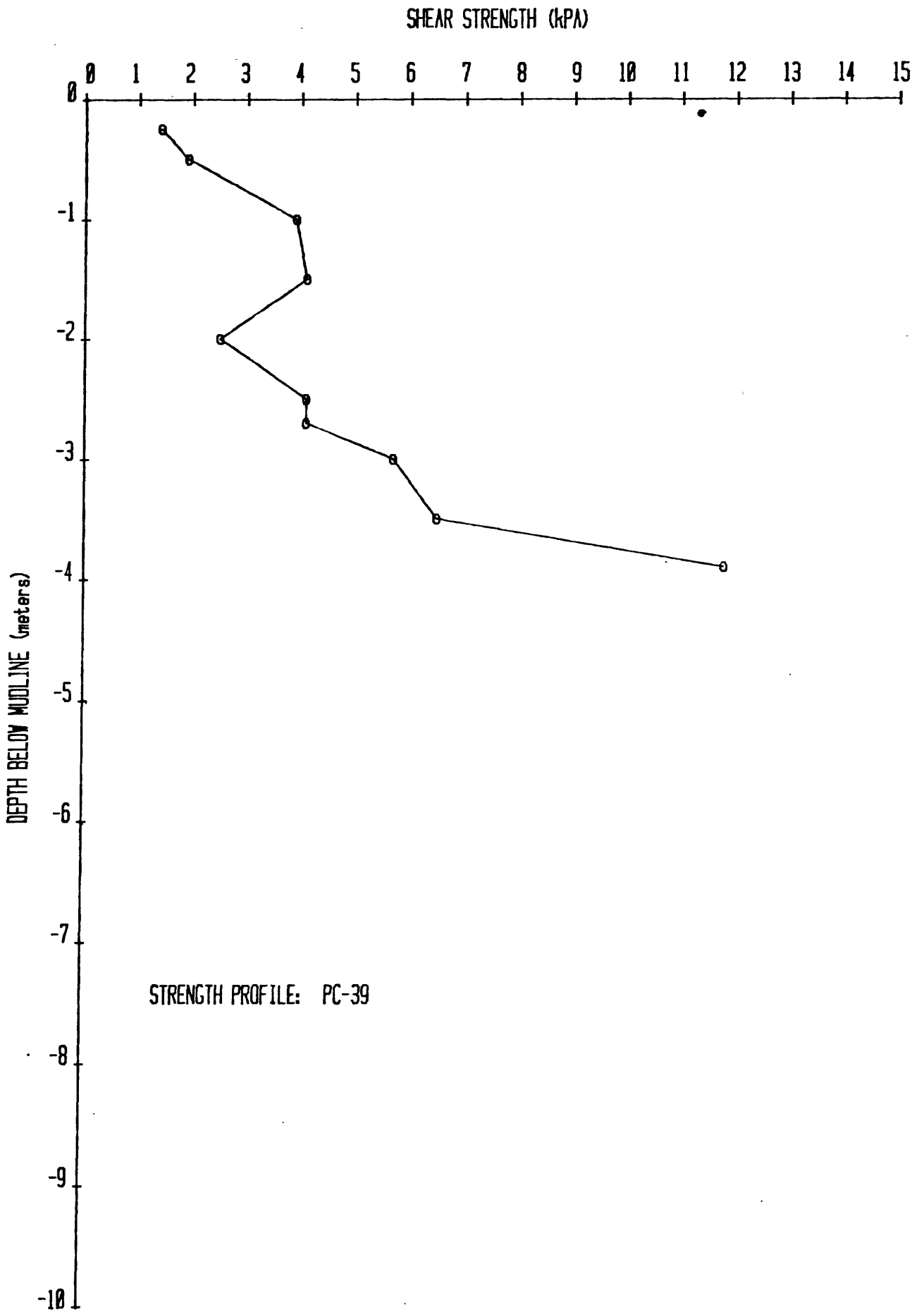


Figure 2c. Shear strength ( $S_u$ ) vs. depth in core.

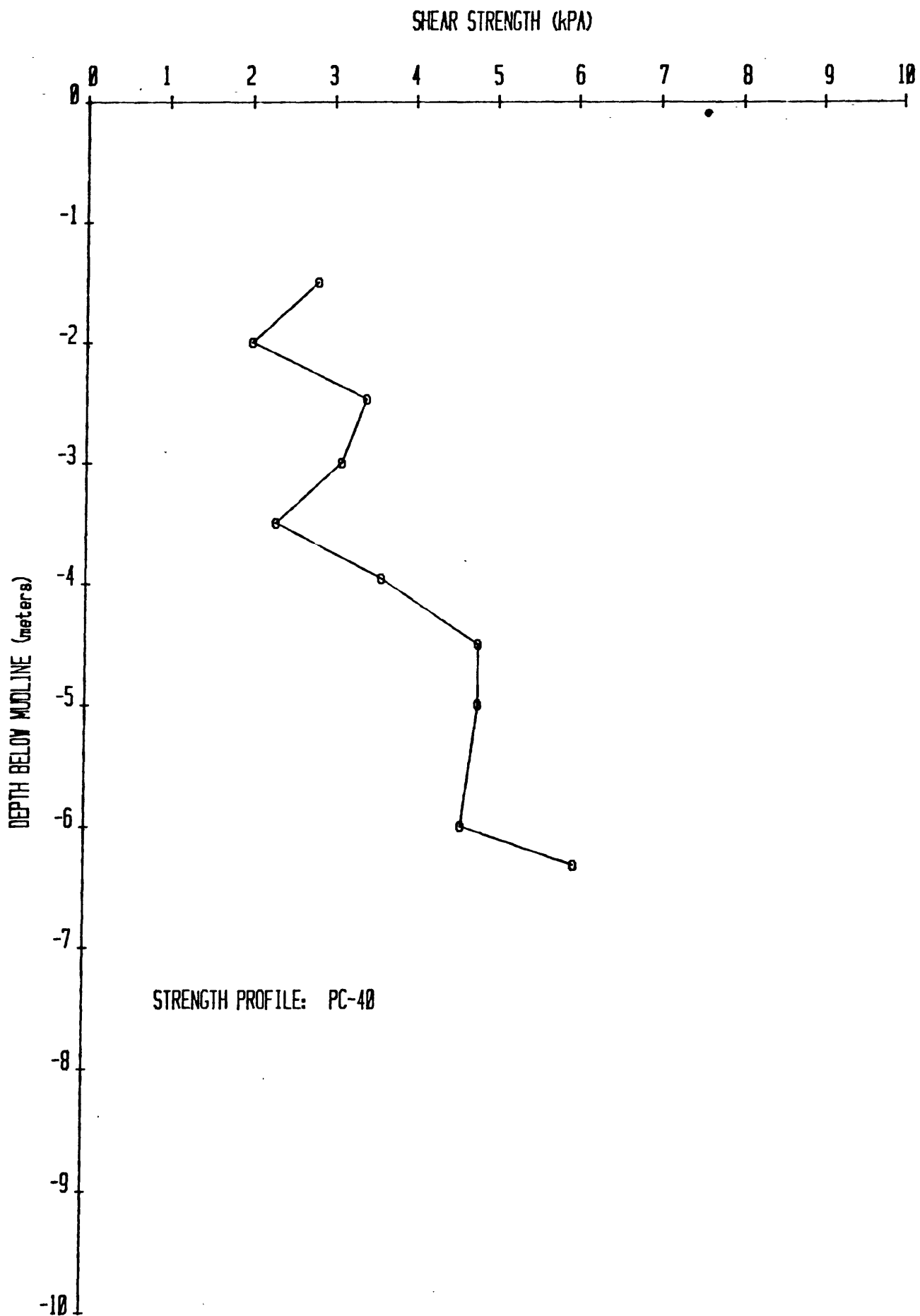


Figure 2d. Shear strength ( $S_u$ ) vs. depth in core.

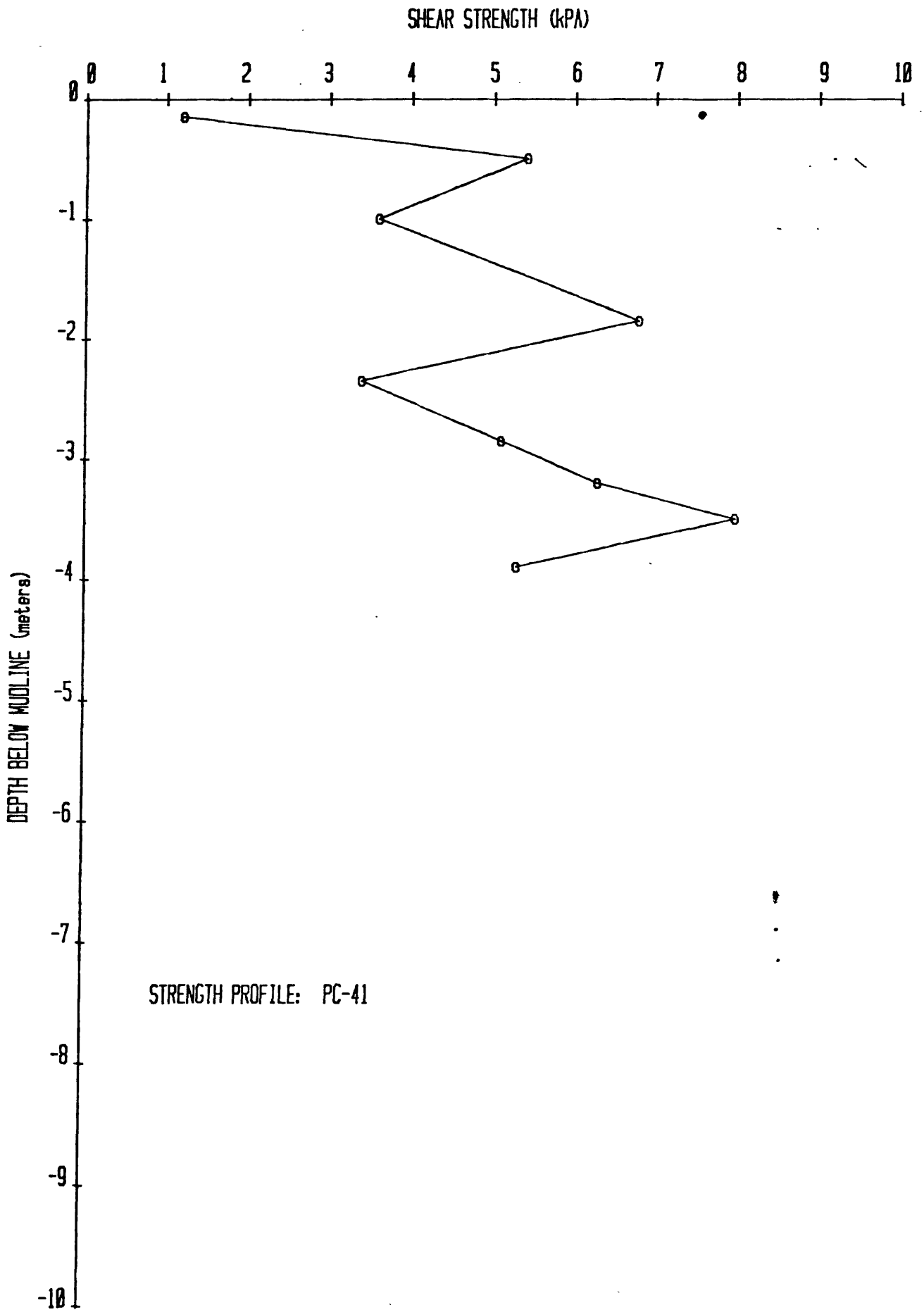


Figure 2e. Shear strength ( $S_u$ ) vs. depth in core.



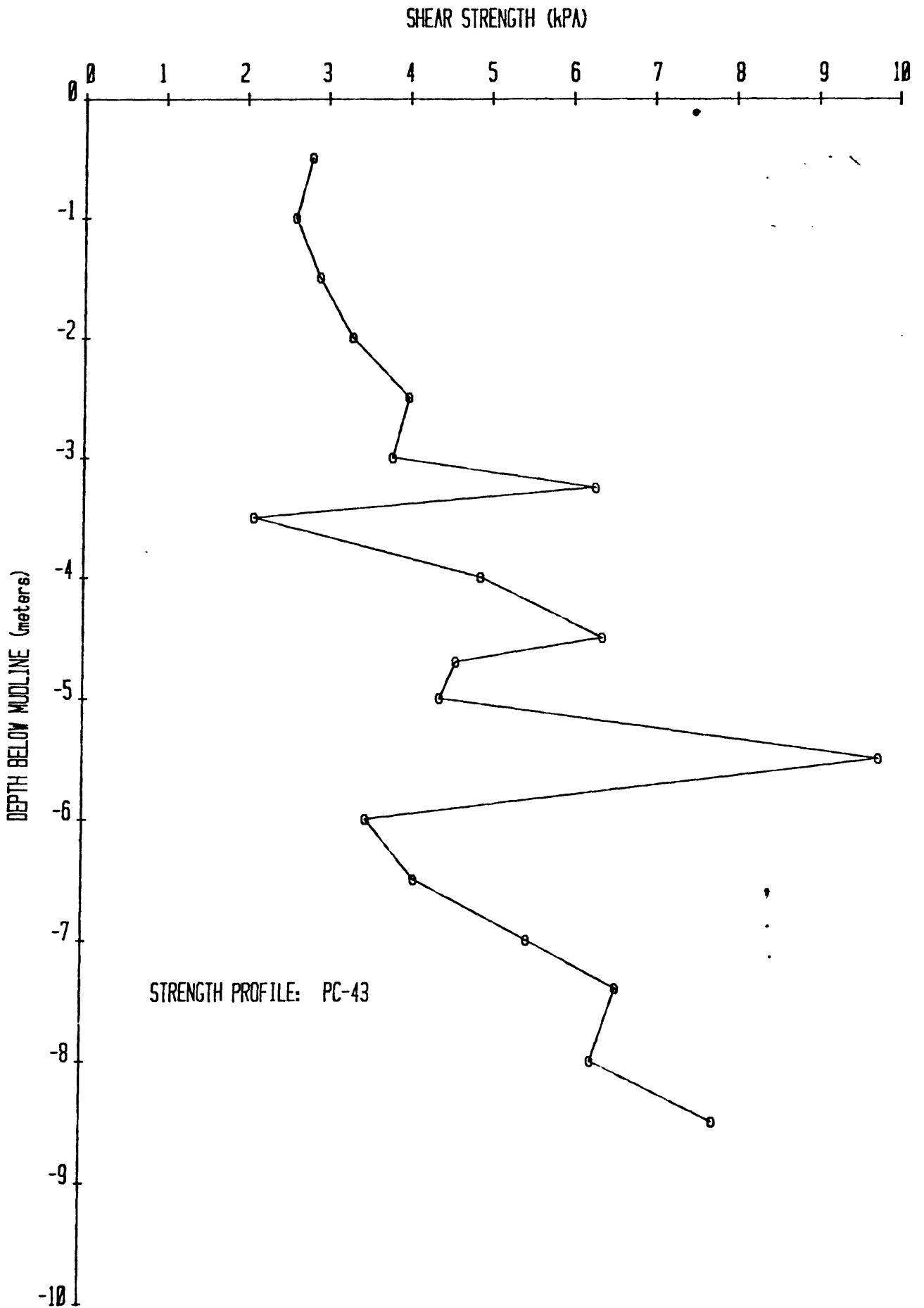


Figure 2f. Shear strength ( $S_u$ ) vs. depth in core.

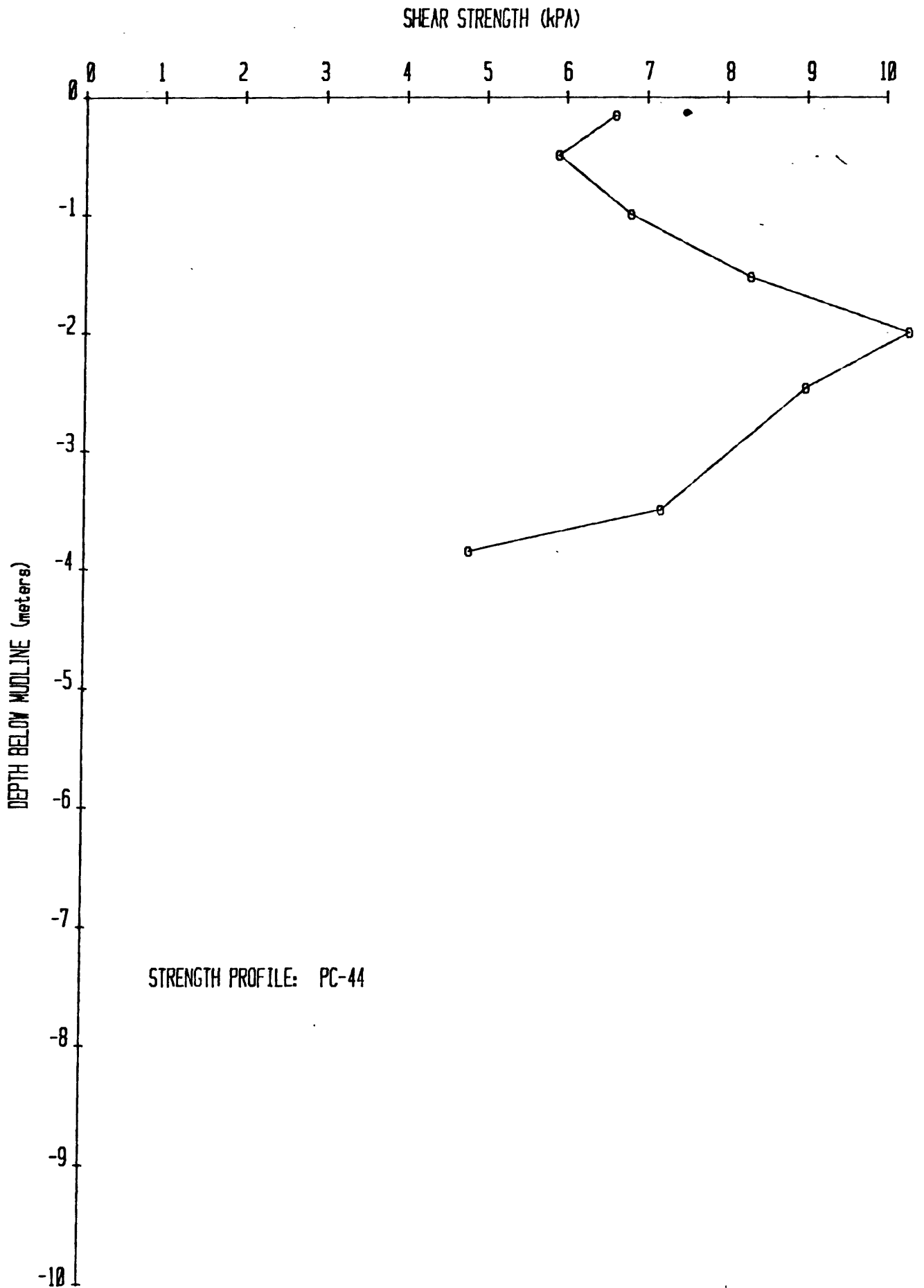


Figure 2g. Shear strength ( $S_u$ ) vs. depth in core.

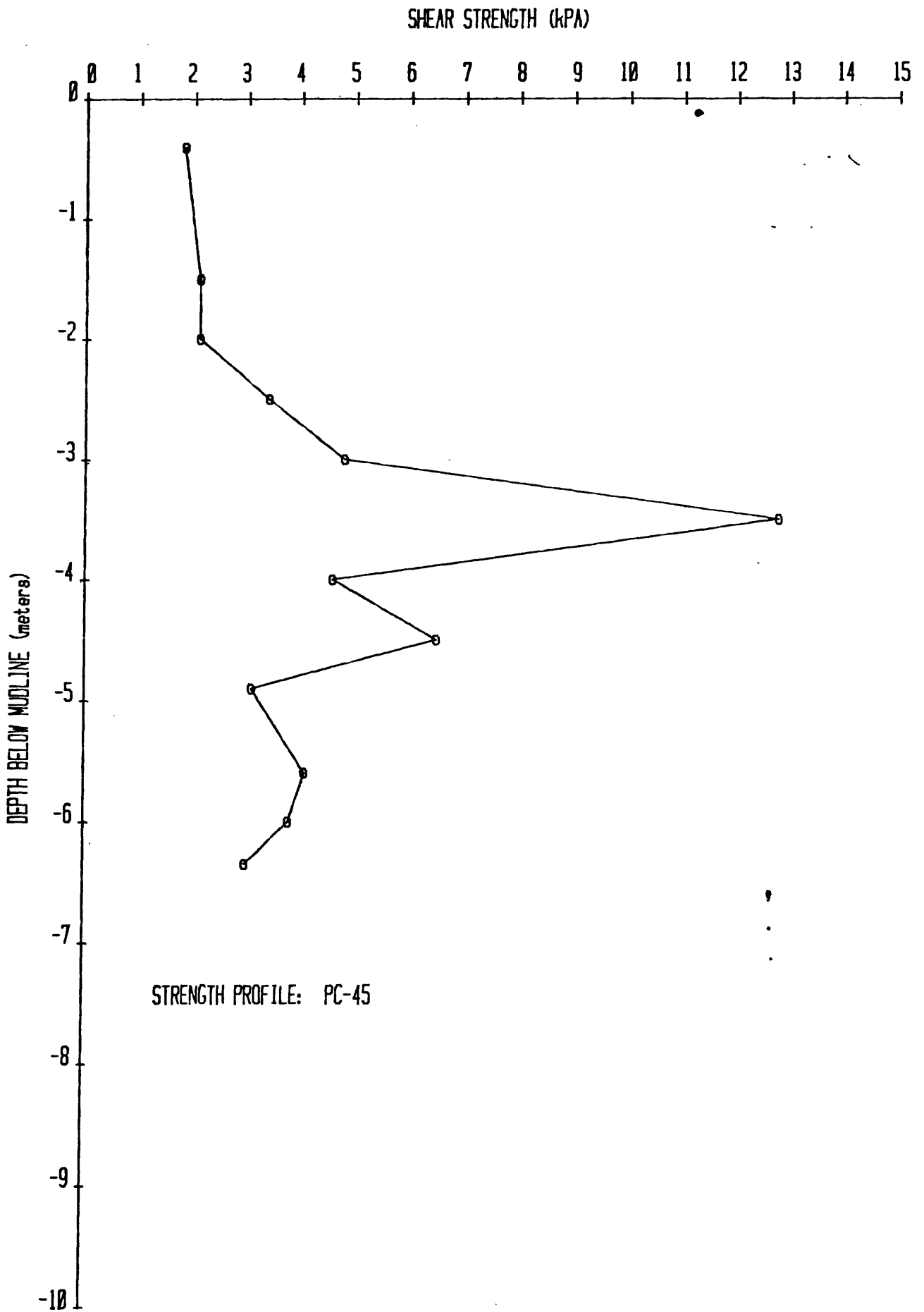


Figure 2h. Shear strength ( $S_u$ ) vs. depth in core.

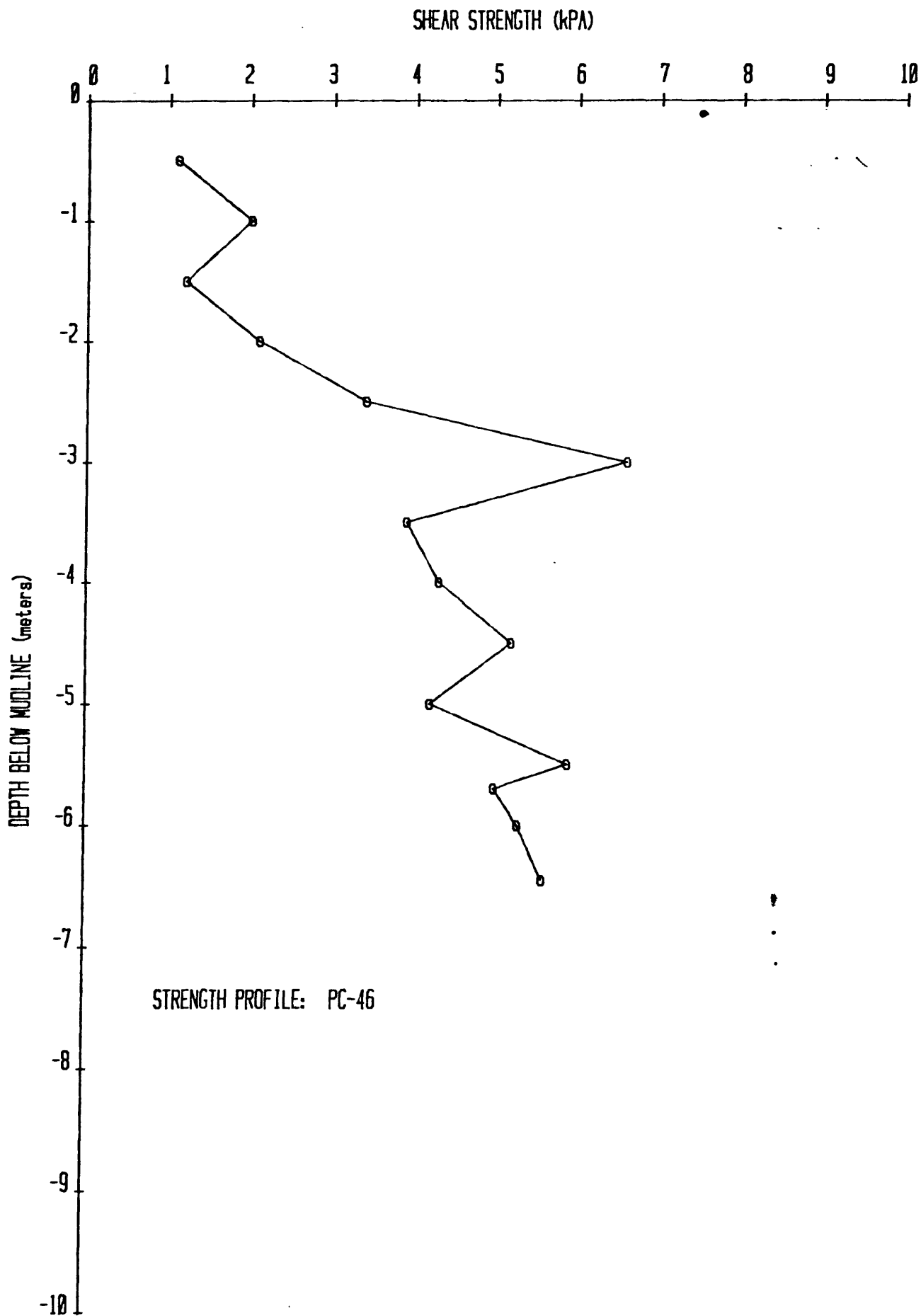


Figure 2i. Shear strength ( $S_u$ ) vs. depth in core.

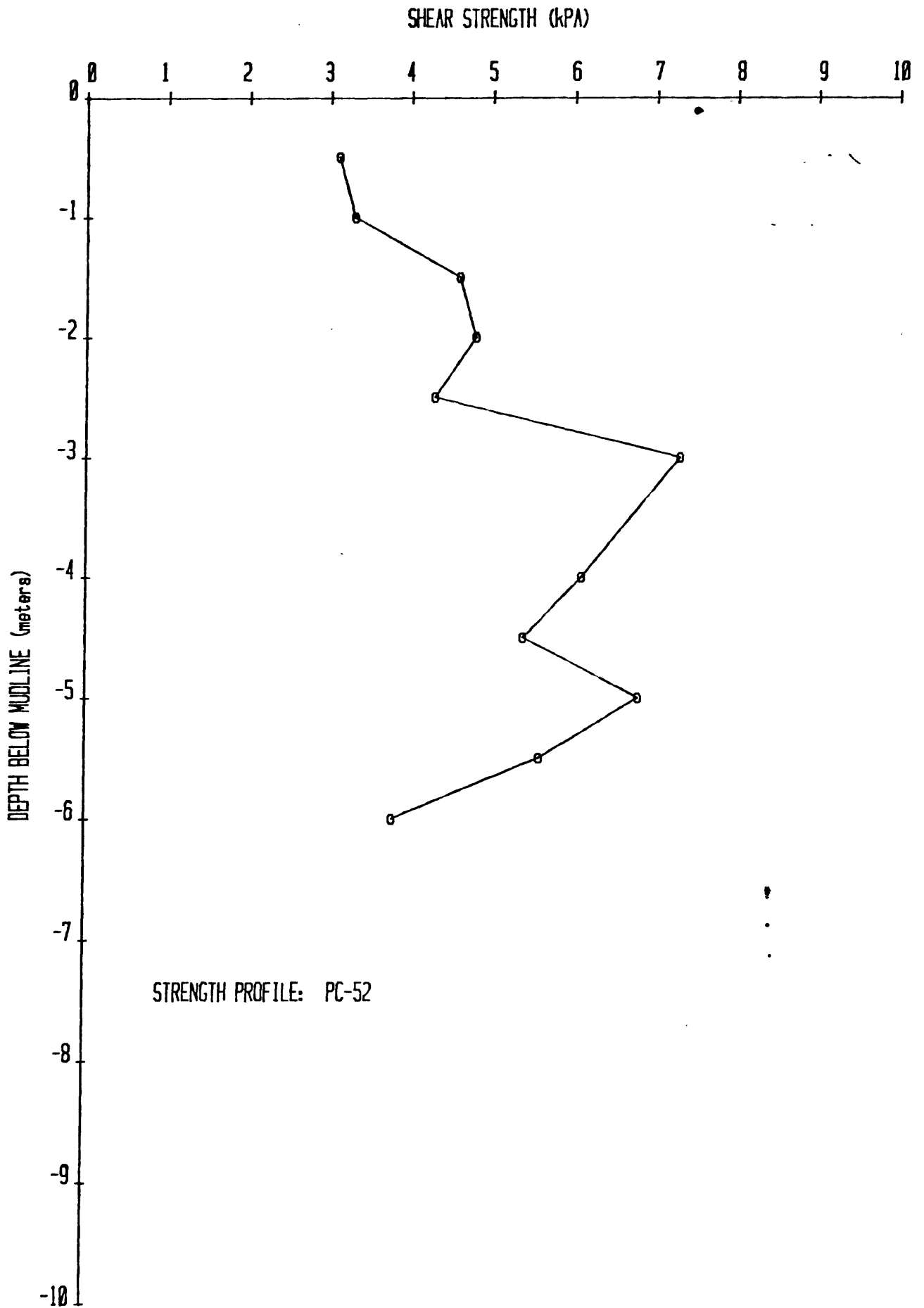


Figure 2j. Shear strength ( $S_u$ ) vs. depth in core.

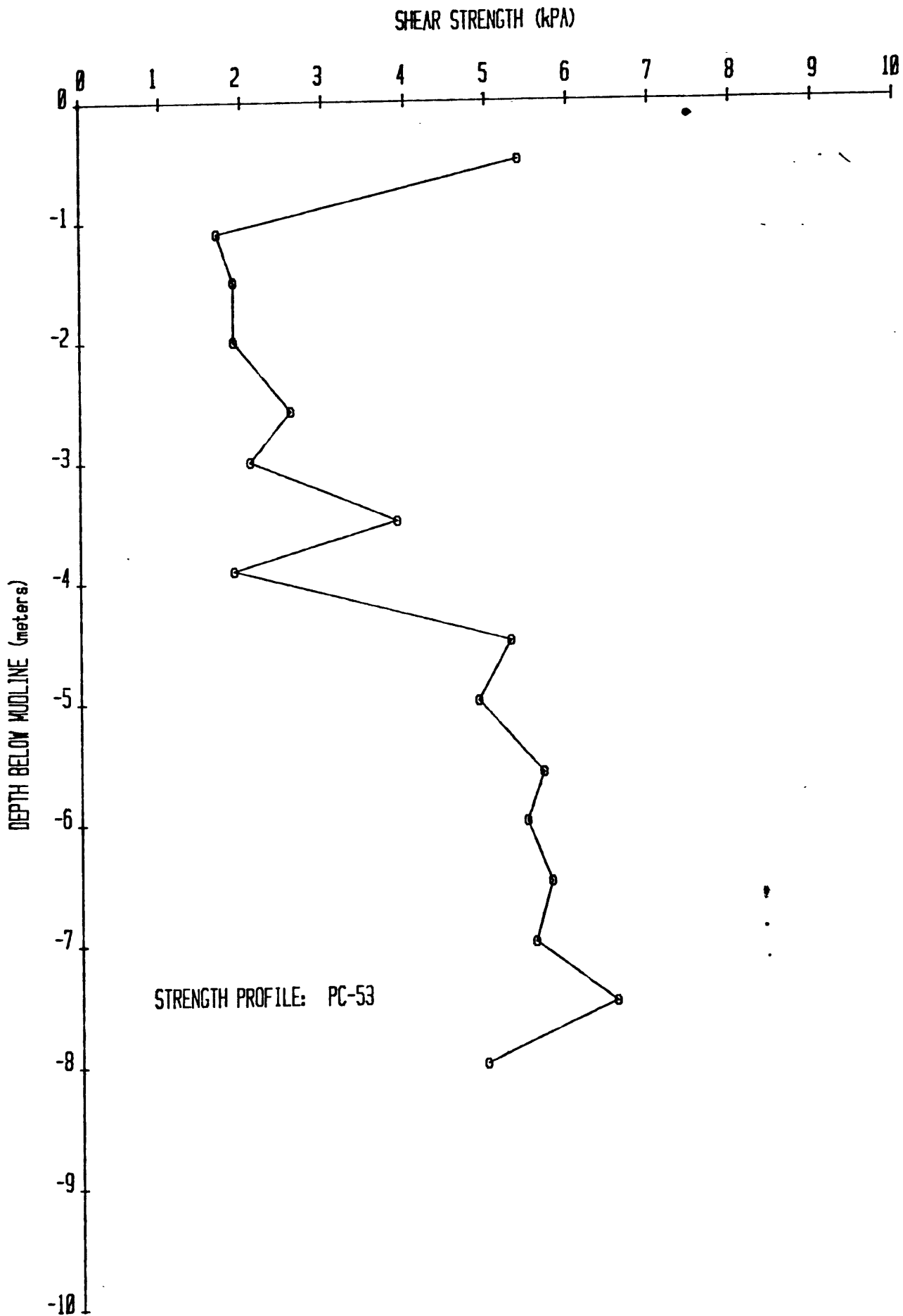


Figure 2k. Shear strength ( $S_u$ ) vs. depth in core.

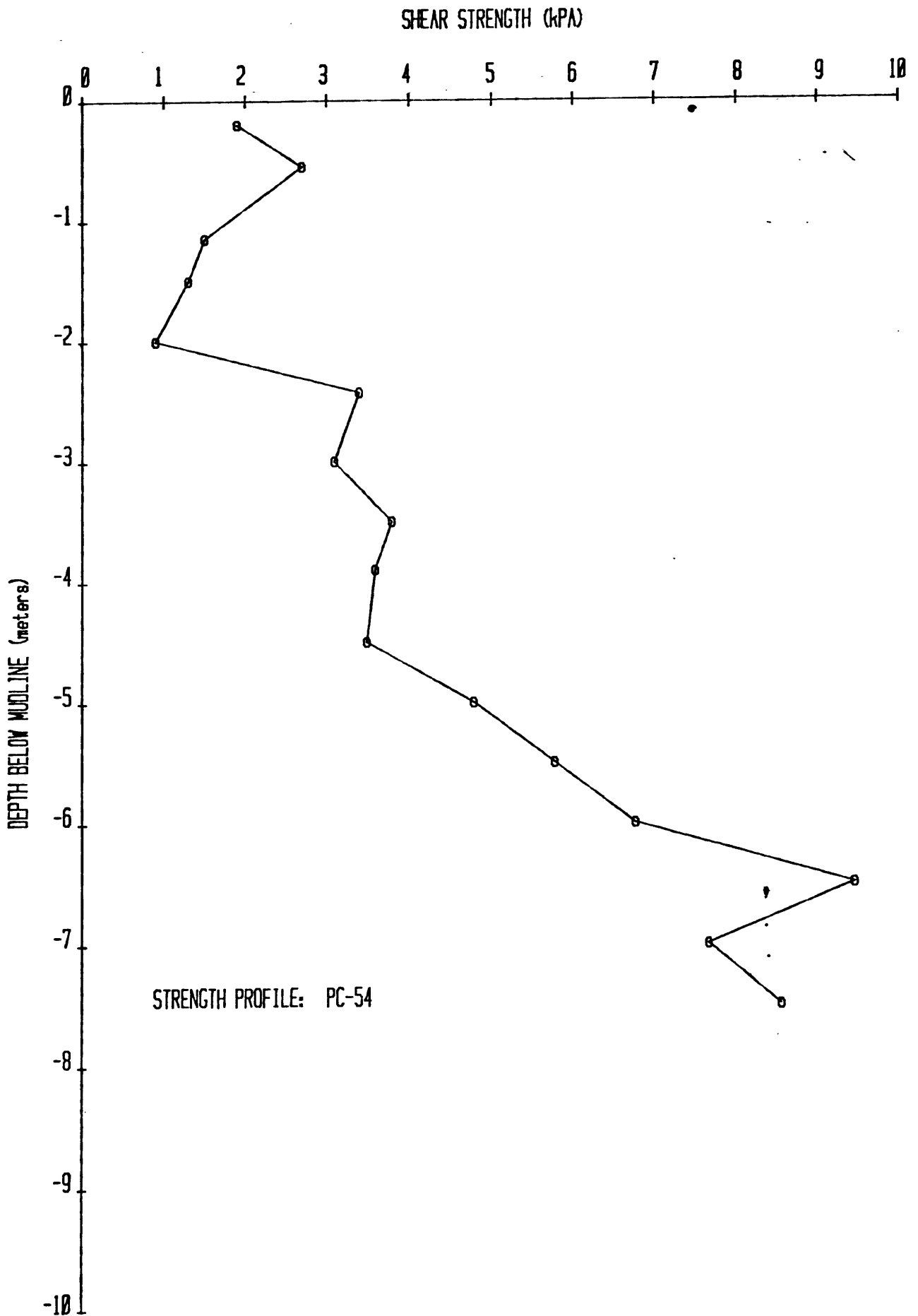


Figure 21. Shear strength ( $S_u$ ) vs. depth in core.

increase in strength up to 18 kPa at 4 m. This sediment is stronger than would normally be expected despite the fact that its surface strength is comparable to the previously mentioned cores. Overall, the shear strengths of these sediments span values from below the limit of accurate measurement (less than 0.5 kPa) to 46.7 kPa (see table 1). The average value of 5.5 kPa is typical for cohesive surficial marine sediments.

Sensitivity, the ratio of natural shear strength to remolded shear strength of a sediment, is an important measure of the amount of strength lost by a sediment after it has been disturbed by earthquakes or other forms of loading. As shown in table 1, the mean sensitivity of these sediments is about 6, which corresponds to an 86% reduction in strength after remolding. According to the classification of Rosenquist (1953), these sediments, on average, would be considered very sensitive and range from insensitive to slightly quick. Marine fine-grain sediments generally have sensitivities of 4 or less; thus these sediments are slightly more sensitive than normal.

#### Index Properties

The water content, bulk density, and porosity data shown in table 1 would usually be considered incompatible with the reported shear strength data. In fact, they also differ markedly from the average values for the Mid-Atlantic Slope reported by Keller and others (1979), who found higher water contents and porosities, and lower bulk densities than are shown in table 1. In this case these differences can be attributed to the presence of sand. Cohesion and void space would be reduced with an increasing percentage of sand and, therefore, strength, water content, and porosity would decrease while bulk density would



Table 1. Summary of geotechnical data

Natural shear strength (kPa)			Sensitivity			Water content (%)			Bulk density (g/cc)			Porosity (%)		
min	avg	max	min	avg	max	min	avg	max	min	avg	max	min	avg	max
-	5.5	46.7	1.0	6.0*	13.8*	26	58	119	1.44	1.73	2.06	41	60	76

Liquid limit			Plastic limit			Plasticity index			Liquidity index		
min	avg	max	min	avg	max	min	avg	max	min	avg	max
21	48	91	15	23	40	8	25	60	0.73	1.42	2.20

\*Because many samples were too weak to measure after remolding, these values are minimums.

increase. Thus, just as sand is in part responsible for some of the erratic strength profiles, it also may be responsible for the unusual combination of water content, bulk density, and porosity and shear strengths noted here. Because the results of the textural analyses on these cores are not yet available, the influence of sands in the cores cannot be evaluated beyond the level that simple core description permits.

Grain specific gravity, measured on 62 samples, averaged 2.70. This value is typical of fine-grained terrigenous sediment and is identical to the value reported for the Mid-Atlantic slope cores recovered by Keller and others (1979).

The plasticity data, which here includes liquid and plastic limits, plasticity index (liquid limit minus plastic limit), and liquidity index (the ratio of natural water content minus plastic limit to plasticity index) provide a means for classifying sediments. The plasticity chart devised by Casagrande (1948) was used as the method of classification. The chart is divided into fields that embrace the different plasticity characteristics of different sediment (soil) types. Figure 3 is the plot of the samples from this study on such a chart. Note the spread of data points along "Line A". This indicates that a wide variety of sediment types are represented by the cores. Specifically, the sediments have a low organic content and include sands, silts, and clays. The fields marked as inorganic clays of low or medium plasticity also include sandy and silty clays (Keller and others, 1979). Approximately half of the samples from this study fall into those two categories. This tendency toward coarse grain sizes is also reflected on the data summary (table 1), which shows liquid limit, plastic limit, and plasticity index values slightly below those of a sediment totally

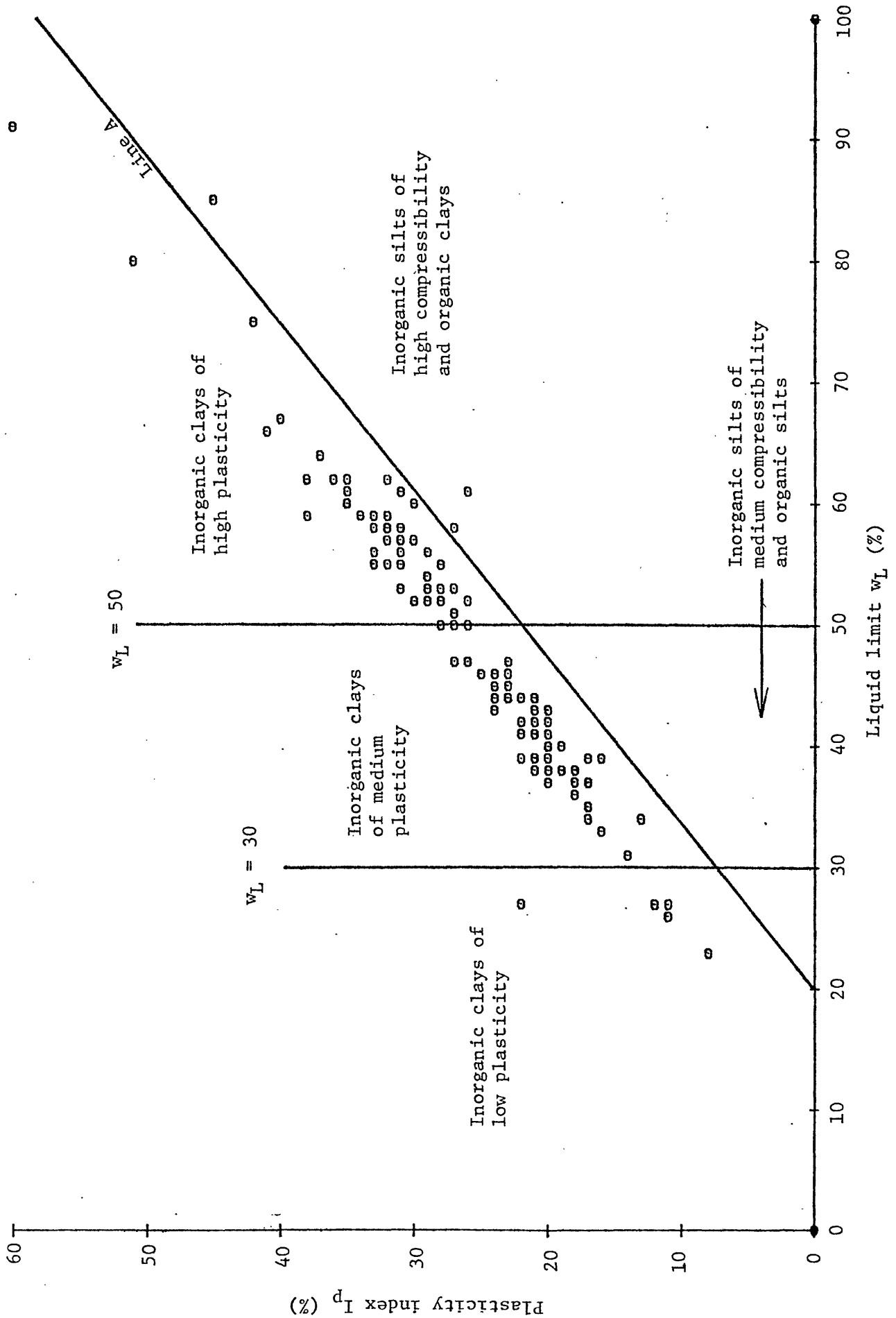


Fig. 3. Classification of sediments based on plasticity characteristics.

dominated by fines. Compared to typical values of many types of terrestrial soils, these plasticity data do not imply any anomalous sediment types or extraordinary conditions. The spread of the data on the plasticity chart indicates a complex depositional environment, but the area is characterized by sediments with a common range in texture and common mineralogy.

The textural variability again manifests itself in the plastic limit-liquid limit-water content plots (figs. 4a-4l) that show the changes in the three variables down core. An increase in the percentage of coarser grain sizes is often mirrored by a decrease in both plastic and liquid limit (the change in liquid limit generally being the most striking), and in the plasticity (shown in the figures as the distance between the two limits). Most of the cores show this effect to some degree with some of the cores, e.g., PC-40 (fig. 4a), possibly manifesting multiple changes in textural properties.

The vertical profiles of liquidity index, represented by the relationship between natural water content and liquid limit, are also shown in figures 4a-4l. A profile typical of most surficial sediments is observed in figure 4a. The water content is above the liquid limit in the upper portion of core PC-8, then it falls below the liquid limit for the remainder of the core. Although typical for most surficial sediments, this relationship is not typical of most of the cores in this study. Throughout their length, water content values consistently match or exceed liquid limits. The average liquidity index of 1.40 (table 1) underscores this relationship. Thus, upon remolding from a shock or other mode of disturbance, these sediments would behave more as a liquid than as a plastic, a fact that has implications regarding slope stability. Further, these data also have implications regarding the

-o-LOWER VALUE: PLASTIC LIMIT(%)

-x-WATER CONTENT(%)

-o-HIGHER VALUE: LIQUID LIMIT(%)

PC-08

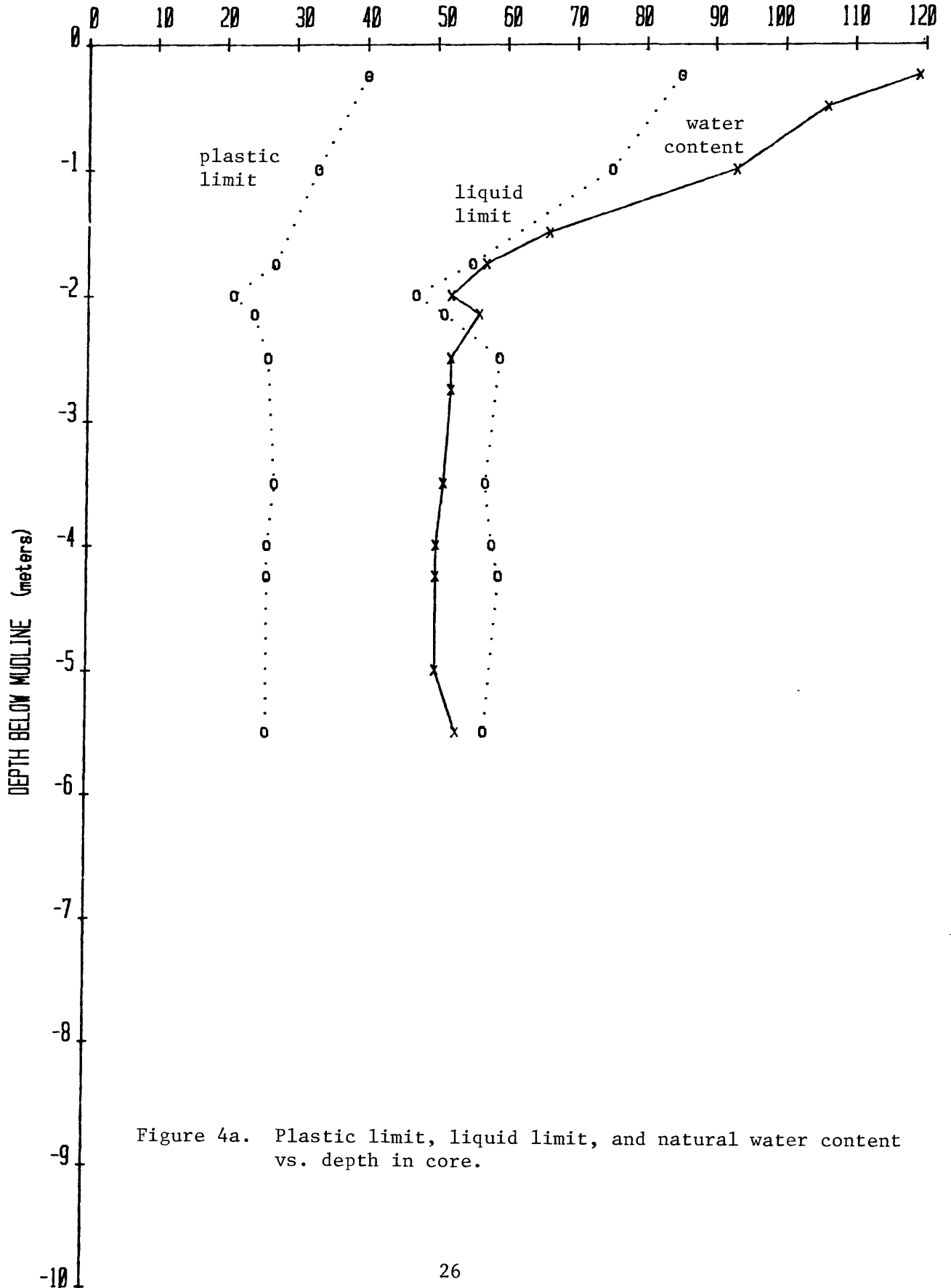


Figure 4a. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o- LOWER VALUE: PLASTIC LIMIT (%)  
-o- HIGHER VALUE: LIQUID LIMIT (%)

-x- WATER CONTENT (%)

PC-13

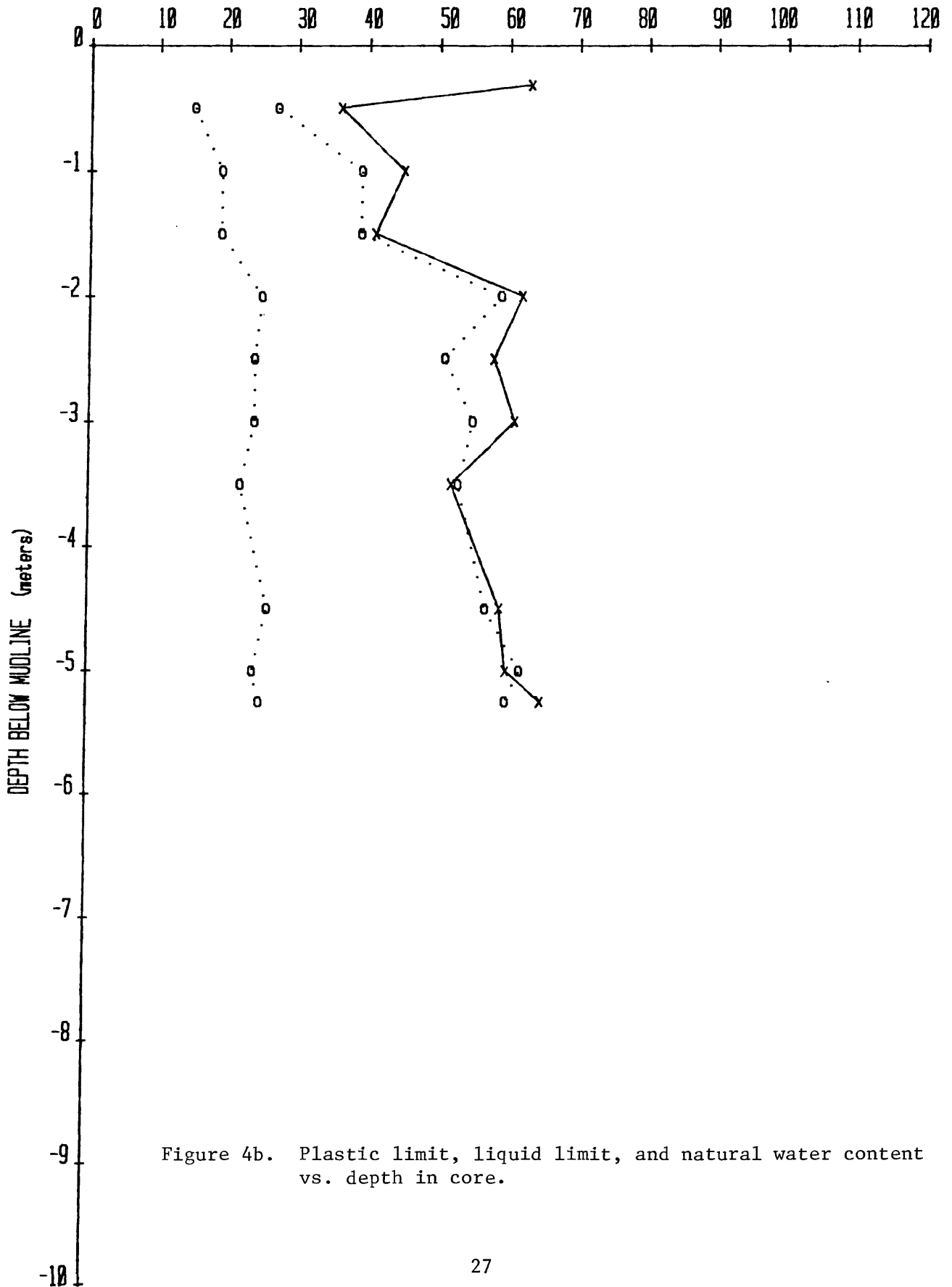


Figure 4b. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o- LOWER VALUE: PLASTIC LIMIT (%)

-x- WATER CONTENT (%)

-o- HIGHER VALUE: LIQUID LIMIT (%)

PC-39

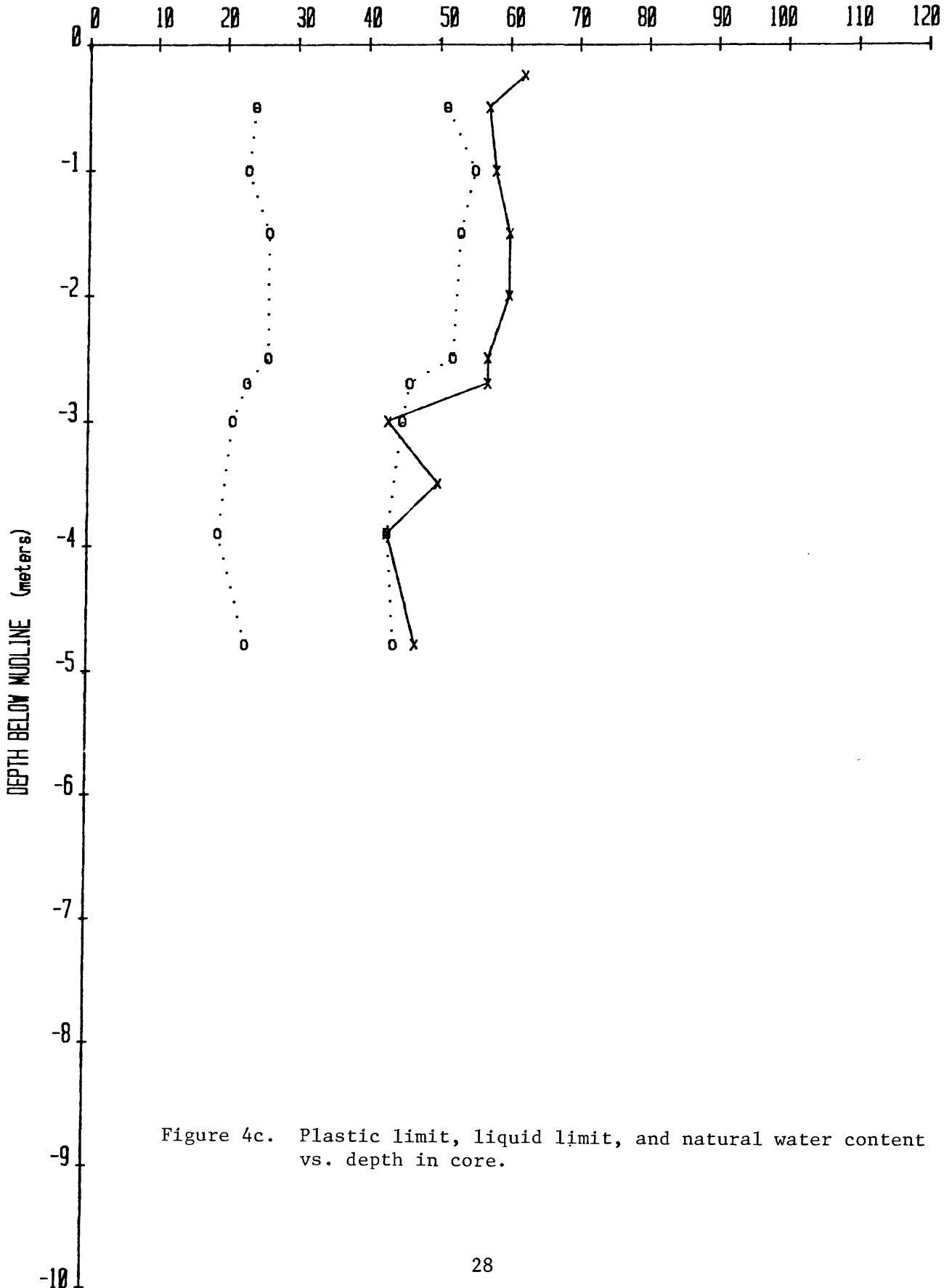


Figure 4c. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o-LOWER VALUE: PLASTIC LIMIT (%)

-x-WATER CONTENT (%)

-o-HIGHER VALUE: LIQUID LIMIT (%)

PC-40

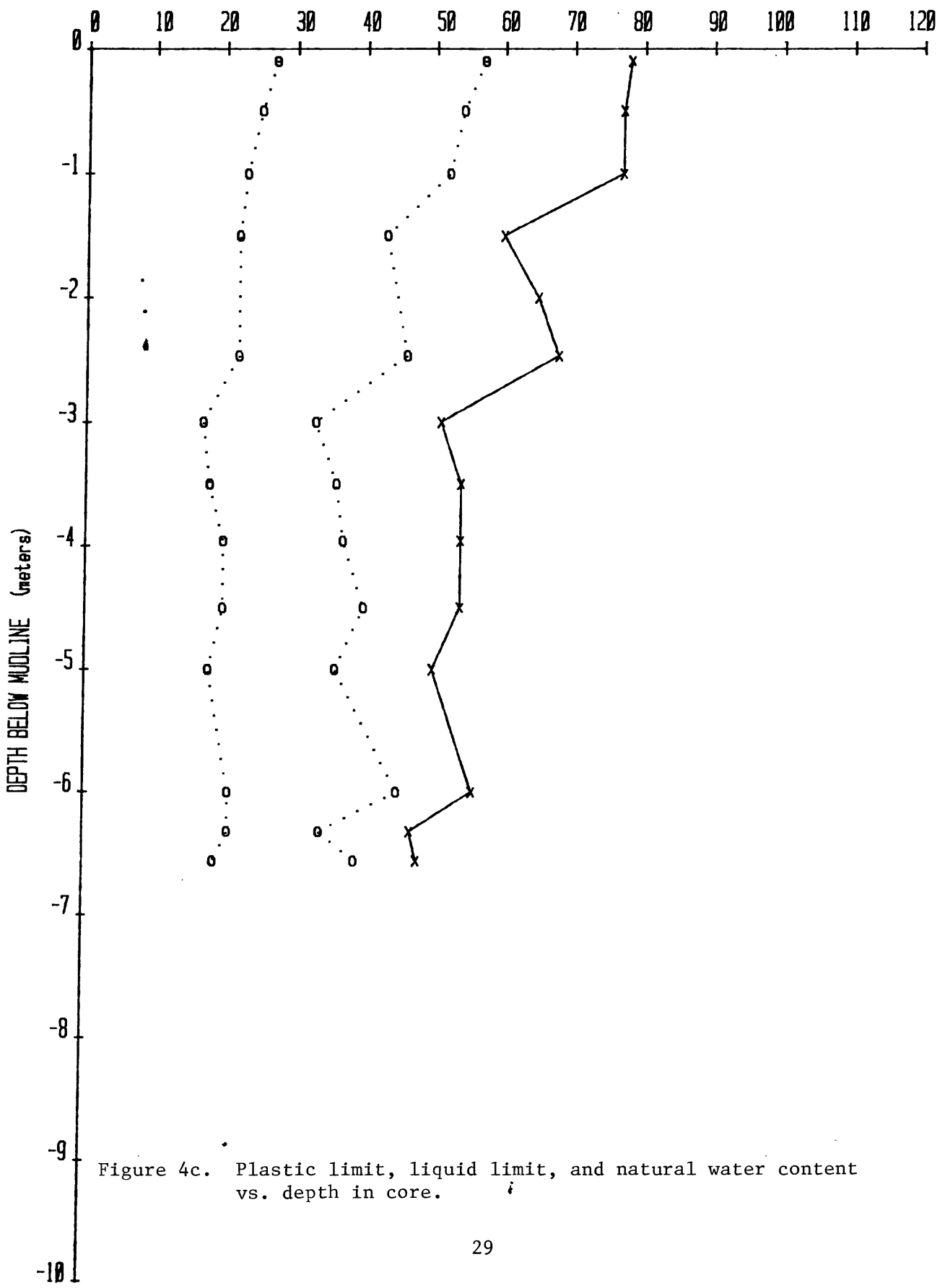


Figure 4c. Plastic limit, liquid limit, and natural water content vs. depth in core.



-o- LOWER VALUE: PLASTIC LIMIT (%)  
 -o- HIGHER VALUE: LIQUID LIMIT (%)

-x- WATER CONTENT (%)

PC-41

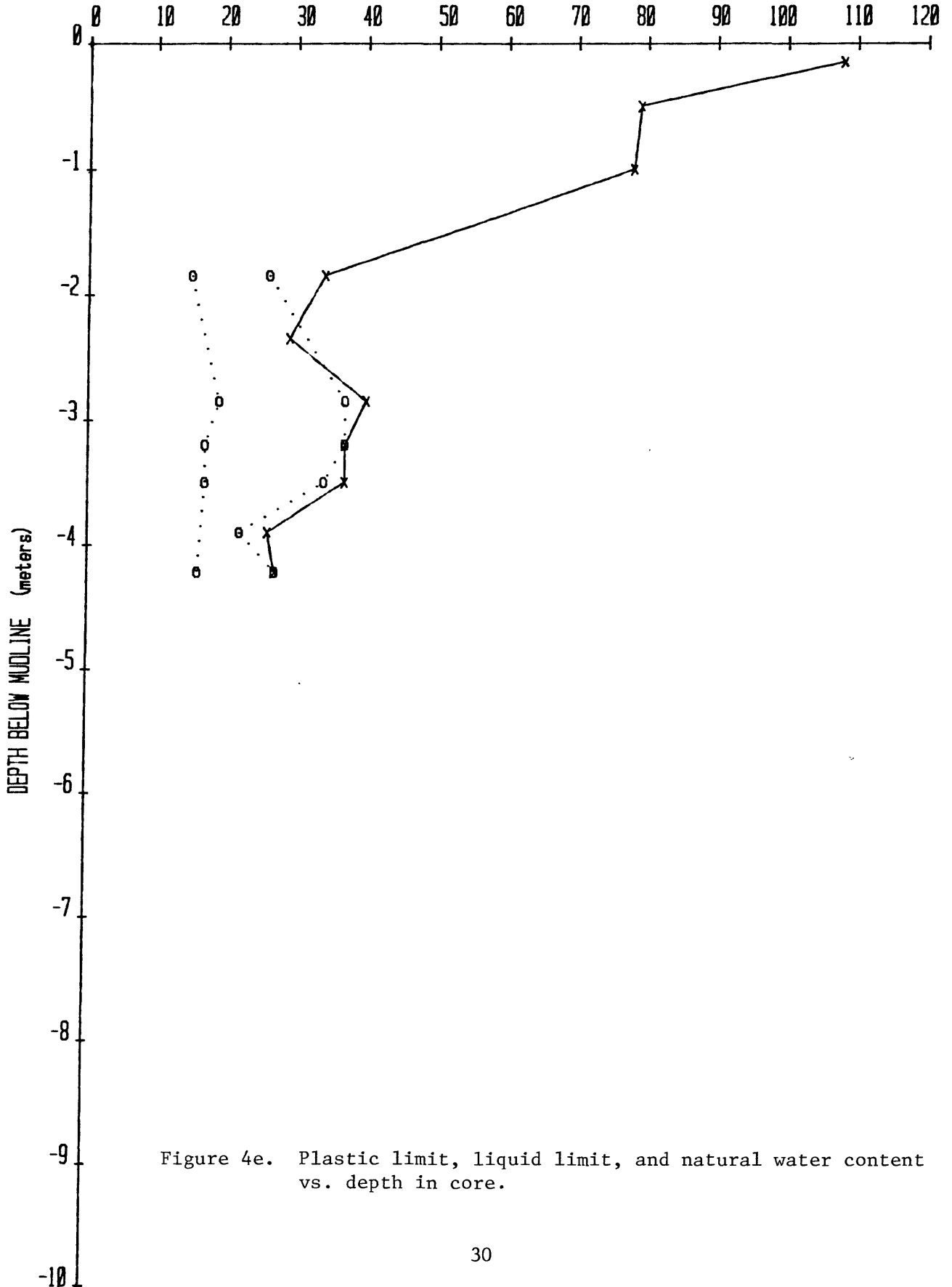


Figure 4e. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o- LOWER VALUE: PLASTIC LIMIT (%)

-x- WATER CONTENT (%)

-o- HIGHER VALUE: LIQUID LIMIT (%)

PC-43

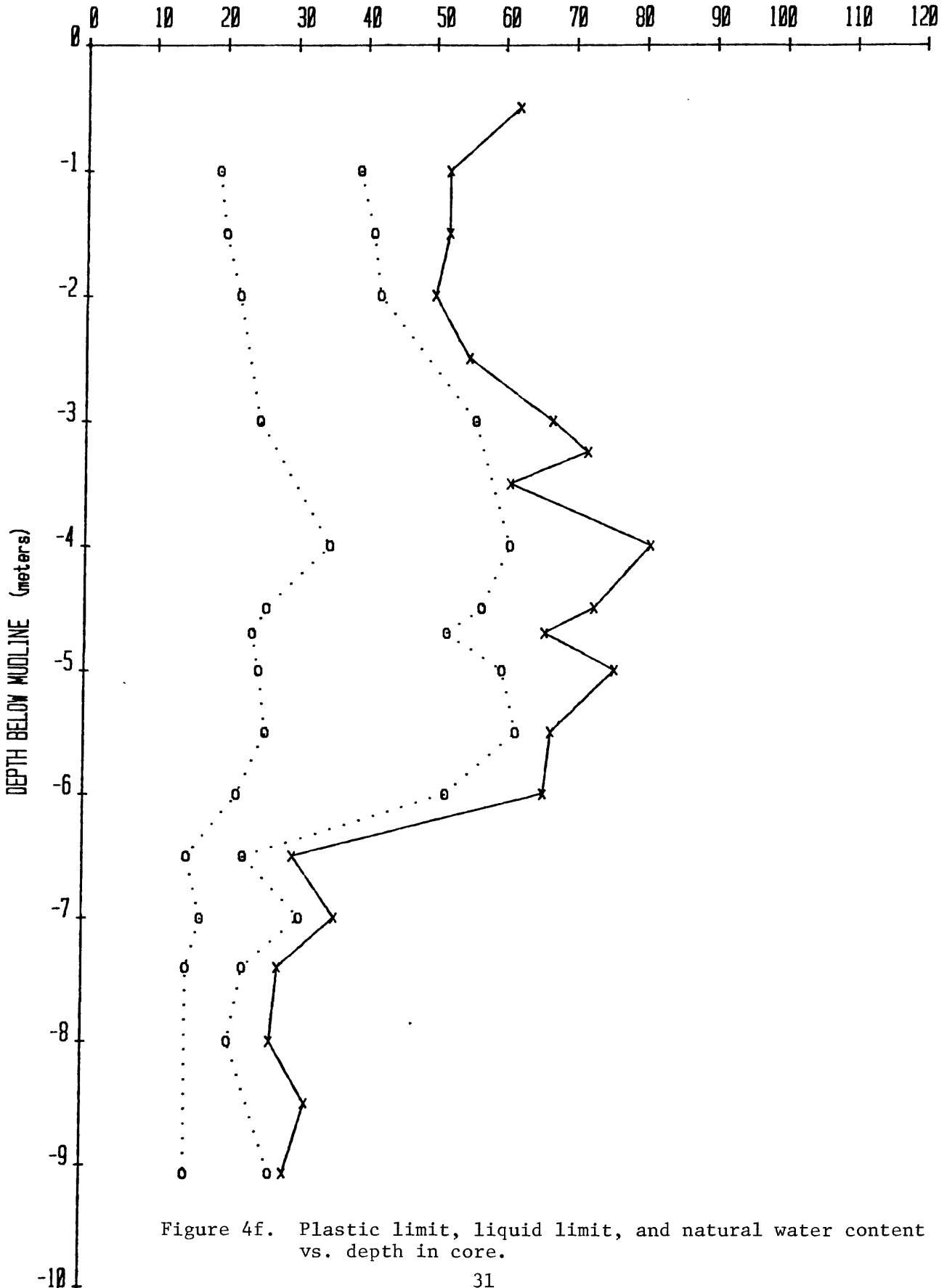


Figure 4f. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o-LOWER VALUE: PLASTIC LIMIT(%)

-x-WATER CONTENT(%)

-o-HIGHER VALUE: LIQUID LIMIT(%)

PC-44

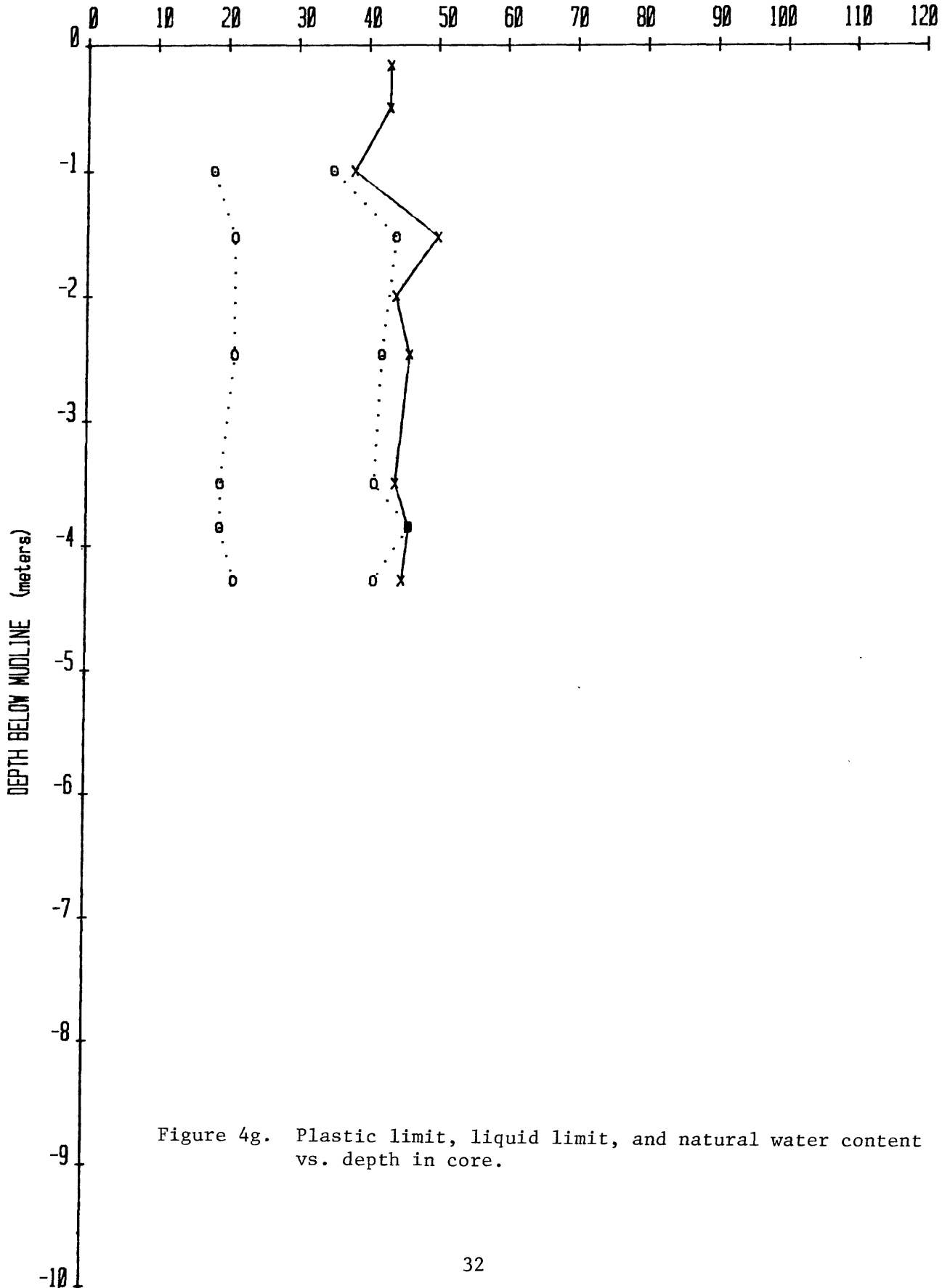


Figure 4g. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o- LOWER VALUE: PLASTIC LIMIT (%)

-x- WATER CONTENT (%)

-o- HIGHER VALUE: LIQUID LIMIT (%)

PC-45

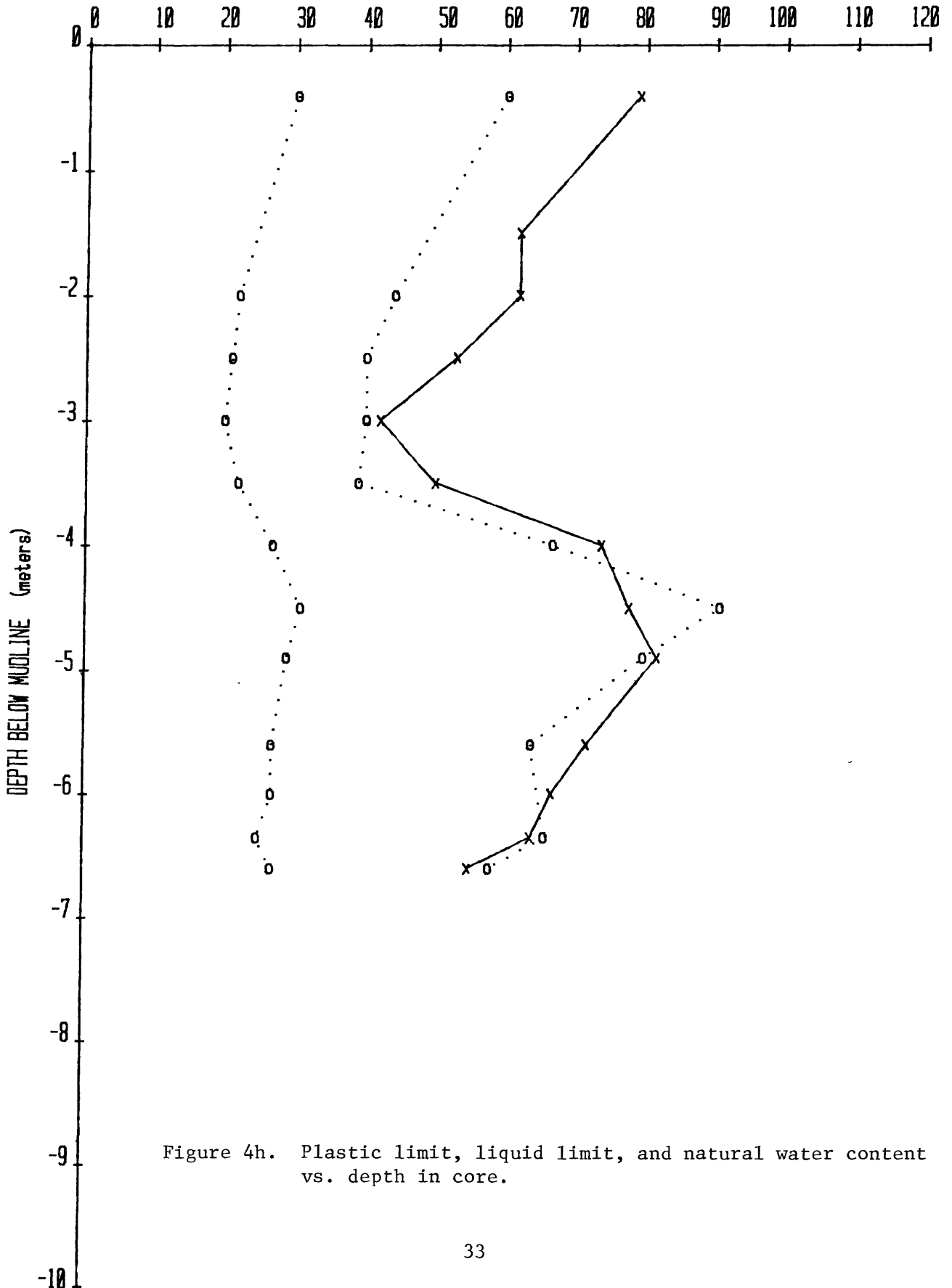


Figure 4h. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o- LOWER VALUE: PLASTIC LIMIT (%)  
-o- HIGHER VALUE: LIQUID LIMIT (%)

-x- WATER CONTENT (%)

PC-46

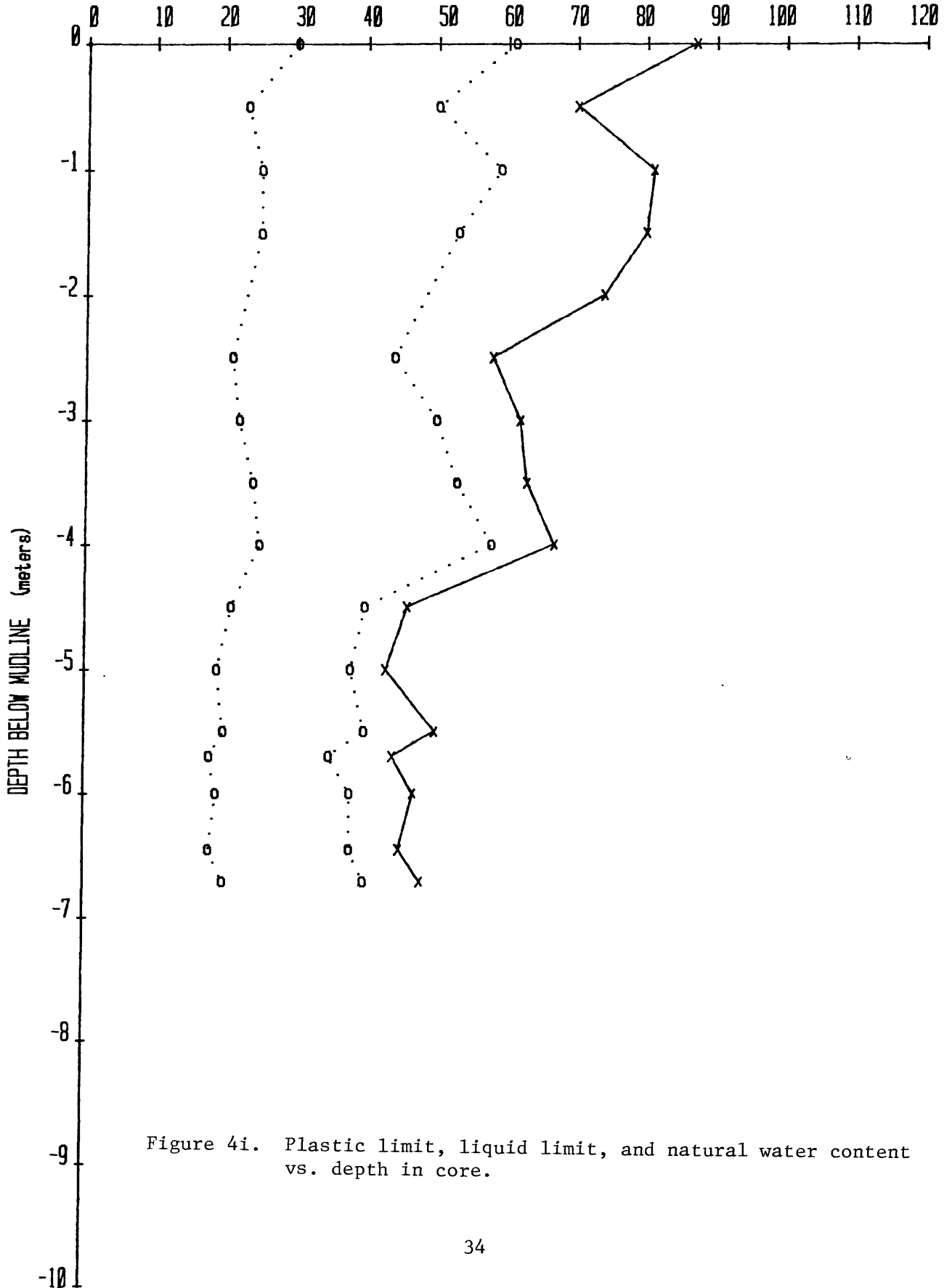


Figure 4i. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o- LOWER VALUE: PLASTIC LIMIT (%)

-x- WATER CONTENT (%)

-o- HIGHER VALUE: LIQUID LIMIT (%)

PC-52

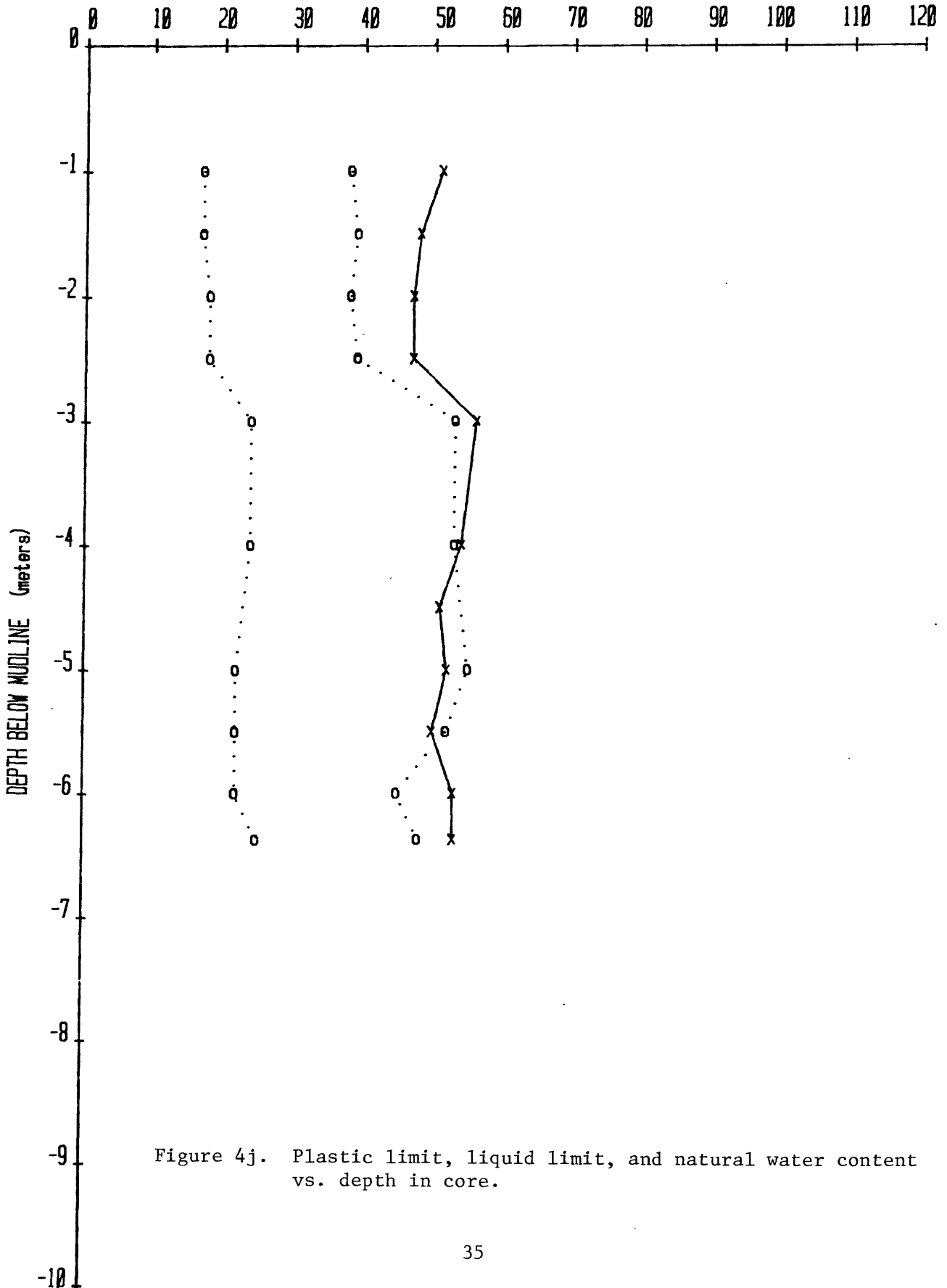


Figure 4j. Plastic limit, liquid limit, and natural water content vs. depth in core.

-o- LOWER VALUE: PLASTIC LIMIT (%)

-x- WATER CONTENT (%)

-o- HIGHER VALUE: LIQUID LIMIT (%)

PC-53

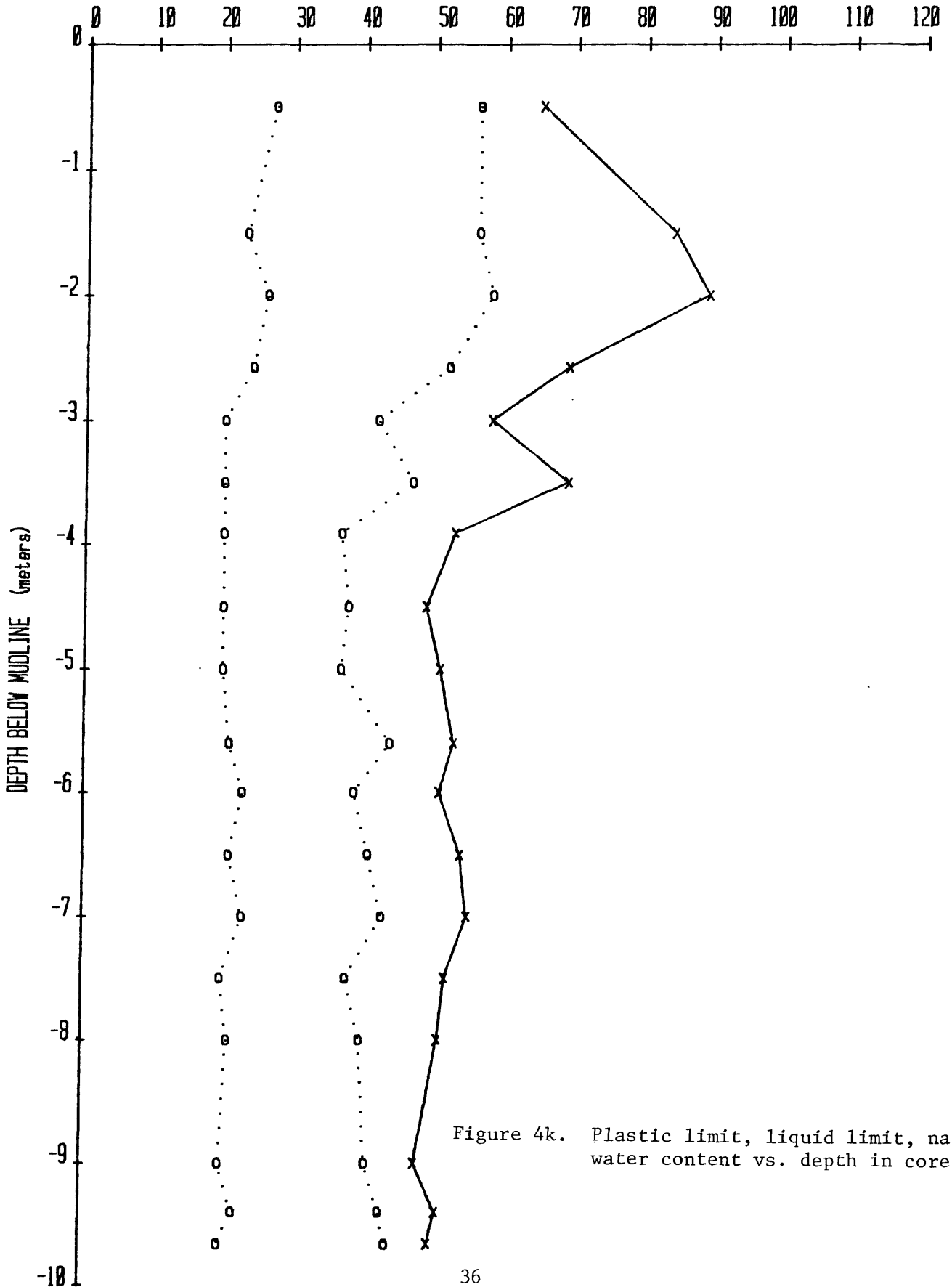


Figure 4k. Plastic limit, liquid limit, natural water content vs. depth in core.

-o- LOWER VALUE: PLASTIC LIMIT (%)  
-o- HIGHER VALUE: LIQUID LIMIT (%)

-x- WATER CONTENT (%)

PC-54

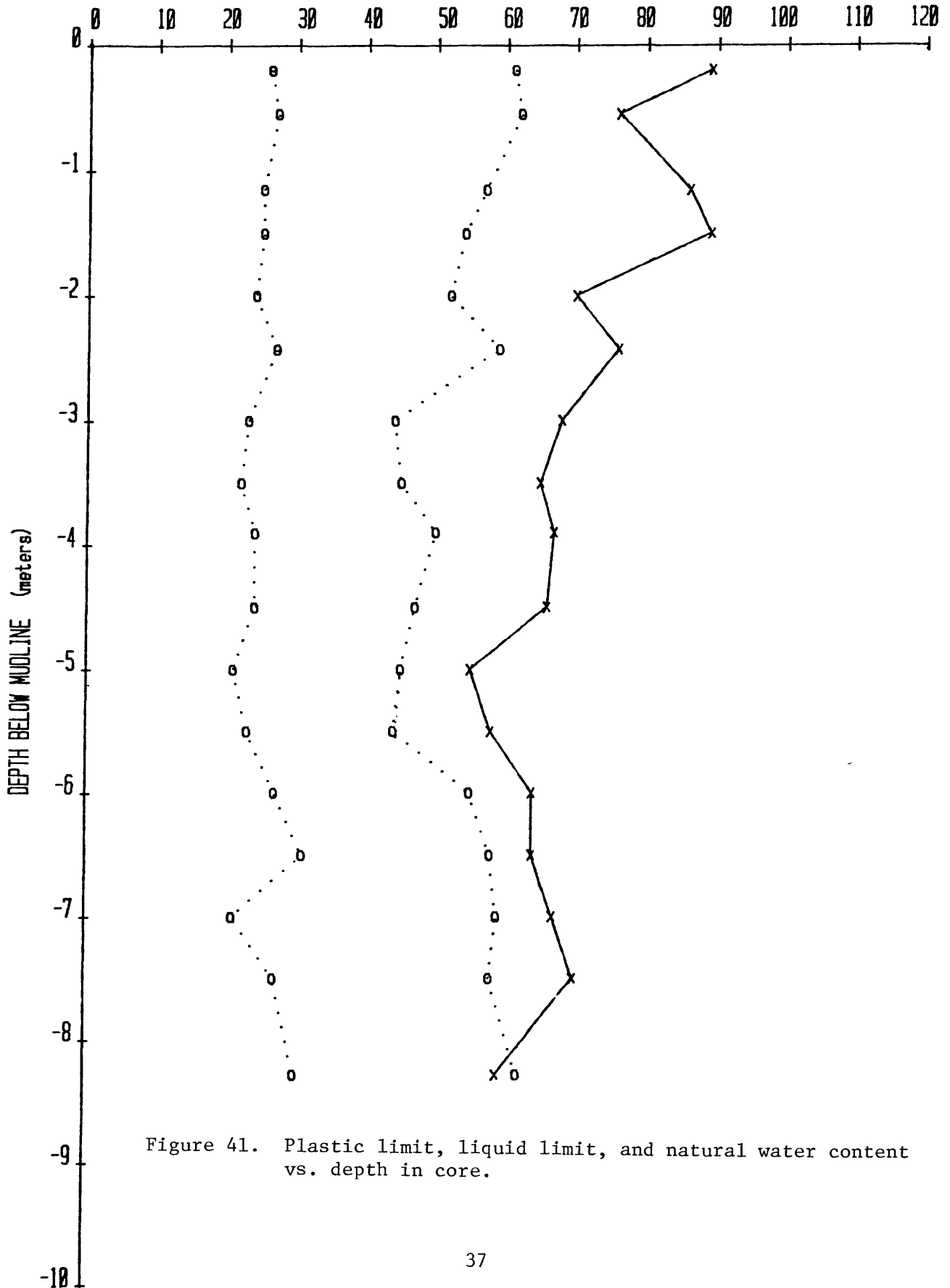


Figure 41. Plastic limit, liquid limit, and natural water content vs. depth in core.



consolidation state of the sediments. These are discussed in the section on slope stability.

### Triaxial Testing

The results of the triaxial tests are given in table II. These data do not reflect any unusual sediment characteristics, although the angle of internal friction ( $\phi'$ ) is somewhat low for cores PC-53 and PC-54. For the other cores the  $\phi'$  values are typical of essentially fine-grain marine sediments. The highest value ( $29.9^\circ$ ) is associated with PC-43. As inferred from the plasticity data (e.g., fig. 4f), this core has relatively coarser grain sizes in its lower portion. This is compatible with the higher friction angle noted here in that  $\phi'$  tends to increase with increasing grain size. The slightly lower values of  $22.0^\circ$  and  $21.5^\circ$  for cores PC-53 and PC-54 may also indicate a textural effect; in this case, finer grain sizes. A change to a smectite dominated clay mineral suite may also be responsible for the low values.

Cohesion ( $C'$ ) represents the strength of the sediment at zero effective stress; that is, the strength due to interparticle attraction alone. The values shown in table II are typical of the types of sediment discussed thus far.

The stress-strain relationships of the samples indicate that failure occurs generally between 2% and 20% strain. This large spread reflects the variety of sediment present. Generally, strains above 5% are common for cohesive sediments and plastic failure (i.e., no discrete failure plane(s)) is typical. Such was the case for these sediment. A few samples reached failure at less than 5% strain, however, indicating a less plastic sediment. Stress-strain curves are shown in Appendix III.

Table II. Summary of selected triaxial data

<u>Core</u>	<u>c'</u> (kPa)	<u><math>\phi'</math></u>
PC-39	7.8	25.2°
PC-40	4.0	26.0°
PC-43	8.7	29.9°
PC-44	7.4	27.5°
PC-45	2.7	29.1°
PC-46	2.2	24.1°
PC-52	4.8	27.5°
PC-53	1.9	22.0°
PC-54	<u>5.5</u>	<u>21.5°</u>
Average	5.0 kPa	25.9°

## SLOPE STABILITY

The geotechnical evidence clearly suggests that this area of the Continental Slope has been subjected to a complex and variable pattern of deposition in recent geologic time. It is an obvious hypothesis, therefore, that the mass movement potential of these surficial sediments is likewise variable. This hypothesis may be tested directly through slope stability analysis and indirectly by determining the consolidation state of the sediment.

Although several methods of stability analysis are applicable the general infinite slope model was selected for use here. Other methods will be presented in a later report. The general equation is:

$$F = (1 - u_e / \gamma' Z \cos^2 \alpha) \tan \phi' / \tan \alpha$$

where F is the factor of safety against failure (<1 is unstable, >1 is stable),  $u_e$  is the excess pore pressure (relative to hydrostatic pressure),  $\gamma'$  is the buoyant unit weight (bulk density minus the density of seawater), Z is the thickness of sediment,  $\alpha$  is the slope angle, and  $\phi'$  is the angle of internal friction. For a first approximation,  $u_e$  is assumed to be zero, and the equation may be rewritten as

$$F = \tan \phi' / \tan \alpha$$

Therefore, failure should only occur where the slope was equal to or greater than the angle of internal friction. Table III shows the results of the calculations. The F values in all cases indicate that these sediments are inherently stable. Thus, if they are normally consolidated or overconsolidated, mass movement would be unlikely under all but extreme circumstances.

A knowledge of pore pressures is absent in this study. This

Table III. Factor of safety against mass movement  
 ( $F = \tan \phi' / \tan \alpha$ )

<u>Core</u>	<u><math>\alpha^*</math></u>	<u><math>\phi'</math></u>	<u>F</u>
PC-39	8°	25.2°	3.3
PC-40	11°	26.0°	2.5
PC-43	5°	29.9°	6.6
PC-44	9°	27.5°	3.4
PC-45	6°	29.1°	5.3
PC-46	9°	24.1°	2.8
PC-52	13°	27.5°	2.3
PC-53	10°	22.0°	2.3
PC-54	7°	21.5°	3.3

\*Approximate slope angle

absence presents the one serious drawback of applying this type of analysis to these sediments: a state of normal consolidation (no excess pore pressures) must be assumed. In particular, if a state of underconsolidation exists, excess pore pressure is implied and the calculated F values would be too high. Consolidation state can also be used as an independent means for evaluating mass movement potential because it can reflect the presence of abnormal strength or weakness in a sediment column. All other properties being equal, overconsolidation denotes a relatively high strength-stability under most circumstances, normal consolidation denotes standard strength-stability at typical slope angles and in the absence of outside forces, and underconsolidation denotes relative weakness and highest probability of sediment failure. Establishing a criterion for normal consolidation in the context of this study is the key step, because normal consolidation is the barometer for interpreting the other states.

By using the ratio of strength to overburden ( $S_u/\sigma'_v$ ), a state of normal consolidation may be recognized. Skempton (1954) has shown that for normally consolidated sediment the  $S_u/\sigma'_v$  value is related to the plasticity index in the following manner:

$$S_u/\sigma'_v = 0.11 + 0.0037I_p$$

If we use the plasticity indices from this study an average value of 0.20 is predicted. The range is generally between 0.17 and 0.24. Thus, values within this range indicate normal consolidation, ratios below the minimum value indicate underconsolidation, and ratios above indicate overconsolidation. Because the estimate of the  $S_u/\sigma'_v$  range for normal consolidation is only approximate because of the effects of disturbance on the strength measurements ( $S_u$  values), this criterion is restricted to qualitative assessment. In fact, this uncertainty about data

accuracy prevents us from using the  $S_u/\sigma'_v$  ratio in an undrained stability analysis, which will be presented when the question of accuracy will have been more thoroughly addressed.

The vane shear data ( $S_u$ ) and computed overburden pressures (which were determined by summing buoyant bulk density values) were combined to get the  $S_u/\sigma'_v$  values for the cores. Results of the comparisons are shown in table IV. The  $S_u/\sigma'_v$  value for each core represents an average for the bottom meter or so. This comparison reduces the effects of the inconsistencies in lithology or undetected disturbance. Finally, the qualitative statements concerning consolidation state are intentionally conservative. That is, the core value had to be significantly below or above the stated range for normally consolidated sediment before a core was judged to be under or overconsolidated. Significance was arbitrarily defined as more than a 25% departure from the values of the end members of the range; thus, a value of 0.13 or less signified underconsolidation and a value of 0.30 or more signified overconsolidation. The analysis (table IV) indicates that the expected variability of consolidation states is present. Of particular interest, however, is that five cores may be underconsolidated. These are PC-40, PC-43, PC-45, PC-46, and PC-53. The sites of these cores may be more vulnerable to failure than the other sites at least in the upper few meters.

Skempton (1970) has shown that the relationship of liquidity index to overburden pressure may also be used to judge consolidation state. At the overburden pressure presumed for these cores, a liquidity index greater than 1.0 would indicate possible underconsolidation. This criterion was met by each of the 5 cores previously labeled as being underconsolidated. Accordingly, the factor of safety for these cores

shown in table III would be smaller than the given value.

In summary, the slope stability and consolidation analyses suggest that the surficial sediments in the study area are essentially stable, although some sites may be marginally so.

Evaluating the potential for a major mass movement event (i.e., several tens of meters thick or more) is not possible because of the limited penetration of the piston cores. If rates of deposition were high at certain times in the past thick sections of underconsolidated sediment could still exist. Because of the associated excess pore pressures, marginally stable sediments may be present in some areas. The fact that geophysical evidence indicates the absence of past large mass movement events (Robb and others, 1981) may imply that the sediments, even during the periods of rapid deposition, never reached a critical value of  $F$ . This does not necessarily bear on the central question of present-day stability, but, with assumed low rates of deposition for the past several thousand years, it does suggest that mass movement did not occur during the time that the slope would have been the most vulnerable to failure. Further, given lower rates of deposition and time, the excess pore pressures would tend to dissipate and the sediments would become increasingly more stable. Until more evidence becomes available, as from a deep-drilling program, the exact condition of the sediment must remain unknown, however.

#### CONCLUSIONS

The following conclusions are based on analyses completed to date:

1. Erratic strength profiles and variability of index properties implies that the Baltimore Canyon Continental Slope is a complex depositional environment. The sediments are essentially inorganic

sands, silts, and clays, and range from low to high plasticity. No exotic minerals or abnormal textures were indicated by the geotechnical data.

2. Based on slope stability analyses without pore pressure data, the surficial sediments represented by the cores are stable. However, index property data and assessments of consolidation state suggest that excess pore pressures may exist in some areas, and thus these areas may be only marginally stable. This conclusion applies to the sites of PC-40, PC-43, PC-45, PC-46, and PC-53.
3. All possible consolidation states are represented by the cores, as judged from the strength and plasticity data.

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Shear Strength Data

Core no. (length)	Penetration (m)	Shear strength (natural) (kpa)	Shear strength (remolded) (kPa)	Sensitivity
PC-8				
(5.85 m)	0.25	ND	ND	-
	0.50	0.8	ND	-
	1.00	2.7	0.6	4.8
	1.50	ND	ND	-
	1.75	8.2	1.3	6.2
	2.00	7.7	1.1	6.8
	2.15	8.6	0.6	13.8
	2.50	13.6	3.1	4.3
	2.75	13.2	2.4	5.5
	3.50	15.0	1.9	7.7
	4.00	17.1	2.3	7.6
	4.25	11.9	2.0	5.9
	5.00	14.1	3.5	3.8
	5.50	D	2.4	-
PC-13				
(5.32 m)	0.32	5.5	1.1	4.9
	0.50	6.8	0.8	8.3
	1.00	6.3	1.2	5.0
	1.50	6.3	0.6	10.1
	2.00	7.5	0.6	12.0
	2.50	8.4	1.32	6.4
	3.00	6.6	1.7	3.9
	3.50	6.8	1.1	6.0
	4.50	10.5	1.4	7.6
	5.00	8.3	1.5	5.5
	5.25	D	1.8	-
	PC-39			
(5.72 m)	0.25	1.4	ND	-
	0.50	1.9	0.7	2.8
	1.00	3.9	ND	-
	1.50	4.1	0.8	5.5
	2.00	2.5	ND	-
	2.50	4.1	ND	-
	2.70	4.1	ND	-
	3.00	5.7	1.0	5.7
	3.50	6.5	1.2	5.2
	3.90	11.8	1.7	7.0

ND: no data - sample too weak for accurate strength measurement  
D: Disturbed sample

Shear Strength Data

Core no. (length)	Penetration (m)	Shear strength (natural) (kPa)	Shear strength (remolded) (kPa)	Sensitivity
PC-40 (7.08 m)	.10	ND	ND	-
	.50	ND	ND	-
	1.00	ND	ND	-
	1.50	2.8	ND	-
	2.00	2.0	ND	-
	2.47	3.4	ND	-
	3.00	3.1	ND	-
	3.50	2.3	ND	-
	3.96	3.6	ND	-
	4.50	4.8	0.6	7.6
	5.00	4.8	ND	-
	6.00	4.6	0.8	6.2
	6.32	6.0	0.6	9.6
PC-41 (4.54 m)	0.15	1.2	ND	-
	0.50	5.4	1.0	5.4
	1.00	3.6	0.5	7.2
	1.85	6.8	1.1	6.0
	2.35	3.4	1.1	3.0
	2.85	5.1	1.2	4.3
	3.20	6.3	1.5	4.2
	3.50	8.0	0.8	10.7
	3.90	5.3	ND	-
	PC-43 (9.42 m)	0.50	2.8	ND
1.00		2.6	ND	-
1.50		2.9	ND	-
2.00		3.3	ND	-
2.50		4.0	0.7	5.7
3.00		3.8	0.7	5.5
3.25		6.3	0.8	8.3
3.50		2.1	ND	-
4.00		4.9	ND	-
4.50		6.4	1.4	4.6
4.70		4.6	0.9	5.3
5.00		4.4	ND	-
5.50		9.8	ND	-
6.00		3.5	ND	-
6.50		4.1	ND	-
7.00		5.5	0.6	9.8
7.40	6.6	0.8	8.2	
8.00	6.3	0.8	8.3	
8.50	7.8	0.8	9.6	

ND: No data - sample too weak for accurate strength measurement  
D: Disturbed sample

Shear Strength Data

Core no. (length)	Penetration (m)	Shear strength (natural) (kPa)	Shear strength (remolded) (kPa)	Sensitivity
PC-44 (4.50 m)	0.16	6.6	1.0 ✓	6.6
	0.50	5.9	1.2	4.7
	1.00	6.8	1.4	4.9
	1.53	8.3	1.2	6.6
	2.00	10.3	1.4	7.5
	2.47	9.0	0.9	10.3
	3.50	7.2	1.3	5.7
	3.85	4.8	0.9	5.1
PC-45 (6.97 m)	0.41	1.8	ND ✓	-
	1.00	ND	-	-
	1.50	2.1	ND	-
	2.00	2.1	ND	-
	2.50	3.4	ND	-
	3.00	4.8	ND	-
	3.50	12.8	2.5	5.1
	4.00	4.6	ND	-
	4.50	6.5	0.9	7.0
	4.90	3.1	1.1	2.8
	5.60	4.1	1.2	3.2
	6.00	3.8	1.8	2.1
	6.35	3.0	1.4	2.2
PC-46 (7.05 m)	0.50	1.1	ND ✓	-
	1.00	2.0	ND	-
	1.50	1.2	ND	-
	2.00	2.1	ND	-
	2.50	3.4	ND	-
	3.00	6.6	ND	-
	3.50	3.9	ND	-
	4.00	4.3	ND	-
	4.50	5.2	ND	-
	5.00	4.2	ND	-
	5.50	5.9	ND	-
	5.70	5.0	0.8	6.7
	6.00	5.3	0.8	7.0
6.45	5.6	ND	-	
PC-51 (0.17 m)	0.05	15.5	- ✓	-
	0.12	46.7	-	-

ND: No data - sample too weak for accurate strength measurement  
D: Disturbed sample

Shear Strength Data

Core no. (length)	Penetration (m)	Shear strength (natural) (kPa)	Shear strength (remolded) (kPa)	Sensitivity
PC-52 (6.73 m)	0.50	3.1	ND	-
	1.00	3.3	ND	-
	1.50	4.6	ND ✓	-
	2.00	4.8	ND	-
	2.50	4.3	0.6	6.9
	3.00	7.3	2.1	3.4
	4.00	6.1	0.8	8.2
	4.50	5.4	1.9	2.9
	5.00	6.8	1.6	4.3
	5.50	5.6	0.9	6.4
	6.00	3.8	1.2	3.0
PC-53 (10.06 m)	0.50	5.4	0.9	5.7
	1.10	1.7	ND ✓	-
	1.50	1.9	0.6	3.0
	2.00	1.9	ND	-
	2.58	2.6	0.9	3.0
	3.00	2.1	0.6	3.4
	3.50	3.9	0.9	4.4
	3.91	1.9	0.8	2.5
	4.50	5.3	0.9	5.6
	5.00	4.9	ND	-
	5.60	5.7	ND	-
	6.00	5.5	0.9	5.9
	6.50	5.8	ND	-
	7.00	5.6	ND	-
	7.50	6.6	0.9	7.1
8.00	5.0	0.9	5.7	
9.00	D	1.1	-	
9.40	D	1.1	-	
PC-54 (8.58 m)	0.20	1.9	1.9 ✓	1.00
	0.55	2.7	0.6	4.30
	1.15	1.5	ND	-
	1.50	1.3	ND	-
	2.00	0.9	ND	-
	2.43	3.4	ND	-
	3.00	3.1	ND	-
	3.50	3.8	ND	-
	3.90	3.6	ND	-
	4.50	3.5	ND	-
	5.00	4.8	ND	-
	5.50	5.8	ND	-
	6.00	6.8	ND	-
	6.50	9.5	ND	-
7.00	7.7	0.8	10.3	
7.50	8.6	1.1	8.0	

ND: No data - sample too weak for accurate strength measurement  
D: Disturbed sample

APPENDIX II  
Geotechnical Properties

Index Properties

Core no. (length)	Penetration (m)	Water content (%)	Bulk density (g/cc)	Porosity (%)	Liquid limit	Plastic limit	Plasticity index	Liquidity index
PC-8								
(5.85 m)	0.25	119	1.44	76	85	40	45	1.76
	0.50	106	1.48	74	-	-	-	-
	1.00	93	1.52	71	75	33	42	1.43
	1.50	66	1.66	64	-	-	-	-
	1.75	57	1.72	61	55	27	28	1.07
	2.00	52	1.75	59	47	21	26	1.19
	2.15	56	1.72	61	51	24	27	1.19
	2.50	52	1.75	59	59	26	33	0.79
	2.75	52	1.75	59	-	-	-	-
	3.50	51	1.76	58	57	27	30	0.80
	4.00	50	1.77	58	58	26	32	0.75
	4.25	50	1.77	58	59	26	33	0.73
	5.00	50	1.77	58	-	-	-	-
	5.50	53	1.75	59	57	26	31	0.87
PC-13								
(5.32 m)	0.32	63	1.67	63	-	-	-	-
	0.50	36	1.91	50	27	15	12	1.75
	1.00	45	1.81	55	39	19	20	1.30
	1.50	41	1.86	53	39	19	20	1.10
	2.00	62	1.68	63	59	25	34	1.09
	2.50	58	1.71	61	51	24	27	1.26
	3.00	61	1.69	62	55	24	31	1.19
	3.50	52	1.75	59	53	22	31	0.97
	4.50	59	1.70	62	57	26	31	1.06
	5.00	60	1.69	62	62	24	38	0.95
	5.25	65	1.66	64	60	25	35	1.14
PC-39								
(5.72 m)	0.25	62	1.68	63	-	-	-	-
	0.50	57	1.72	61	51	24	27	1.24
	1.00	58	1.71	61	55	23	32	1.09
	1.50	60	1.70	62	53	26	27	1.26
	2.00	60	1.70	62	-	-	-	-
	2.50	57	1.72	61	52	26	26	1.19
	2.70	57	1.72	61	46	23	23	1.22
	3.00	43	1.85	54	45	21	24	0.92
	3.50	50	1.77	58	-	-	-	-
	3.90	43	1.85	54	43	19	24	1.00
	4.79	47	1.81	56	44	23	21	1.14

APPENDIX II  
Geotechnical Properties

Index Properties

Core no. (length)	Penetration (m)	Water content (%)	Bulk density (g/cc)	Porosity (%)	Liquid limit	Plastic limit	Plasticity index	Liquidity index
PC-40 (7.08 m)								
	0.10	78	1.59	68	57	27	31	1.68
	0.50	77	1.60	68	54	25	29	1.79
	1.00	77	1.60	68	52	23	29	1.86
	1.50	60	1.70	62	43	22	21	1.81
	2.00	65	1.67	64	-	-	-	-
	2.47	68	1.65	65	46	22	24	1.88
	3.00	51	1.76	58	33	17	16	2.12
	3.50	54	1.74	60	36	18	18	2.00
	3.96	54	1.74	60	37	20	17	2.00
	4.50	54	1.74	60	40	20	20	1.70
	5.00	50	1.78	58	36	18	18	1.75
	6.00	56	1.73	60	45	21	24	1.46
	6.32	47	1.80	56	34	21	13	2.00
	6.56	48	1.79	57	39	19	20	1.45
PC-41 (4.54 m)								
	0.15	108	1.48	75	-	-	-	-
	0.50	79	1.59	68	-	-	-	-
	1.00	78	1.59	68	-	-	-	-
	1.85	34	1.95	48	26	15	11	1.73
	2.35	29	2.02	44	-	-	-	-
	2.85	40	1.87	52	37	19	18	1.17
	3.20	37	1.91	50	37	17	20	1.00
	3.50	37	1.91	50	34	17	17	1.18
	3.90	26	2.06	41	22	-	-	-
	4.22	27	2.04	42	27	16	11	1.00
PC-43 (9.42 m)								
	0.50	62	1.69	63	-	-	-	-
	1.00	52	1.76	59	39	19	20	1.65
	1.50	52	1.76	59	41	20	21	1.52
	2.00	50	1.78	58	42	22	20	1.40
	2.50	55	1.74	60	-	-	-	-
	3.00	67	1.65	65	56	25	31	1.35
	3.25	72	1.62	66	-	-	-	-
	3.50	61	1.69	62	-	-	-	-
	4.00	81	1.58	69	61	35	26	1.77
	4.50	73	1.62	66	57	26	31	1.52
	4.70	66	1.66	64	52	24	28	1.50
	5.00	76	1.60	67	60	25	35	1.45
	5.50	67	1.65	65	62	26	36	1.14
	6.00	66	1.66	64	52	22	30	1.47
	6.50	30	2.00	45	23	15	8	1.88
	7.00	36	1.92	49	31	17	14	1.36
	7.40	28	2.03	43	23	15	8	1.62
	8.00	27	2.05	42	21	-	-	-
	8.50	32	1.97	47	-	-	-	-
	9.07	29	2.01	44	27	15	12	1.17



Index Properties

Core no. (length)	Penetration (m)	Water content (%)	Bulk density (g/cc)	Porosity (%)	Liquid limit	Plastic limit	Plasticity index	Liquidity index
PC-44								
(4.50 m)	0.16	43	1.84	54	-	-	-	-
	0.50	43	1.84	54	-	-	-	-
	1.00	38	1.90	50	35	18	17	1.18
	1.53	50	1.78	58	44	21	23	1.26
	2.00	44	1.83	54	-	-	-	-
	2.47	46	1.81	56	42	21	21	1.10
	3.50	44	1.83	55	41	19	22	1.14
	3.85	46	1.81	56	46	21	25	1.00
	4.28	45	1.82	55	41	21	20	1.20
PC-45								
(6.97 m)	0.41	79	1.59	68	60	30	30	1.60
	1.00	-	-	-	-	-	-	-
	1.50	62	1.69	63	-	-	-	-
	2.00	62	1.69	63	44	22	22	1.82
	2.50	53	1.75	59	40	21	19	1.68
	3.00	42	1.85	53	40	20	20	1.10
	3.50	50	1.78	58	39	22	17	1.65
	4.00	74	1.61	67	67	27	40	1.18
	4.50	78	1.59	68	91	31	60	.78
	4.90	82	1.57	69	80	29	51	1.04
	5.60	72	1.62	66	64	27	37	1.22
	6.00	67	1.65	65	-	27	-	-
	6.35	64	1.67	64	66	25	41	0.94
	6.60	55	1.73	60	58	27	31	0.90
PC-46								
(7.05 m)	0.00	87	1.55	70	61	30	31	1.84
	0.50	70	1.64	65	50	23	27	1.74
	1.00	81	1.58	69	59	25	34	1.65
	1.50	80	1.58	69	53	25	28	1.97
	2.00	74	1.61	67	-	-	-	-
	2.50	58	1.71	61	44	21	23	1.61
	3.00	62	1.68	63	50	22	28	1.43
	3.50	63	1.68	63	53	24	29	1.34
	4.00	67	1.65	65	58	25	33	1.27
	4.50	46	1.81	56	40	21	19	1.32
	5.00	43	1.84	54	38	19	19	1.26
	5.50	50	1.78	58	40	20	20	1.50
	5.70	44	1.83	55	35	18	17	1.53
	6.00	47	1.80	56	38	19	19	1.47
	6.45	45	1.82	55	38	18	20	1.35
	6.71	48	1.79	57	40	20	20	1.40

APPENDIX II  
Geotechnical Properties

Index Properties

Core no. (length)	Penetration (m)	Water content (%)	Bulk density (g/cc)	Porosity (%)	Liquid limit	Plastic limit	Plasticity index	Liquidity index
PC-52 (6.73 m)	0.50	-	-	-	-	-	-	-
	1.00	51	1.77	58	38	17	21	1.62
	1.50	48	1.79	57	39	17	22	1.41
	2.00	47	1.80	56	38	18	20	1.45
	2.50	47	1.80	56	39	18	21	1.39
	3.00	56	1.73	60	53	24	29	1.10
	4.00	54	1.74	60	53	24	29	1.03
	4.50	51	1.77	58	-	-	-	-
	5.00	52	1.76	59	55	22	33	0.91
	5.50	50	1.78	58	52	22	30	0.93
	6.00	53	1.75	59	45	22	24	1.36
	6.37	53	1.75	57	40	20	20	1.40
	PC-53 (10.06 m)	0.50	65	1.67	64	56	27	29
1.10		-	-	-	-	-	-	-
1.50		84	1.57	69	56	23	33	1.85
2.00		89	1.54	71	58	26	32	1.97
2.58		69	1.64	65	52	24	29	1.74
3.00		58	1.71	61	42	20	22	1.73
3.50		69	1.64	65	47	20	27	1.81
3.91		53	1.75	59	37	20	17	1.94
4.50		49	1.78	57	38	20	18	1.78
5.00		51	1.77	58	37	20	17	1.82
5.60		53	1.75	59	44	21	23	1.52
6.00		51	1.77	58	39	23	16	1.77
6.50		54	1.74	60	41	21	20	1.65
7.00		55	1.74	60	43	23	20	1.60
7.50		52	1.76	59	38	20	18	1.78
8.00		51	1.77	58	40	21	19	1.58
9.00		48	1.79	57	41	20	21	1.33
9.40	51	1.77	58	43	22	21	1.38	
9.66	50	1.78	58	44	20	24	1.25	
PC-54 (8.58 m)	0.20	89	1.54	71	61	26	35	1.80
	0.55	76	1.60	67	62	27	35	1.40
	1.15	86	1.56	70	57	25	32	1.91
	1.50	89	1.54	71	54	25	29	2.20
	2.00	70	1.64	65	52	24	28	1.64
	2.43	76	1.60	67	59	27	32	1.53
	3.00	68	1.65	65	44	23	21	2.14
	3.50	65	1.67	64	45	22	23	1.87
	3.90	67	1.65	65	50	24	26	1.65
	4.50	66	1.66	64	47	24	23	1.83
	5.00	55	1.74	60	45	21	24	1.44
	5.50	58	1.71	61	44	23	21	1.67
	6.00	64	1.67	64	55	27	28	1.32
	6.50	64	1.67	64	58	31	27	1.22
	7.00	67	1.65	65	59	21	38	1.21
	7.50	70	1.64	65	58	27	31	1.39
8.28	59	1.70	62	62	30	32	0.91	

TRIAXIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-2R, PC-39; 300/340  
 INTERVAL (meters): 4.61-4.73  
 GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
 DESCRIPTION: OLIVE-GRAY CLAY  
 DATE FINISHED: 1/15/80

INDEX PROPERTIES

MOISTURE CONTENT: 0.42  
 BULK DENSITY (g/cc): 1.83  
 VOID RATIO: 1.12  
 POROSITY: 0.53  
 GRAIN SPEC GRAVITY (g/cc): 2.73

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
 DIAMETER (mm): 50.00  
 AREA (sq. mm): 1963.50  
 VOLUME (cc): 196.35  
 WEIGHT (gm): 351.40

TEST RESULTS

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		47.82		
2	100.00	50.00	96.40	48.58	0.97
3	150.00	50.00	145.87	49.47	0.99
4	200.00	50.00	195.27	49.40	0.99
5	340.00	140.00	335.94	140.67	1.00

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 340.00  
 BACK PRESSURE (kPa): 300.00  
 CONSOLIDATION PRESSURE (kPa): 40.00  
 ASSUMED EFFECTIVE  
 OVERBURDEN PRESSURE (kPa): 36.83

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	98.46
AREA (sq. mm):	1963.50	1903.58
VOLUME (cc):	196.35	187.43
WATER CONTENT:	0.42	0.38
POROSITY:	0.53	0.39
VOID RATIO:	1.12	0.65
BULK DENSITY (g/cc):	1.83	1.87
BOUYANT BULK DENSITY (g/cc):	0.80	0.84
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	4	0.60	2.00	0.12
3	10	1.00	3.16	0.25
4	20	1.30	4.47	0.42
5	38	1.58	6.16	0.66
6	73	1.86	8.54	1.02
7	139	2.14	11.79	1.56
8	269	2.43	16.40	2.38
9	527	2.72	22.96	3.58
10	1041	3.02	32.26	5.15
11	2068	3.32	45.48	6.74
12	4118	3.61	64.17	7.80
13	7120	3.85	84.38	8.21
14	10122	4.01	100.61	8.36
15	13124	4.12	114.56	8.44
16	16126	4.21	126.99	8.49
17	19128	4.28	138.30	8.53
18	22131	4.35	148.76	8.57
19	25133	4.40	158.53	8.59
20	28135	4.45	167.73	8.62
21	31137	4.49	176.46	8.63
22	34139	4.53	184.77	8.65
23	37141	4.57	192.72	8.67
24	40143	4.60	200.36	8.68
25	43145	4.63	207.71	8.69
26	46148	4.66	214.82	8.70
27	49150	4.69	221.70	8.71
28	52152	4.72	228.37	8.72
29	55154	4.74	234.85	8.73
30	58156	4.76	241.16	8.74
31	61158	4.79	247.30	8.75
32	64160	4.81	253.30	8.75
33	67162	4.83	259.16	8.75
34	70165	4.85	264.89	8.76

35	73167	4.86	270.49	8.77
36	76169	4.88	275.99	8.78
37	79171	4.90	281.37	8.79
38	82173	4.91	286.66	8.80
39	85175	4.93	291.85	8.81
40	88177	4.95	296.95	8.81
41	91180	4.96	301.96	8.83
42	94182	4.97	306.89	8.83
43	97184	4.99	311.74	8.84
44	100186	5.00	316.52	8.85
45	103188	5.01	321.23	8.85
46	106190	5.03	325.87	8.86
47	109192	5.04	330.44	8.86
48	112194	5.05	334.95	8.87
49	115197	5.06	339.41	8.87
50	118199	5.07	343.80	8.88
51	121201	5.08	348.14	8.88
52	124203	5.09	352.42	8.89
53	127205	5.10	356.66	8.89
54	130207	5.11	360.84	8.90
55	133209	5.12	364.98	8.90
56	136211	5.13	369.07	8.90
57	139214	5.14	373.11	8.91
58	142216	5.15	377.12	8.92
59	145218	5.16	381.07	8.92

ALPHA: 0.98  $\sin \phi' = \tan \alpha$   
 Ao (sq. mm): 1903.59  $\phi' = .98$   
 Lo (mm): 98.46

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 340.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	301.79	0.00	0.00	340.00	0
2	0.01	304.14	0.27	7.63	340.00	1322
3	-0.02	314.11	0.55	45.73	340.00	2645
4	0.01	318.05	0.80	58.52	340.00	3967
5	0.01	319.36	1.09	67.86	340.00	5289
6	-0.00	319.78	1.41	74.80	340.00	6611
7	0.01	320.76	1.68	80.80	340.00	7933
8	0.02	321.18	1.98	86.50	340.00	9255

9	0.01	320.73	2.32	90.84	340.00	10577
10	0.01	321.15	2.64	93.71	340.00	11899
11	0.02	321.21	2.95	96.11	340.00	13222
12	0.01	320.92	3.29	98.13	340.00	14544
13	0.01	320.53	3.64	99.56	340.00	15866
14	0.02	321.02	3.95	100.41	340.00	17188
15	0.02	321.12	4.29	101.38	340.00	18510
16	0.02	320.59	4.64	101.89	340.00	19832
17	0.01	320.50	4.97	101.69	340.00	21154
18	0.03	321.05	5.30	101.62	340.00	22476
19	0.03	320.73	5.67	101.77	340.00	23799
20	0.01	320.63	6.03	101.62	340.00	25121
21	0.02	321.18	6.37	101.38	340.00	26443
22	0.03	321.34	6.72	101.58	340.00	27765
23	0.02	320.92	7.08	101.31	340.00	29087
24	0.02	321.08	7.44	100.92	340.00	30410
25	0.03	321.51	7.78	100.69	340.00	31732
26	0.03	321.60	8.13	100.69	340.00	33054
27	0.03	321.28	8.50	100.69	340.00	34376
28	0.02	321.28	8.85	100.22	340.00	35698
29	0.04	322.03	9.19	99.95	340.00	37020
30	0.05	322.06	9.54	100.38	340.00	38342
31	0.04	321.57	9.90	100.45	340.00	39665
32	0.03	321.51	10.25	100.34	340.00	40987
33	0.05	322.35	10.58	100.26	340.00	42309
34	0.05	322.26	10.93	100.76	340.00	43631
35	0.05	321.90	11.29	100.88	340.00	44953
36	0.04	321.90	11.64	100.69	340.00	46275
37	0.05	322.16	11.98	100.61	340.00	47597
38	0.06	322.29	12.33	101.07	340.00	48920
39	0.05	321.96	12.68	101.27	340.00	50242
40	0.05	322.19	13.03	101.19	340.00	51564
41	0.05	322.16	13.38	101.03	340.00	52886
42	0.07	322.65	13.71	101.27	340.00	54208
43	0.06	322.71	14.07	102.97	340.00	55530
44	0.06	322.62	14.41	102.00	340.00	56852
45	0.05	322.42	14.76	102.08	340.00	58174
46	0.06	322.42	15.11	101.73	340.00	59497
47	0.06	322.75	15.45	102.16	340.00	60819
48	0.08	322.88	15.79	102.78	340.00	62141
49	0.07	322.62	16.15	103.09	340.00	63463
50	0.07	322.45	16.50	103.13	340.00	64785
51	0.06	322.48	16.85	103.24	340.00	66107
52	0.06	322.52	17.19	103.28	340.00	67429
53	0.08	323.17	17.52	103.67	340.00	68752
54	0.08	322.88	17.89	104.10	340.00	70074
55	0.07	322.58	18.23	104.60	340.00	71396
56	0.07	322.71	18.58	104.68	340.00	72718
57	0.09	323.33	18.92	105.10	340.00	74040
58	0.09	322.94	19.28	105.69	340.00	75362
59	0.08	322.62	19.63	105.88	340.00	76684

60      0.09    323.46    19.97    106.03    340.00    78007

DERIVED PROPERTIES

READING	STRAIN A	TOTAL STRESS		EFFECTIVE STRESS		EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
		SIG1 (kPa)	SIG3 (kPa)	EFFSIG1 (kPa)	EFFSIG3 (kPa)			
1	0.0000	340.00	340.00	1.00	38.21	38.21	1.00	
2	0.0027	344.00	340.00	1.01	39.86	35.86	1.11	
3	0.0056	363.89	340.00	1.07	49.78	25.89	1.92	
4	0.0082	370.49	340.00	1.09	52.44	21.95	2.39	
5	0.0111	375.25	340.00	1.10	55.90	20.64	2.71	
6	0.0143	378.73	340.00	1.11	58.95	20.22	2.92	
7	0.0171	381.72	340.00	1.12	60.97	19.24	3.17	
8	0.0201	384.53	340.00	1.13	63.34	18.82	3.37	
9	0.0236	386.59	340.00	1.14	65.87	19.28	3.42	
10	0.0268	387.91	340.00	1.14	66.76	18.85	3.54	
11	0.0300	388.98	340.00	1.14	67.76	18.79	3.61	
12	0.0334	389.83	340.00	1.15	68.91	19.08	3.61	
13	0.0369	390.37	340.00	1.15	69.84	19.47	3.59	
14	0.0401	390.63	340.00	1.15	69.61	18.98	3.67	
15	0.0435	390.94	340.00	1.15	69.82	18.88	3.70	
16	0.0472	391.00	340.00	1.15	70.41	19.41	3.63	
17	0.0505	390.73	340.00	1.15	70.23	19.50	3.60	
18	0.0539	390.51	340.00	1.15	69.46	18.95	3.67	
19	0.0576	390.38	340.00	1.15	69.66	19.28	3.61	
20	0.0612	390.11	340.00	1.15	69.49	19.37	3.59	
21	0.0647	389.82	340.00	1.15	68.63	18.62	3.65	
22	0.0682	389.72	340.00	1.15	68.37	18.66	3.67	
23	0.0720	389.39	340.00	1.15	68.47	19.08	3.59	
24	0.0756	389.01	340.00	1.14	67.92	18.92	3.59	
25	0.0790	388.71	340.00	1.14	67.20	18.49	3.63	
26	0.0826	388.52	340.00	1.14	66.92	18.40	3.64	
27	0.0863	388.33	340.00	1.14	67.05	18.72	3.58	
28	0.0899	387.92	340.00	1.14	66.64	18.72	3.56	
29	0.0933	387.61	340.00	1.14	65.58	17.97	3.65	
30	0.0969	387.62	340.00	1.14	65.56	17.94	3.65	
31	0.1005	387.47	340.00	1.14	65.89	18.43	3.58	
32	0.1041	387.22	340.00	1.14	65.72	18.49	3.55	
33	0.1075	387.01	340.00	1.14	64.65	17.65	3.66	
34	0.1110	387.06	340.00	1.14	64.80	17.74	3.65	
35	0.1146	386.92	340.00	1.14	65.02	18.10	3.59	
36	0.1182	386.64	340.00	1.14	64.74	18.10	3.58	
37	0.1216	386.42	340.00	1.14	64.27	17.84	3.60	
38	0.1252	386.45	340.00	1.14	64.16	17.71	3.62	
39	0.1288	386.35	340.00	1.14	64.38	18.04	3.57	
40	0.1324	386.12	340.00	1.14	63.93	17.81	3.59	
41	0.1359	385.86	340.00	1.13	63.70	17.84	3.57	
42	0.1392	385.79	340.00	1.13	63.15	17.35	3.64	
43	0.1429	386.36	340.00	1.14	63.65	17.29	3.68	

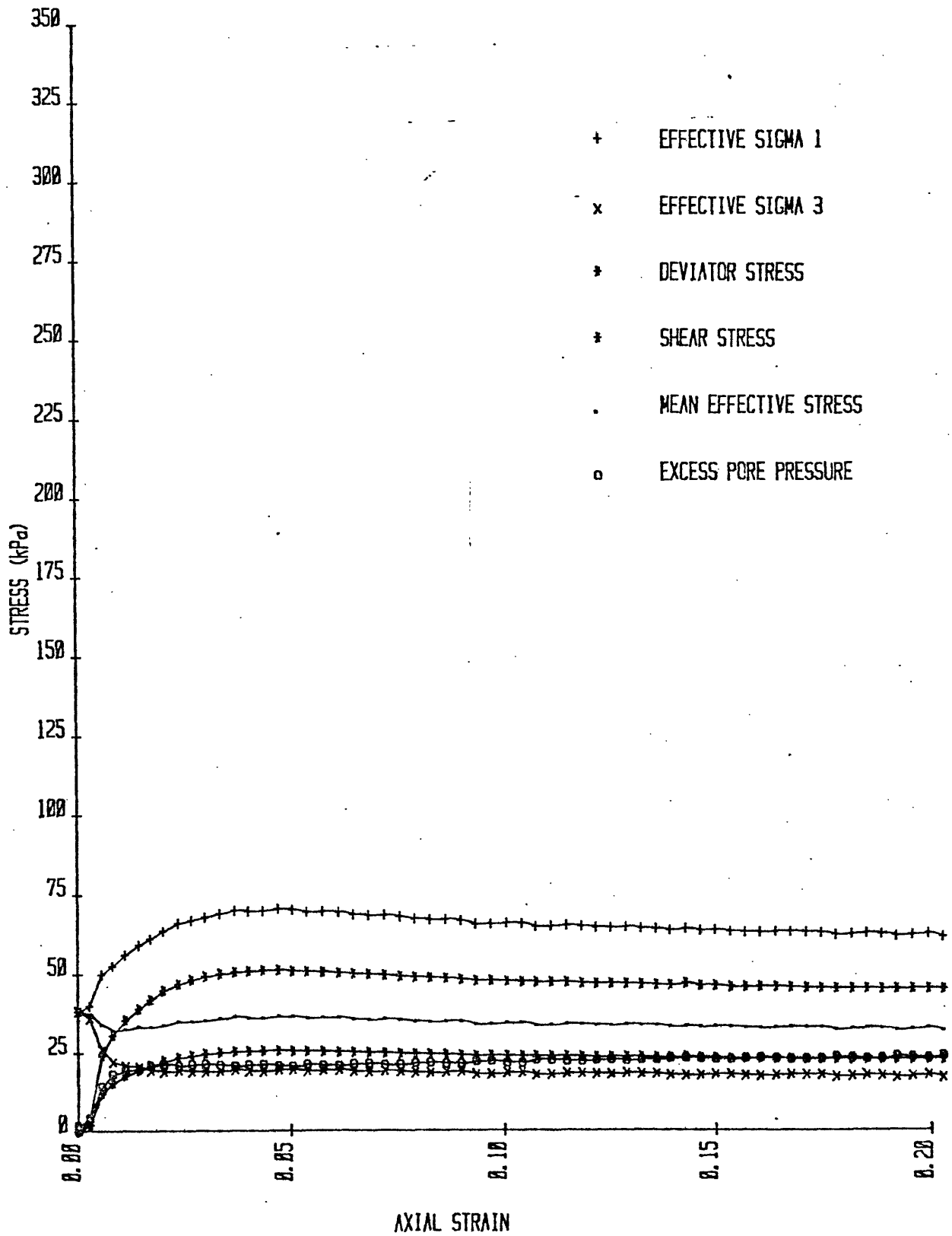
44	0.1464	385.74	340.00	1.13	63.12	17.39	3.63
45	0.1499	385.59	340.00	1.13	63.17	17.58	3.59
46	0.1535	385.24	340.00	1.13	62.82	17.58	3.57
47	0.1569	385.25	340.00	1.13	62.50	17.26	3.62
48	0.1604	385.33	340.00	1.13	62.46	17.13	3.65
49	0.1640	385.27	340.00	1.13	62.66	17.39	3.60
50	0.1675	385.10	340.00	1.13	62.65	17.55	3.57
51	0.1711	384.96	340.00	1.13	62.47	17.52	3.57
52	0.1746	384.78	340.00	1.13	62.26	17.48	3.56
53	0.1780	384.77	340.00	1.13	61.60	16.83	3.66
54	0.1817	384.75	340.00	1.13	61.87	17.13	3.61
55	0.1852	384.77	340.00	1.13	62.19	17.42	3.57
56	0.1887	384.61	340.00	1.13	61.90	17.29	3.58
57	0.1922	384.60	340.00	1.13	61.27	16.67	3.68
58	0.1958	384.65	340.00	1.13	61.71	17.06	3.62
59	0.1994	384.53	340.00	1.13	61.92	17.39	3.56
60	0.2028	384.41	340.00	1.13	60.94	16.54	3.69

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	MEAN EFFECTIVE	
					DEVIATOR STRESS (kPa)	STRESS (kPa)
1	0.59	0.00	38.21	0.00	0.00	38.21
2	0.59	2.00	37.86	0.05	4.00	37.19
3	0.50	11.94	37.83	0.32	23.89	33.85
4	0.60	15.25	37.19	0.41	30.49	32.11
5	0.27	17.63	38.27	0.46	35.25	32.39
6	0.12	19.37	39.59	0.49	38.73	33.13
7	0.33	20.86	40.10	0.52	41.72	33.15
8	0.15	22.26	41.08	0.54	44.53	33.66
9	-0.22	23.30	42.57	0.55	46.59	34.81
10	0.32	23.95	42.81	0.56	47.91	34.82
11	0.06	24.49	43.28	0.57	48.98	35.11
12	-0.35	24.91	43.99	0.57	49.83	35.69
13	-0.72	25.18	44.66	0.56	50.37	36.26
14	1.86	25.32	44.30	0.57	50.63	35.86
15	0.32	25.47	44.35	0.57	50.94	35.86
16	-8.97	25.50	44.91	0.57	51.00	36.41
17	0.36	25.36	44.87	0.57	50.73	36.41
18	-2.51	25.25	44.20	0.57	50.51	35.79
19	2.69	25.19	44.47	0.57	50.38	36.07
20	0.36	25.06	44.43	0.56	50.11	36.08
21	-1.86	24.91	43.73	0.57	49.82	35.42
22	-1.69	24.86	43.52	0.57	49.72	35.23
23	1.28	24.69	43.77	0.56	49.39	35.54
24	-0.43	24.50	43.42	0.56	49.01	35.25
25	-1.43	24.36	42.85	0.57	48.71	34.73
26	-0.52	24.26	42.66	0.57	48.52	34.57
27	1.67	24.16	42.89	0.56	48.33	34.83
28	0.00	23.96	42.68	0.56	47.92	34.69



29	-2.41	23.80	41.78	0.57	47.61	33.84
30	2.08	23.81	41.75	0.57	47.62	33.81
31	3.11	23.73	42.16	0.56	47.47	34.25
32	0.27	23.61	42.10	0.56	47.22	34.23
33	-3.97	23.50	41.15	0.57	47.01	33.32
34	-2.09	23.53	41.27	0.57	47.06	33.43
35	2.61	23.46	41.56	0.56	46.92	33.74
36	0.00	23.32	41.42	0.56	46.64	33.65
37	-1.21	23.21	41.05	0.57	46.42	33.32
38	5.26	23.22	40.94	0.57	46.45	33.19
39	3.18	23.17	41.21	0.56	46.35	33.49
40	-1.02	23.06	40.87	0.56	46.12	33.18
41	0.13	22.93	40.77	0.56	45.86	33.13
42	-7.01	22.90	40.25	0.57	45.79	32.62
43	0.11	23.18	40.47	0.57	46.36	32.74
44	0.16	22.87	40.25	0.57	45.74	32.63
45	1.28	22.79	40.37	0.56	45.59	32.78
46	0.00	22.62	40.20	0.56	45.24	32.66
47	52.13	22.62	39.88	0.57	45.25	32.34
48	1.50	22.67	39.79	0.57	45.33	32.24
49	4.38	22.64	40.02	0.57	45.27	32.48
50	0.94	22.55	40.10	0.56	45.10	32.58
51	-0.22	22.48	39.99	0.56	44.96	32.50
52	-0.19	22.39	39.87	0.56	44.78	32.41
53	-45.08	22.38	39.22	0.57	44.77	31.75
54	15.41	22.37	39.50	0.57	44.75	32.04
55	-11.53	22.39	39.80	0.56	44.77	32.34
56	-0.80	22.31	39.59	0.56	44.61	32.16
57	-81.11	22.30	38.97	0.57	44.60	31.54
58	-8.61	22.32	39.38	0.57	44.65	31.94
59	2.76	22.27	39.65	0.56	44.53	32.23
60	0.00	22.20	38.74	0.57	44.41	31.34



## TRIAXIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-2R, PC-39; 300/380  
INTERVAL (meters): 4.73-4.85  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/15/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.47  
BULK DENSITY (g/cc): 1.78  
VOID RATIO: 1.25  
POROSITY: 0.56  
GRAIN SPEC GRAVITY (g/cc): 2.73  
LIQUID LIMIT (%): 44.00  
PLASTIC LIMIT (%): 23.00

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 349.60

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		52.96		
2	100.00	50.00	107.14	54.18	1.08
3	150.00	50.00	146.00	38.86	0.78
4	200.00	50.00	196.70	50.70	1.01
5	380.00	180.00	375.69	178.99	0.99

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 380.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 80.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 35.54

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	97.11
AREA (sq. mm):	1963.50	1851.69
VOLUME (cc):	196.35	179.82
WATER CONTENT:	0.47	0.40
POROSITY:	0.56	0.42
VOID RATIO:	1.25	0.73
BULK DENSITY (g/cc):	1.78	1.85
BOUYANT BULK DENSITY (g/cc):	0.76	0.83
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	4	0.60	2.00	0.09
3	10	1.00	3.16	0.21
4	20	1.30	4.47	0.36
5	38	1.58	6.16	0.59
6	72	1.86	8.49	0.94
7	138	2.14	11.75	1.50
8	268	2.43	16.37	2.38
9	527	2.72	22.96	3.77
10	1041	3.02	32.26	5.82
11	2067	3.32	45.46	8.55
12	4117	3.61	64.16	11.39
13	7119	3.85	84.37	13.22
14	10121	4.01	100.60	14.08
15	13123	4.12	114.56	14.56
16	16126	4.21	126.99	14.86
17	19128	4.28	138.30	15.07
18	22130	4.34	148.76	15.23
19	25132	4.40	158.53	15.36
20	28134	4.45	167.73	15.46
21	31136	4.49	176.45	15.54
22	34138	4.53	184.76	15.62
23	37141	4.57	192.72	15.68
24	40143	4.60	200.36	15.74
25	43145	4.63	207.71	15.79
26	46147	4.66	214.82	15.83
27	49149	4.69	221.70	15.87
28	52151	4.72	228.37	15.91
29	55153	4.74	234.85	15.95
30	58155	4.76	241.15	15.98
31	61158	4.79	247.30	16.01
32	64160	4.81	253.30	16.04
33	67162	4.83	259.16	16.06
34	70164	4.85	264.88	16.09

35	73166	4.86	270.49	16.11
36	76168	4.88	275.99	16.14
37	79170	4.90	281.37	16.17
38	82173	4.91	286.66	16.20
39	85175	4.93	291.85	16.22
40	88177	4.95	296.95	16.24
41	91179	4.96	301.96	16.27
42	94181	4.97	306.89	16.28
43	97183	4.99	311.74	16.31
44	100185	5.00	316.52	16.33
45	103187	5.01	321.23	16.35
46	106189	5.03	325.87	16.36
47	109191	5.04	330.44	16.38
48	112194	5.05	334.95	16.39
49	115196	5.06	339.41	16.41
50	118198	5.07	343.80	16.42
51	121200	5.08	348.14	16.43
52	124202	5.09	352.42	16.45
53	127204	5.10	356.66	16.46
54	130206	5.11	360.84	16.47
55	133209	5.12	364.98	16.48
56	136211	5.13	369.07	16.49
57	139213	5.14	373.11	16.51
58	142215	5.15	377.11	16.52
59	145217	5.16	381.07	16.53

ALPHA: 0.97  
 Ao (sq. mm): 1851.69  
 Lo (mm): 97.11

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 380.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	301.28	0.00	0.00	380.00	1
2	0.01	306.30	0.29	14.83	380.00	1323
3	0.00	321.94	0.60	73.89	380.00	2646
4	0.00	330.87	0.88	98.79	380.00	3967
5	0.01	336.15	1.19	112.53	380.00	5289
6	0.00	339.49	1.52	121.76	380.00	6611
7	0.00	341.93	1.81	128.63	380.00	7933
8	0.01	344.10	2.16	134.23	380.00	9255

9	0.00	345.27	2.52	138.38	380.00	10578
10	-0.00	346.51	2.83	140.83	380.00	11900
11	0.00	347.59	3.17	142.58	380.00	13222
12	0.01	348.42	3.53	143.46	380.00	14544
13	-0.00	348.77	3.87	144.20	380.00	15866
14	-0.00	349.47	4.20	143.98	380.00	17188
15	0.00	350.36	4.54	144.64	380.00	18510
16	-0.00	350.58	4.91	144.73	380.00	19832
17	-0.01	350.90	5.28	144.38	380.00	21155
18	0.00	351.63	5.60	144.38	380.00	22477
19	-0.00	351.82	5.97	144.51	380.00	23799
20	-0.00	352.08	6.32	144.38	380.00	25121
21	-0.00	352.49	6.66	144.33	380.00	26443
22	0.00	352.93	7.02	144.38	380.00	27765
23	-0.00	353.00	7.37	144.51	380.00	29087
24	-0.00	353.12	7.73	144.16	380.00	30409
25	-0.01	353.51	8.06	143.94	380.00	31732
26	0.00	353.89	8.41	144.38	380.00	33054
27	-0.01	353.92	8.77	144.20	380.00	34376
28	-0.00	353.86	9.12	144.07	380.00	35698
29	-0.00	354.30	9.46	143.76	380.00	37020
30	0.01	354.65	9.80	144.42	380.00	38342
31	0.00	354.62	10.15	144.38	380.00	39664
32	-0.00	354.55	10.50	144.25	380.00	40986
33	-0.00	355.03	10.83	144.07	380.00	42308
34	0.00	355.19	11.18	144.73	380.00	43630
35	0.00	355.19	11.53	144.60	380.00	44953
36	-0.00	355.06	11.88	144.47	380.00	46275
37	-0.01	355.35	12.21	144.20	380.00	47597
38	0.00	355.70	12.55	144.77	380.00	48919
39	0.00	355.54	12.91	144.73	380.00	50241
40	-0.00	355.67	13.26	144.55	380.00	51563
41	-0.01	355.54	13.60	144.25	380.00	52885
42	-0.00	356.14	13.93	144.29	380.00	54208
43	0.00	356.14	14.29	144.86	380.00	55530
44	-0.00	355.95	14.64	144.64	380.00	56852
45	-0.00	355.99	14.99	144.55	380.00	58174
46	-0.01	356.05	15.35	144.07	380.00	59496
47	-0.01	356.30	15.69	144.16	380.00	60818
48	0.01	356.68	16.04	144.51	380.00	62140
49	0.00	356.37	16.40	144.64	380.00	63463
50	0.01	356.40	16.76	144.51	380.00	64785
51	0.00	356.49	17.11	144.25	380.00	66107
52	0.00	356.56	17.47	143.81	380.00	67429
53	0.01	357.10	17.81	144.07	380.00	68751
54	0.01	357.16	18.17	144.64	380.00	70073
55	0.01	357.07	18.54	144.68	380.00	71396
56	0.01	357.03	18.89	144.29	380.00	72718
57	0.01	357.51	19.24	144.60	380.00	74040
58	0.02	357.61	19.60	144.99	380.00	75362
59	0.01	357.35	19.96	144.73	380.00	76684

60      0.01    357.67    20.31    144.82    380.00    78006

DERIVED PROPERTIES

READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL	EFFECTIVE		
				STRESS RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	380.00	380.00	1.00	78.73	78.73	1.00
2	0.0030	387.99	380.00	1.02	81.69	73.70	1.11
3	0.0062	419.66	380.00	1.10	97.72	58.06	1.68
4	0.0091	432.87	380.00	1.14	102.00	49.13	2.08
5	0.0123	440.02	380.00	1.16	103.87	43.85	2.37
6	0.0156	444.73	380.00	1.17	105.24	40.51	2.60
7	0.0187	448.17	380.00	1.18	106.23	38.07	2.79
8	0.0222	450.88	380.00	1.19	106.78	35.91	2.97
9	0.0259	452.79	380.00	1.19	107.52	34.73	3.10
10	0.0292	453.84	380.00	1.19	107.33	33.49	3.20
11	0.0327	454.48	380.00	1.20	106.89	32.41	3.30
12	0.0364	454.65	380.00	1.20	106.24	31.58	3.36
13	0.0398	454.77	380.00	1.20	106.01	31.23	3.39
14	0.0433	454.39	380.00	1.20	104.92	30.53	3.44
15	0.0468	454.46	380.00	1.20	104.10	29.64	3.51
16	0.0506	454.21	380.00	1.20	103.63	29.42	3.52
17	0.0544	453.73	380.00	1.19	102.83	29.10	3.53
18	0.0576	453.48	380.00	1.19	101.85	28.37	3.59
19	0.0614	453.25	380.00	1.19	101.43	28.18	3.60
20	0.0651	452.89	380.00	1.19	100.82	27.93	3.61
21	0.0686	452.60	380.00	1.19	100.11	27.51	3.64
22	0.0723	452.33	380.00	1.19	99.40	27.07	3.67
23	0.0759	452.12	380.00	1.19	99.12	27.00	3.67
24	0.0796	451.66	380.00	1.19	98.53	26.88	3.67
25	0.0830	451.28	380.00	1.19	97.77	26.50	3.69
26	0.0866	451.22	380.00	1.19	97.33	26.11	3.73
27	0.0903	450.85	380.00	1.19	96.93	26.08	3.72
28	0.0939	450.50	380.00	1.19	96.65	26.15	3.70
29	0.0974	450.08	380.00	1.18	95.78	25.70	3.73
30	0.1009	450.12	380.00	1.18	95.48	25.35	3.77
31	0.1046	449.82	380.00	1.18	95.20	25.38	3.75
32	0.1081	449.48	380.00	1.18	94.92	25.45	3.73
33	0.1115	449.13	380.00	1.18	94.10	24.97	3.77
34	0.1151	449.16	380.00	1.18	93.97	24.81	3.79
35	0.1187	448.82	380.00	1.18	93.63	24.81	3.77
36	0.1223	448.48	380.00	1.18	93.41	24.94	3.75
37	0.1257	448.08	380.00	1.18	92.73	24.65	3.76
38	0.1293	448.08	380.00	1.18	92.38	24.30	3.80
39	0.1329	447.77	380.00	1.18	92.23	24.46	3.77
40	0.1365	447.41	380.00	1.18	91.74	24.33	3.77
41	0.1400	446.99	380.00	1.18	91.45	24.46	3.74
42	0.1435	446.74	380.00	1.18	90.60	23.86	3.80
43	0.1471	446.72	380.00	1.18	90.58	23.86	3.80

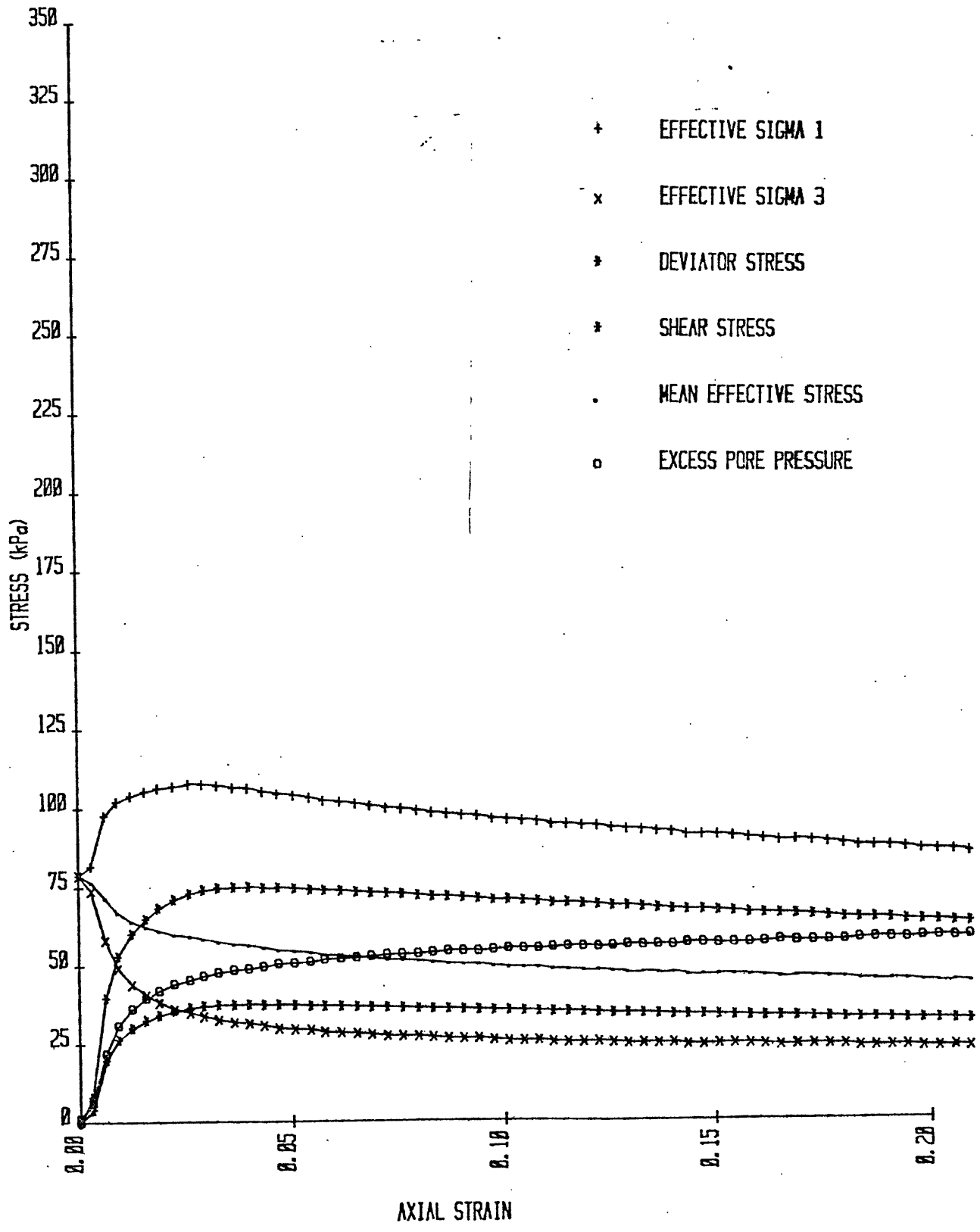
44	0.1507	446.34	380.00	1.17	90.38	24.05	3.76
45	0.1544	446.01	380.00	1.17	90.03	24.02	3.75
46	0.1580	445.51	380.00	1.17	89.46	23.95	3.74
47	0.1615	445.28	380.00	1.17	88.97	23.70	3.75
48	0.1652	445.15	380.00	1.17	88.47	23.32	3.79
49	0.1689	444.92	380.00	1.17	88.56	23.63	3.75
50	0.1725	444.58	380.00	1.17	88.18	23.60	3.74
51	0.1762	444.17	380.00	1.17	87.68	23.51	3.73
52	0.1798	443.70	380.00	1.17	87.14	23.44	3.72
53	0.1834	443.53	380.00	1.17	86.44	22.90	3.77
54	0.1871	443.50	380.00	1.17	86.33	22.84	3.78
55	0.1909	443.22	380.00	1.17	86.15	22.93	3.76
56	0.1945	442.76	380.00	1.17	85.73	22.97	3.73
57	0.1982	442.62	380.00	1.16	85.10	22.49	3.78
58	0.2019	442.49	380.00	1.16	84.89	22.39	3.79
59	0.2056	442.09	380.00	1.16	84.74	22.65	3.74
60	0.2091	441.85	380.00	1.16	84.18	22.33	3.77

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.63	0.00	78.73	0.00	0.00	78.73
2	0.63	3.99	77.70	0.05	7.99	76.37
3	0.49	19.83	77.89	0.25	39.66	71.28
4	0.68	26.43	75.56	0.35	52.87	66.75
5	0.74	30.01	73.86	0.41	60.02	63.86
6	0.71	32.36	72.88	0.44	64.73	62.09
7	0.71	34.08	72.15	0.47	68.17	60.79
8	0.80	35.44	71.34	0.50	70.88	59.53
9	0.61	36.40	71.13	0.51	72.79	58.99
10	1.19	36.92	70.41	0.52	73.84	58.10
11	1.67	37.24	69.65	0.53	74.48	57.24
12	4.85	37.33	68.91	0.54	74.65	56.47
13	2.91	37.39	68.62	0.54	74.77	56.16
14	-1.83	37.20	67.73	0.55	74.39	55.33
15	13.32	37.23	66.87	0.56	74.46	54.46
16	-0.88	37.10	66.52	0.56	74.21	54.16
17	-0.67	36.87	65.97	0.56	73.73	53.68
18	-2.86	36.74	65.11	0.56	73.48	52.86
19	-0.83	36.62	64.80	0.57	73.25	52.60
20	-0.72	36.45	64.37	0.57	72.89	52.22
21	-1.41	36.30	63.81	0.57	72.60	51.71
22	-1.67	36.17	63.23	0.57	72.33	51.18
23	-0.29	36.06	63.06	0.57	72.12	51.04
24	-0.28	35.83	62.70	0.57	71.66	50.76
25	-1.01	35.64	62.13	0.57	71.28	50.25
26	-5.92	35.61	61.72	0.58	71.22	49.85
27	-0.08	35.42	61.50	0.58	70.85	49.70
28	0.18	35.25	61.40	0.57	70.50	49.65



29	-1.06	35.04	60.74	0.58	70.08	49.06
30	7.92	35.06	60.41	0.58	70.12	48.73
31	0.10	34.91	60.29	0.58	69.82	48.65
32	0.19	34.74	60.18	0.58	69.48	48.60
33	-1.37	34.56	59.53	0.58	69.13	48.01
34	4.58	34.58	59.39	0.58	69.16	47.86
35	0.00	34.41	59.22	0.58	68.82	47.75
36	0.37	34.24	59.18	0.58	68.48	47.76
37	-0.73	34.04	58.69	0.58	68.08	47.35
38	-56.00	34.04	58.34	0.58	68.08	46.99
39	0.52	33.89	58.35	0.58	67.77	47.05
40	-0.35	33.70	58.04	0.58	67.41	46.80
41	0.30	33.50	57.96	0.58	66.99	46.79
42	-2.44	33.37	57.23	0.58	66.74	46.10
43	0.00	33.36	57.22	0.58	66.72	46.10
44	0.50	33.17	57.22	0.58	66.34	46.16
45	-0.10	33.01	57.02	0.58	66.01	46.02
46	-0.13	32.75	56.71	0.58	65.51	45.79
47	-1.09	32.64	56.33	0.58	65.28	45.46
48	-3.08	32.58	55.89	0.58	65.15	45.03
49	1.38	32.46	56.10	0.58	64.92	45.27
50	-0.09	32.29	55.89	0.58	64.58	45.13
51	-0.24	32.09	55.59	0.58	64.17	44.90
52	-0.13	31.85	55.29	0.58	63.70	44.68
53	-3.31	31.77	54.67	0.58	63.53	44.08
54	-1.70	31.75	54.59	0.58	63.50	44.00
55	0.34	31.61	54.54	0.58	63.22	44.01
56	0.07	31.33	54.35	0.58	62.76	43.89
57	-3.19	31.31	53.80	0.58	62.62	43.36
58	-0.78	31.25	53.64	0.58	62.49	43.23
59	0.63	31.05	53.69	0.58	62.09	43.35
60	0.00	30.93	53.26	0.58	61.85	42.95



TRIAxIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-2R, PC-39; 300/460  
INTERVAL (meters): 4.85-4.98  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/15/80

INDEX PROPERTIES

MOISTURE CONTENT: 0.46  
BULK DENSITY (g/cc): 1.79  
VOID RATIO: 1.23  
POROSITY: 0.55  
GRAIN SPEC GRAVITY (g/cc): 2.73

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 348.40

TEST RESULTS

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		44.00		
2	100.00	50.00	91.80	47.80	0.96
3	150.00	50.00	142.25	50.45	1.01
4	200.00	50.00	192.00	49.75	1.00
5	460.00	260.00	452.70	260.70	1.00

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 460.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 160.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 36.94

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	95.70
AREA (sq. mm):	1963.50	1798.42
VOLUME (cc):	196.35	172.12
WATER CONTENT:	0.46	0.36
POROSITY:	0.55	0.38
VOID RATIO:	1.23	0.62
BULK DENSITY (g/cc):	1.79	1.90
BOUYANT BULK DENSITY (g/cc):	0.77	0.87
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	4	0.60	2.00	0.16
3	10	1.00	3.16	0.36
4	20	1.30	4.47	0.60
5	38	1.58	6.16	0.96
6	73	1.86	8.54	1.52
7	139	2.14	11.79	2.37
8	269	2.43	16.40	3.70
9	527	2.72	22.96	5.74
10	1041	3.02	32.26	8.73
11	2067	3.32	45.46	12.71
12	4117	3.61	64.16	17.14
13	7119	3.85	84.37	20.16
14	10122	4.01	100.61	21.54
15	13124	4.12	114.56	22.26
16	16126	4.21	126.99	22.69
17	19128	4.28	138.30	22.96
18	22130	4.34	148.76	23.15
19	25132	4.40	158.53	23.29
20	28134	4.45	167.73	23.40
21	31136	4.49	176.45	23.49
22	34139	4.53	184.77	23.55
23	37141	4.57	192.72	23.61
24	40143	4.60	200.36	23.66
25	43145	4.63	207.71	23.70
26	46147	4.66	214.82	23.73
27	49149	4.69	221.70	23.77
28	52151	4.72	228.37	23.80
29	55154	4.74	234.85	23.82
30	58156	4.76	241.16	23.85
31	61158	4.79	247.30	23.87
32	64160	4.81	253.30	23.89
33	67162	4.83	259.16	23.91
34	70164	4.85	264.88	23.92

35	73166	4.86	270.49	23.95
36	76168	4.88	275.99	23.96
37	79170	4.90	281.37	23.98
38	82173	4.91	286.66	24.01
39	85175	4.93	291.85	24.02
40	88177	4.95	296.95	24.04
41	91179	4.96	301.96	24.05
42	94181	4.97	306.89	24.07
43	97183	4.99	311.74	24.08
44	100185	5.00	316.52	24.10
45	103187	5.01	321.23	24.11
46	106189	5.03	325.87	24.12
47	109192	5.04	330.44	24.13
48	112194	5.05	334.95	24.15
49	115196	5.06	339.41	24.15
50	118198	5.07	343.80	24.16
51	121200	5.08	349.14	24.17
52	124202	5.09	352.42	24.18
53	127204	5.10	356.66	24.19
54	130206	5.11	360.84	24.20
55	133209	5.12	364.98	24.21
56	136211	5.13	369.07	24.22
57	139213	5.14	373.11	24.22
58	142215	5.15	377.11	24.23
59	145217	5.16	381.07	24.23

ALPHA: 0.96  
 Ao (sq. mm): 1798.42  
 Lo (mm): 95.70

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 460.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	298.42	0.00	0.00	460.00	0
2	0.00	306.56	0.20	17.68	460.00	1322
3	-0.00	315.21	0.45	31.36	460.00	2644
4	-0.00	333.36	0.68	79.72	460.00	3966
5	-0.00	355.92	0.92	134.68	460.00	5289
6	0.00	369.89	1.21	155.78	460.00	6611
7	0.00	377.67	1.48	167.85	460.00	7933
8	-0.00	384.38	1.76	176.03	460.00	9255

9	0.00	389.08	2.07	182.30	460.00	10577
10	0.00	392.97	2.38	186.41	460.00	11899
11	-0.00	396.38	2.66	190.53	460.00	13221
12	-0.00	398.87	3.00	193.48	460.00	14543
13	-0.00	401.04	3.34	195.98	460.00	15865
14	0.00	402.76	3.67	197.33	460.00	17187
15	-0.00	404.25	4.00	198.48	460.00	18510
16	0.00	405.26	4.35	198.87	460.00	19832
17	-0.00	406.49	4.69	199.06	460.00	21154
18	0.00	407.43	5.02	199.60	460.00	22476
19	0.00	408.43	5.38	200.25	460.00	23798
20	0.00	409.15	5.73	200.75	460.00	25120
21	0.00	409.60	6.08	201.02	460.00	26442
22	-0.00	410.35	6.43	201.98	460.00	27765
23	-0.00	410.77	6.78	202.52	460.00	29087
24	-0.00	411.19	7.14	203.29	460.00	30409
25	-0.00	411.61	7.49	203.56	460.00	31731
26	0.00	411.97	7.84	204.44	460.00	33053
27	0.01	412.58	8.20	204.90	460.00	34375
28	0.01	412.55	8.55	205.48	460.00	35697
29	0.00	412.87	8.90	205.86	460.00	37019
30	0.00	413.23	9.24	207.01	460.00	38341
31	0.00	413.55	9.60	207.78	460.00	39663
32	0.00	413.72	9.95	208.32	460.00	40985
33	0.01	413.94	10.29	208.82	460.00	42308
34	0.01	414.20	10.64	209.74	460.00	43630
35	0.01	414.07	10.99	210.51	460.00	44952
36	0.01	414.17	11.34	210.74	460.00	46274
37	0.00	414.33	11.68	211.20	460.00	47596
38	0.00	414.82	12.02	211.82	460.00	48918
39	0.01	414.95	12.36	212.55	460.00	50240
40	0.00	414.82	12.70	212.63	460.00	51562
41	0.00	415.11	13.05	212.97	460.00	52884
42	-0.00	415.47	13.38	213.05	460.00	54207
43	0.00	415.34	13.72	214.01	460.00	55529
44	0.01	415.53	14.07	214.16	460.00	56851
45	0.01	415.50	14.41	214.51	460.00	58173
46	0.01	415.63	14.75	214.55	460.00	59495
47	0.01	415.89	15.08	214.82	460.00	60817
48	0.00	416.15	15.42	215.39	460.00	62139
49	0.01	416.21	15.77	215.97	460.00	63461
50	0.01	416.18	16.11	216.28	460.00	64783
51	0.01	416.34	16.46	216.20	460.00	66105
52	0.00	416.37	16.80	216.32	460.00	67427
53	0.00	416.70	17.14	216.58	460.00	68750
54	0.01	416.80	17.49	217.32	460.00	70072
55	0.01	416.80	17.84	217.55	460.00	71394
56	0.01	416.83	18.18	217.89	460.00	72716
57	0.01	417.25	18.53	217.97	460.00	74038
58	0.01	417.51	18.87	218.81	460.00	75360
59	0.01	417.35	19.22	218.81	460.00	76682

60 0.01 417.61 19.56 219.16 460.00 78004

DERIVED PROPERTIES

READING	STRAIN <sub>A</sub>	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	460.00	460.00	1.00	161.58	161.58	1.00
2	0.0021	469.81	460.00	1.02	163.26	153.45	1.06
3	0.0047	477.36	460.00	1.04	162.15	144.79	1.12
4	0.0071	504.01	460.00	1.10	170.65	126.64	1.35
5	0.0096	534.17	460.00	1.16	178.24	104.08	1.71
6	0.0126	545.53	460.00	1.19	176.64	91.11	1.94
7	0.0155	551.89	460.00	1.20	174.22	82.33	2.12
8	0.0184	556.09	460.00	1.21	171.71	75.62	2.27
9	0.0216	559.17	460.00	1.22	170.09	70.92	2.40
10	0.0249	561.07	460.00	1.22	168.10	67.03	2.51
11	0.0280	562.97	460.00	1.22	166.60	63.63	2.62
12	0.0314	564.21	460.00	1.23	165.34	61.13	2.70
13	0.0349	565.17	460.00	1.23	164.13	58.96	2.78
14	0.0383	565.52	460.00	1.23	162.76	57.24	2.84
15	0.0417	565.76	460.00	1.23	161.51	55.75	2.90
16	0.0454	565.56	460.00	1.23	160.30	54.74	2.93
17	0.0490	565.26	460.00	1.23	158.78	53.51	2.97
18	0.0525	565.16	460.00	1.23	157.73	52.57	3.00
19	0.0562	565.09	460.00	1.23	156.66	51.57	3.04
20	0.0599	564.94	460.00	1.23	155.79	50.85	3.06
21	0.0635	564.68	460.00	1.23	155.08	50.40	3.08
22	0.0672	564.77	460.00	1.23	154.42	49.66	3.11
23	0.0709	564.63	460.00	1.23	153.86	49.23	3.13
24	0.0746	564.60	460.00	1.23	153.41	48.81	3.14
25	0.0782	564.33	460.00	1.23	152.72	48.39	3.16
26	0.0819	564.36	460.00	1.23	152.40	48.03	3.17
27	0.0857	564.17	460.00	1.23	151.59	47.42	3.20
28	0.0893	564.05	460.00	1.23	151.50	47.45	3.19
29	0.0929	563.83	460.00	1.23	150.95	47.13	3.20
30	0.0966	563.99	460.00	1.23	150.76	46.77	3.22
31	0.1003	563.95	460.00	1.23	150.39	46.45	3.24
32	0.1040	563.79	460.00	1.23	150.07	46.28	3.24
33	0.1075	563.63	460.00	1.23	149.68	46.06	3.25
34	0.1112	563.66	460.00	1.23	149.46	45.80	3.26
35	0.1149	563.61	460.00	1.23	149.53	45.93	3.26
36	0.1185	563.30	460.00	1.22	149.13	45.83	3.25
37	0.1220	563.11	460.00	1.22	148.78	45.67	3.26
38	0.1255	562.99	460.00	1.22	148.18	45.18	3.28
39	0.1292	562.92	460.00	1.22	147.97	45.05	3.28
40	0.1327	562.54	460.00	1.22	147.72	45.18	3.27
41	0.1363	562.28	460.00	1.22	147.17	44.89	3.28
42	0.1398	561.90	460.00	1.22	146.44	44.53	3.29
43	0.1434	561.93	460.00	1.22	146.60	44.66	3.28

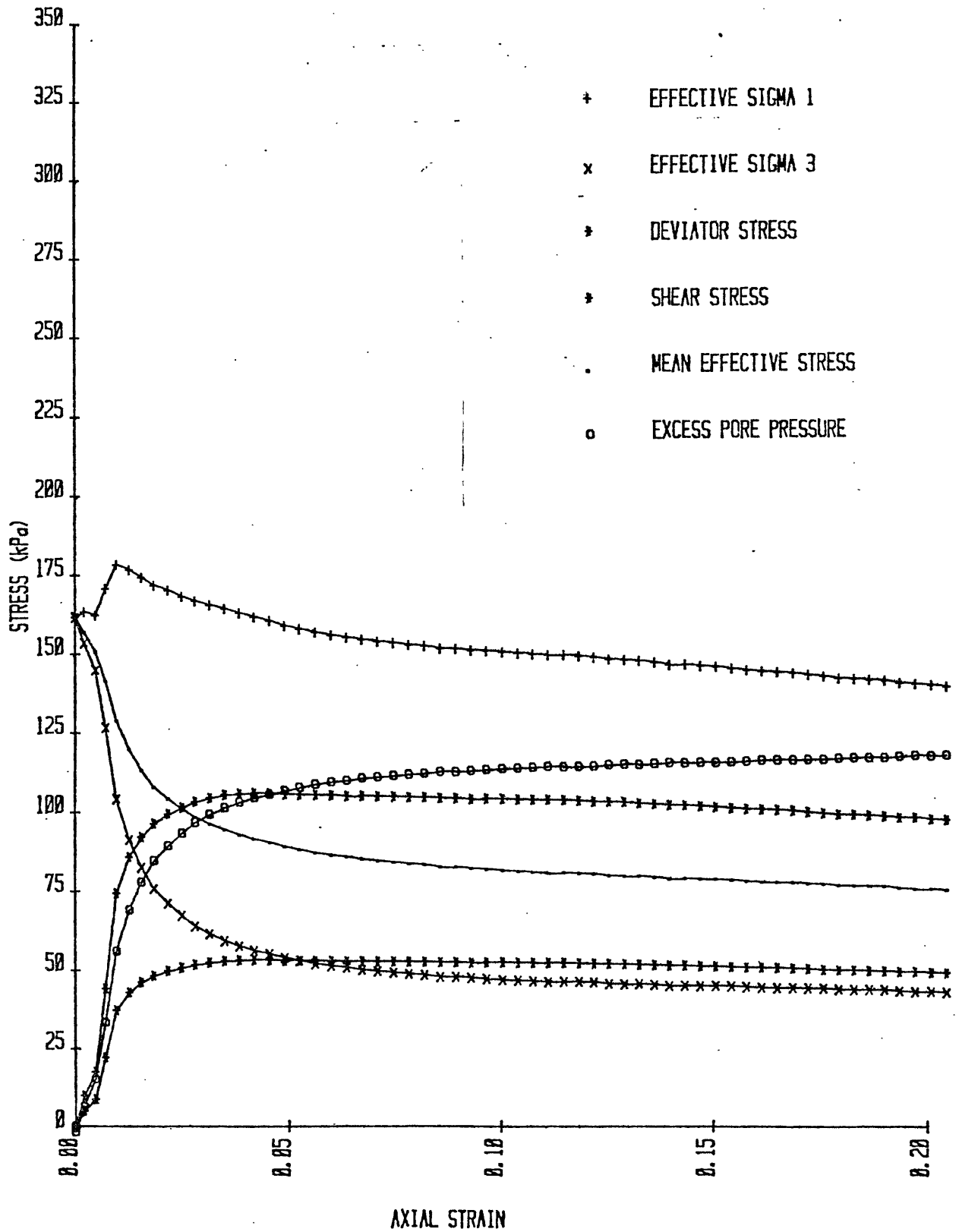
44	0.1470	561.58	460.00	1.22	146.05	44.47	3.28
45	0.1506	561.32	460.00	1.22	145.82	44.50	3.28
46	0.1541	560.91	460.00	1.22	145.29	44.37	3.27
47	0.1576	560.62	460.00	1.22	144.74	44.11	3.28
48	0.1611	560.47	460.00	1.22	144.32	43.85	3.29
49	0.1648	560.30	460.00	1.22	144.09	43.79	3.29
50	0.1684	560.01	460.00	1.22	143.83	43.82	3.28
51	0.1720	559.54	460.00	1.22	143.20	43.66	3.28
52	0.1756	559.16	460.00	1.22	142.79	43.63	3.27
53	0.1791	558.86	460.00	1.21	142.16	43.30	3.28
54	0.1828	558.75	460.00	1.21	141.96	43.20	3.29
55	0.1864	558.42	460.00	1.21	141.62	43.20	3.28
56	0.1900	558.14	460.00	1.21	141.31	43.17	3.27
57	0.1936	557.74	460.00	1.21	140.49	42.75	3.29
58	0.1972	557.68	460.00	1.21	140.17	42.49	3.30
59	0.2009	557.23	460.00	1.21	139.88	42.65	3.28
60	0.2044	556.95	460.00	1.21	139.35	42.39	3.29

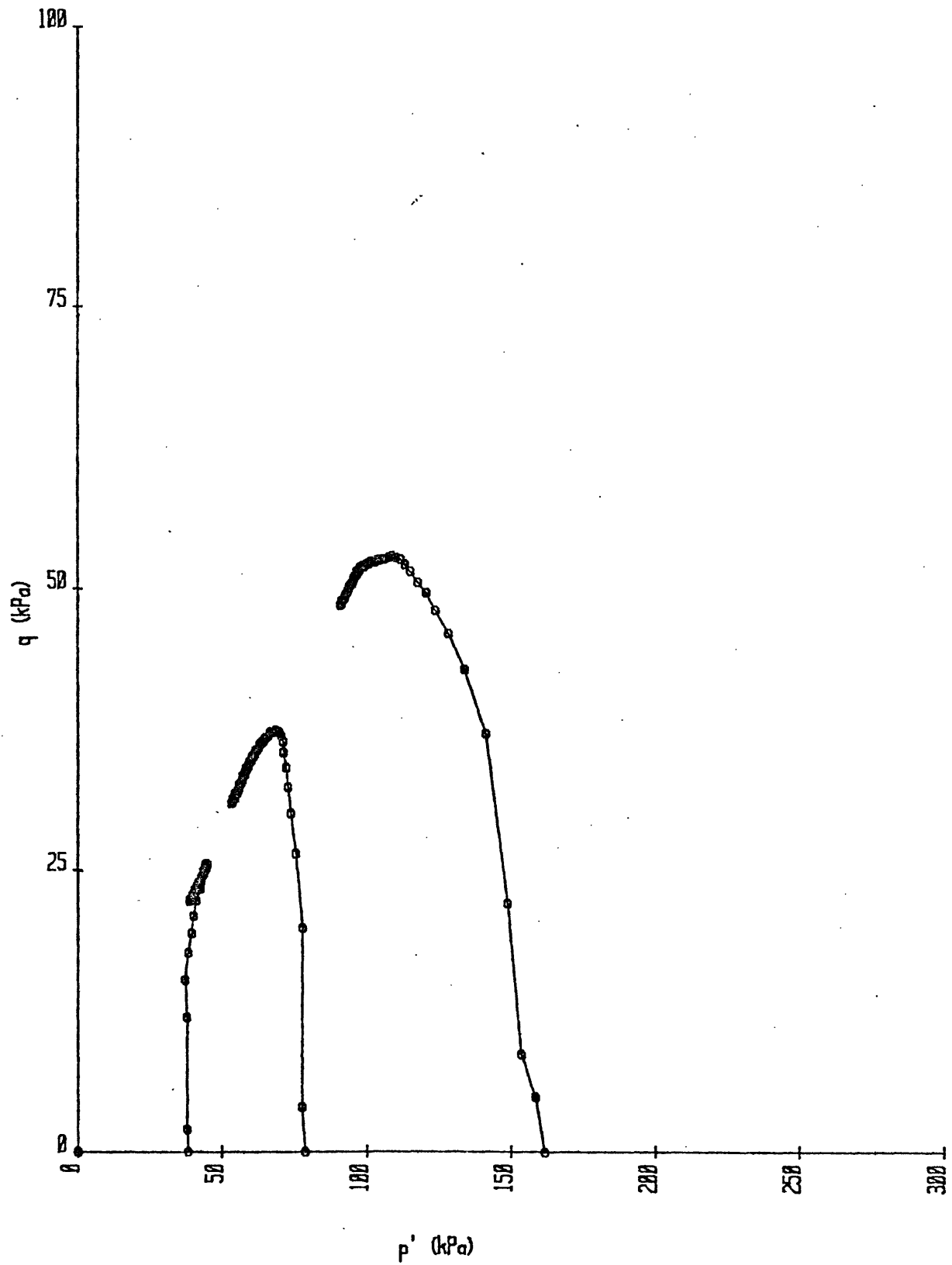
DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR STRESS (kPa)	MEAN EFFECTIVE STRESS (kPa)
1	0.83	0.00	161.58	0.00	0.00	161.58
2	0.83	4.91	158.35	0.03	9.81	156.72
3	1.15	8.68	153.47	0.06	17.36	150.58
4	0.68	22.01	148.64	0.15	44.01	141.31
5	0.75	37.08	141.16	0.26	74.17	128.80
6	1.14	42.76	133.88	0.32	85.53	119.62
7	1.38	45.94	128.27	0.36	91.89	112.96
8	1.60	48.04	123.66	0.39	96.09	107.65
9	1.52	49.59	120.51	0.41	99.17	103.98
10	2.05	50.54	117.57	0.43	101.07	100.72
11	1.79	51.49	115.11	0.45	102.97	97.95
12	2.02	52.11	113.23	0.46	104.21	95.87
13	2.26	52.59	111.54	0.47	105.17	94.02
14	4.91	52.76	110.00	0.48	105.52	92.41
15	6.32	52.88	108.63	0.49	105.76	91.00
16	-4.99	52.78	107.52	0.49	105.56	89.93
17	-4.21	52.63	106.14	0.50	105.26	88.60
18	-9.04	52.58	105.15	0.50	105.16	87.63
19	-14.87	52.55	104.11	0.50	105.09	86.60
20	-4.70	52.47	103.32	0.51	104.94	85.33
21	-1.72	52.34	102.74	0.51	104.68	85.29
22	8.30	52.38	102.04	0.51	104.77	84.58
23	-3.02	52.31	101.55	0.52	104.63	84.11
24	-17.02	52.30	101.11	0.52	104.60	83.68
25	-1.54	52.16	100.56	0.52	104.33	83.17
26	10.45	52.18	100.22	0.52	104.36	82.82
27	-3.27	52.09	99.51	0.52	104.17	82.14
28	0.26	52.02	99.47	0.52	104.05	82.13

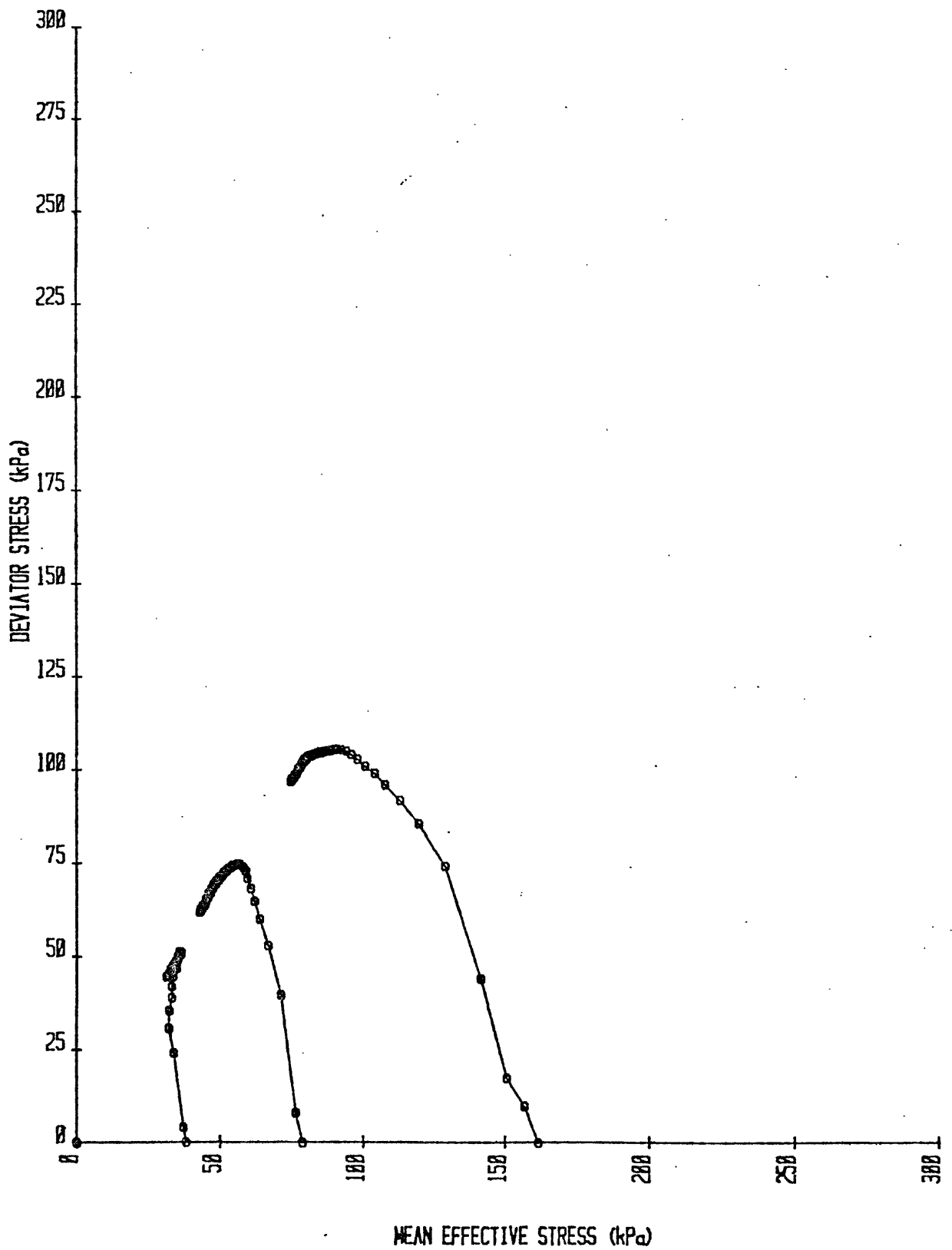


29	-1.49	51.91	99.04	0.52	103.83	81.74
30	2.19	52.00	98.77	0.53	103.99	81.43
31	-7.37	51.97	98.42	0.53	103.95	81.09
32	-1.01	51.89	98.18	0.53	103.79	80.88
33	-1.42	51.81	97.87	0.53	103.63	80.60
34	7.85	51.83	97.63	0.53	103.66	80.35
35	2.45	51.80	97.73	0.53	103.61	80.46
36	-0.32	51.65	97.48	0.53	103.30	80.26
37	-0.85	51.55	97.22	0.53	103.11	80.04
38	-4.20	51.50	96.68	0.53	102.99	79.51
39	-1.71	51.46	96.51	0.53	102.92	79.36
40	0.34	51.27	96.45	0.53	102.54	79.36
41	-1.13	51.14	96.03	0.53	102.28	78.98
42	-0.95	50.95	95.49	0.53	101.90	78.50
43	-4.36	50.97	95.63	0.53	101.93	78.64
44	-0.55	50.79	95.26	0.53	101.58	78.33
45	0.13	50.66	95.16	0.53	101.32	78.27
46	-0.32	50.46	94.83	0.53	100.91	78.01
47	-0.89	50.31	94.42	0.53	100.62	77.65
48	-1.67	50.23	94.09	0.53	100.47	77.34
49	-0.39	50.15	93.94	0.53	100.30	77.22
50	0.11	50.01	93.83	0.53	100.01	77.16
51	-0.35	49.77	93.43	0.53	99.54	76.84
52	-0.08	49.58	93.21	0.53	99.16	76.68
53	-1.07	49.43	92.73	0.53	98.86	76.25
54	-0.92	49.38	92.58	0.53	98.75	76.12
55	0.00	49.21	92.41	0.53	98.42	76.01
56	-0.11	49.07	92.24	0.53	98.14	75.88
57	-1.06	48.87	91.62	0.53	97.74	75.33
58	-4.31	48.84	91.33	0.53	97.68	75.05
59	0.36	48.61	91.27	0.53	97.23	75.06
60	0.00	48.48	90.87	0.53	96.95	74.71





GD-2R, PC-39: 300/340, 380, 460



GD-2R, PC-39; 300/340, 380, 460

TRIAXIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-12, PC-40; 300/350  
INTERVAL (meters): 6.38-6.50  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/31/80

INDEX PROPERTIES

MOISTURE CONTENT: 0.48  
BULK DENSITY (g/cc): 1.77  
VOID RATIO: 1.27  
POROSITY: 0.56  
GRAIN SPEC GRAVITY (g/cc): 2.72

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 346.90

TEST RESULTS :

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		45.30		
2	100.00	50.00	94.10	48.80	0.98
3	150.00	50.00	143.20	49.10	0.98
4	250.00	100.00	242.20	99.00	0.99
5	350.00	100.00	341.20	99.00	0.99

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 350.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 50.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 47.05

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	98.98
AREA (sq. mm):	1963.50	1923.69
VOLUME (cc):	196.35	190.41
WATER CONTENT:	0.48	0.45
POROSITY:	0.56	0.46
VOID RATIO:	1.27	0.86
BULK DENSITY (g/cc):	1.77	1.79
BOUYANT BULK DENSITY (g/cc):	0.75	0.77
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	5	0.70	2.24	0.01
3	11	1.04	3.32	0.02
4	22	1.34	4.69	0.04
5	40	1.60	6.32	0.07
6	74	1.87	8.60	0.12
7	140	2.15	11.83	0.22
8	270	2.43	16.43	0.41
9	529	2.72	23.00	0.76
10	1043	3.02	32.30	1.36
11	2070	3.32	45.50	2.22
12	3872	3.59	62.23	3.19
13	5674	3.75	75.33	3.77
14	7476	3.87	86.46	4.15
15	9278	3.97	96.32	4.42
16	11081	4.04	105.27	4.62
17	12883	4.11	113.50	4.77
18	14686	4.17	121.19	4.89
19	16488	4.22	128.41	4.99
20	18291	4.26	135.24	5.07
21	20093	4.30	141.75	5.14
22	21896	4.34	147.97	5.20
23	23698	4.37	153.94	5.25
24	25501	4.41	159.69	5.31
25	27303	4.44	165.24	5.35
26	29106	4.46	170.60	5.39
27	30908	4.49	175.81	5.43
28	32711	4.51	180.86	5.46
29	34513	4.54	185.78	5.50
30	36316	4.56	190.57	5.52
31	38118	4.58	195.24	5.55
32	39921	4.60	199.80	5.57
33	41723	4.62	204.26	5.60
34	43526	4.64	208.63	5.62

35	45329	4.66	212.91	5.65
36	47131	4.67	217.10	5.67
37	48933	4.69	221.21	5.69
38	50735	4.71	225.24	5.71
39	52538	4.72	229.21	5.72
40	54340	4.74	233.11	5.74
41	56143	4.75	236.95	5.75
42	57945	4.76	240.72	5.76
43	59748	4.78	244.43	5.78
44	61551	4.79	248.09	5.80
45	63354	4.80	251.70	5.82
46	65156	4.81	255.26	5.84
47	66959	4.83	258.76	5.85
48	68762	4.84	262.23	5.87
49	70565	4.85	265.64	5.89
50	72367	4.86	269.01	5.90
51	74170	4.87	272.34	5.92
52	75972	4.88	275.63	5.94

ALPHA: 0.99  
 Ao (sq. mm): 1923.69  
 Lo (mm): 98.98

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 350.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	294.76	0.00	0.00	350.00	0
2	-0.00	303.83	0.16	34.64	350.00	1322
3	-0.00	313.56	0.40	63.32	350.00	2644
4	-0.00	317.67	0.66	75.49	350.00	3967
5	-0.00	320.04	0.93	83.10	350.00	5289
6	-0.01	321.79	1.21	88.70	350.00	6612
7	-0.01	323.15	1.49	92.77	350.00	7935
8	-0.01	323.96	1.79	95.85	350.00	9257
9	-0.01	324.71	2.09	97.77	350.00	10579
10	-0.01	325.13	2.41	98.00	350.00	11902
11	-0.01	325.32	2.73	96.85	350.00	13225
12	-0.01	325.84	3.05	96.38	350.00	14547
13	-0.02	326.36	3.38	95.73	350.00	15870
14	-0.02	326.65	3.72	95.16	350.00	17192
15	-0.02	326.85	4.06	94.54	350.00	18514

16	-0.02	327.07	4.40	94.08	350.00	19837
17	-0.01	327.43	4.75	93.27	350.00	21159
18	-0.01	327.75	5.09	92.85	350.00	22482
19	-0.01	328.01	5.44	92.35	350.00	23804
20	-0.02	328.05	5.79	91.81	350.00	25127
21	-0.01	328.37	6.15	91.35	350.00	26449
22	-0.02	328.40	6.50	90.85	350.00	27771
23	-0.01	328.43	6.85	90.43	350.00	29094
24	-0.02	328.86	7.21	90.09	350.00	30417
25	-0.02	328.99	7.57	89.70	350.00	31739
26	-0.01	329.18	7.92	89.32	350.00	33062
27	-0.02	329.08	8.28	88.94	350.00	34385
28	-0.01	329.37	8.63	88.44	350.00	35707
29	-0.01	329.28	8.98	88.13	350.00	37029
30	-0.01	329.60	9.33	87.59	350.00	38351
31	-0.02	329.76	9.69	87.36	350.00	39674
32	-0.01	329.83	10.03	87.02	350.00	40997
33	-0.01	329.96	10.39	86.71	350.00	42319
34	-0.01	330.15	10.73	86.25	350.00	43642
35	-0.01	330.22	11.08	85.82	350.00	44964
36	-0.02	330.41	11.42	85.29	350.00	46287
37	-0.02	330.77	11.77	84.94	350.00	47610
38	-0.02	330.67	12.11	84.60	350.00	48932
39	-0.02	330.96	12.45	84.29	350.00	50255
40	-0.02	330.87	12.79	83.94	350.00	51577
41	-0.02	330.93	13.13	83.56	350.00	52900
42	-0.03	331.03	13.48	83.44	350.00	54222
43	-0.02	331.06	13.82	82.98	350.00	55545
44	-0.02	331.13	14.16	82.83	350.00	56867
45	-0.02	331.25	14.50	82.45	350.00	58190
46	-0.02	331.35	14.85	82.29	350.00	59512
47	-0.02	331.32	15.19	81.83	350.00	60834
48	-0.03	331.22	15.53	81.60	350.00	62156
49	-0.02	331.58	17.04	79.91	350.00	67952
50	-0.02	331.71	17.39	79.60	350.00	69275
51	-0.01	331.90	17.73	79.33	350.00	70597
52	-0.00	331.94	18.08	79.07	350.00	71920
53	-0.01	332.16	18.42	78.95	350.00	73243
54	-0.00	332.03	18.77	78.80	350.00	74565
55	-0.00	332.26	19.12	78.76	350.00	75888
56	-0.01	332.29	19.47	78.68	350.00	77211
57	-0.00	332.29	19.81	78.72	350.00	78533

DERIVED PROPERTIES

READING	STRAIN A	TOTAL STRESS			EFFECTIVE STRESS		
		SIG1 (kPa)	SIG3 (kPa)	RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	350.00	350.00	1.00	55.24	55.24	1.00
2	0.0017	367.98	350.00	1.05	64.14	46.17	1.39



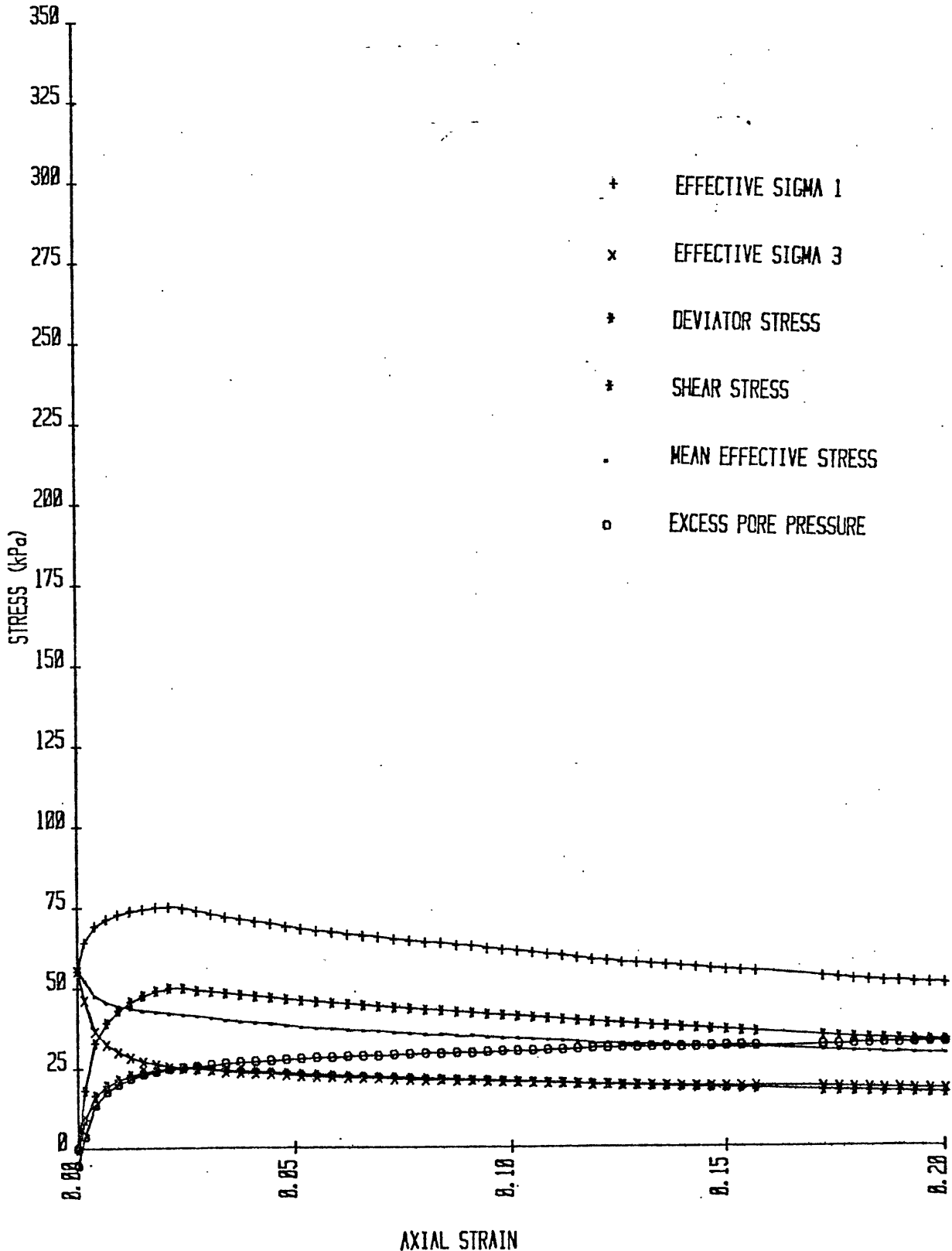
3	0.0041	382.78	350.00	1.09	69.23	36.44	1.90
4	0.0067	388.98	350.00	1.11	71.31	32.33	2.21
5	0.0093	392.79	350.00	1.12	72.75	29.96	2.43
6	0.0122	395.55	350.00	1.13	73.76	28.21	2.61
7	0.0151	397.50	350.00	1.14	74.35	26.85	2.77
8	0.0181	398.92	350.00	1.14	74.96	26.04	2.88
9	0.0212	399.75	350.00	1.14	75.04	25.29	2.97
10	0.0243	399.70	350.00	1.14	74.57	24.87	3.00
11	0.0275	398.96	350.00	1.14	73.64	24.68	2.98
12	0.0308	398.56	350.00	1.14	72.72	24.16	3.01
13	0.0341	398.07	350.00	1.14	71.71	23.64	3.03
14	0.0375	397.61	350.00	1.14	70.96	23.35	3.04
15	0.0410	397.13	350.00	1.13	70.29	23.15	3.04
16	0.0445	396.73	350.00	1.13	69.66	22.93	3.04
17	0.0480	396.16	350.00	1.13	68.73	22.57	3.05
18	0.0515	395.78	350.00	1.13	68.03	22.25	3.06
19	0.0550	395.37	350.00	1.13	67.35	21.99	3.06
20	0.0585	394.93	350.00	1.13	66.89	21.96	3.05
21	0.0621	394.54	350.00	1.13	66.17	21.63	3.06
22	0.0657	394.13	350.00	1.13	65.72	21.60	3.04
23	0.0693	393.75	350.00	1.13	65.32	21.57	3.03
24	0.0729	393.42	350.00	1.12	64.56	21.14	3.05
25	0.0764	393.07	350.00	1.12	64.08	21.02	3.05
26	0.0800	392.72	350.00	1.12	63.54	20.82	3.05
27	0.0836	392.37	350.00	1.12	63.28	20.92	3.03
28	0.0872	391.96	350.00	1.12	62.59	20.63	3.03
29	0.0907	391.66	350.00	1.12	62.38	20.72	3.01
30	0.0943	391.24	350.00	1.12	61.64	20.40	3.02
31	0.0979	390.97	350.00	1.12	61.21	20.24	3.02
32	0.1014	390.65	350.00	1.12	60.82	20.17	3.02
33	0.1049	390.34	350.00	1.12	60.39	20.04	3.01
34	0.1084	389.97	350.00	1.11	59.82	19.85	3.01
35	0.1119	389.62	350.00	1.11	59.40	19.78	3.00
36	0.1154	389.22	350.00	1.11	58.81	19.59	3.00
37	0.1189	388.91	350.00	1.11	58.14	19.23	3.02
38	0.1223	388.60	350.00	1.11	57.92	19.33	3.00
39	0.1258	388.30	350.00	1.11	57.34	19.04	3.01
40	0.1293	388.00	350.00	1.11	57.13	19.14	2.99
41	0.1327	387.67	350.00	1.11	56.74	19.07	2.98
42	0.1362	387.47	350.00	1.11	56.44	18.97	2.97
43	0.1396	387.11	350.00	1.11	56.05	18.94	2.96
44	0.1431	386.90	350.00	1.11	55.77	18.88	2.95
45	0.1465	386.58	350.00	1.10	55.32	18.75	2.95
46	0.1500	386.36	350.00	1.10	55.01	18.65	2.95
47	0.1535	386.01	350.00	1.10	54.69	18.68	2.93
48	0.1569	385.76	350.00	1.10	54.54	18.78	2.90
49	0.1722	384.39	350.00	1.10	52.81	18.42	2.87
50	0.1757	384.11	350.00	1.10	52.40	18.29	2.86
51	0.1792	383.85	350.00	1.10	51.95	18.10	2.87
52	0.1827	383.59	350.00	1.10	51.66	18.07	2.86
53	0.1861	383.40	350.00	1.10	51.24	17.84	2.87

54	0.1896	383.19	350.00	1.09	51.16	17.97	2.85
55	0.1931	383.03	350.00	1.09	50.77	17.74	2.86
56	0.1967	382.86	350.00	1.09	50.57	17.71	2.86
57	0.2002	382.73	350.00	1.09	50.44	17.71	2.85

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR STRESS (kPa)	MEAN EFFECTIVE STRESS (kPa)
1	0.50	0.00	55.24	0.00	0.00	55.24
2	0.50	8.99	55.16	0.16	17.98	52.16
3	0.66	16.39	52.84	0.31	32.78	47.37
4	0.66	19.49	51.82	0.38	38.98	45.32
5	0.62	21.40	51.36	0.42	42.79	44.23
6	0.64	22.77	50.99	0.45	45.55	43.39
7	0.70	23.75	50.60	0.47	47.50	42.68
8	0.57	24.46	50.50	0.48	48.92	42.35
9	0.90	24.87	50.17	0.50	49.75	41.88
10	-9.42	24.85	49.72	0.50	49.70	41.44
11	-0.26	24.48	49.16	0.50	49.96	41.00
12	-1.30	24.28	48.44	0.50	48.56	40.35
13	-1.05	24.03	47.67	0.50	48.07	39.66
14	-0.64	23.80	47.15	0.50	47.61	39.22
15	-0.41	23.57	46.72	0.50	47.13	38.86
16	-0.57	23.37	46.29	0.50	46.73	38.50
17	-0.62	23.08	45.65	0.51	46.16	37.96
18	-0.86	22.89	45.14	0.51	45.78	37.51
19	-0.62	22.68	44.67	0.51	45.37	37.11
20	-0.07	22.47	44.42	0.51	44.93	36.93
21	-0.82	22.27	43.90	0.51	44.54	36.48
22	-0.08	22.06	43.66	0.51	44.13	36.31
23	-0.09	21.88	43.44	0.50	43.75	36.15
24	-1.26	21.71	42.85	0.51	43.42	35.62
25	-0.37	21.53	42.55	0.51	43.07	35.37
26	-0.56	21.36	42.18	0.51	42.72	35.06
27	0.28	21.18	42.10	0.50	42.37	35.04
28	-0.72	20.98	41.61	0.50	41.96	34.61
29	0.32	20.83	41.55	0.50	41.66	34.61
30	-0.78	20.62	41.02	0.50	41.24	34.15
31	-0.60	20.48	40.72	0.50	40.97	33.89
32	-0.20	20.32	40.50	0.50	40.65	33.72
33	-0.43	20.17	40.21	0.50	40.34	33.49
34	-0.52	19.99	39.83	0.50	39.97	33.17
35	-0.18	19.81	39.59	0.50	39.62	32.99
36	-0.49	19.61	39.20	0.50	39.22	32.66
37	-1.14	19.45	38.69	0.50	38.91	32.20
38	0.31	19.30	38.63	0.50	38.60	32.19
39	-1.00	19.15	38.19	0.50	38.30	31.81
40	0.32	19.00	38.13	0.50	38.00	31.80
41	-0.20	18.84	37.91	0.50	37.67	31.63

42	-0.48	18.74	37.71	0.50	37.47	31.46
43	-0.09	18.56	37.50	0.49	37.11	31.31
44	-0.30	18.45	37.32	0.49	36.90	31.17
45	-0.40	18.29	37.04	0.49	36.58	30.94
46	-0.45	18.18	36.83	0.49	36.36	30.77
47	0.09	18.01	36.69	0.49	36.01	30.68
48	0.39	17.88	36.66	0.49	35.76	30.70
49	-0.26	17.19	35.62	0.48	34.39	29.88
50	-0.47	17.06	35.35	0.48	34.11	29.66
51	-0.75	16.93	35.02	0.48	33.85	29.38
52	-0.12	16.80	34.86	0.48	33.59	29.26
53	0.00	16.70	34.54	0.48	33.40	28.97
54	0.00	16.60	34.56	0.48	33.19	29.03
55	0.00	16.52	34.26	0.48	33.03	28.75
56	0.00	16.43	34.14	0.48	32.86	28.66
57	0.00	16.37	34.07	0.48	32.73	28.62



# TRIAxIAL TEST RESULTS

## GENERAL TEST INFORMATION

### SAMPLE INFORMATION

SAMPLE ID: GD-12, PC-40; 300/400  
INTERVAL (meters): 6.50-6.62  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/31/80

### INDEX PROPERTIES

MOISTURE CONTENT: 0.48  
BULK DENSITY (g/cc): 1.77  
VOID RATIO: 1.27  
POROSITY: 0.56  
GRAIN SPEC GRAVITY (g/cc): 2.72  
LIQUID LIMIT (%): 39.00  
PLASTIC LIMIT (%): 19.00

### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 343.40

## TEST RESULTS

### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		48.70		
2	100.00	50.00	97.40	48.70	0.97
3	150.00	50.00	146.80	49.40	0.99
4	250.00	100.00	246.90	100.10	1.00
5	400.00	150.00	396.00	149.10	0.99

### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 400.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 100.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 47.92

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	98.01
AREA (sq. mm):	1963.50	1886.22
VOLUME (cc):	196.35	184.87
WATER CONTENT:	0.48	0.43
POROSITY:	0.56	0.45
VOID RATIO:	1.27	0.81
BULK DENSITY (g/cc):	1.77	1.82
BOUYANT BULK DENSITY (g/cc):	0.75	0.79
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	4	0.60	2.00	0.02
3	11	1.04	3.32	0.03
4	21	1.32	4.58	0.06
5	40	1.60	6.32	0.12
6	75	1.88	8.66	0.22
7	141	2.15	11.87	0.41
8	271	2.43	16.46	0.76
9	529	2.72	23.00	1.39
10	1043	3.02	32.30	2.44
11	2070	3.32	45.50	3.96
12	3872	3.59	62.23	5.59
13	5674	3.75	75.33	6.55
14	7477	3.87	86.47	7.20
15	9279	3.97	96.33	7.65
16	11081	4.04	105.27	8.00
17	12884	4.11	113.51	8.29
18	14686	4.17	121.19	8.53
19	16489	4.22	128.41	8.74
20	18291	4.26	135.24	8.92
21	20094	4.30	141.75	9.08
22	21896	4.34	147.97	9.23
23	23699	4.37	153.94	9.37
24	25501	4.41	159.69	9.49
25	27303	4.44	165.24	9.61
26	29106	4.46	170.30	9.73
27	30909	4.49	175.81	9.82
28	32711	4.51	180.86	9.93
29	34514	4.54	185.78	10.02
30	36316	4.56	190.57	10.11
31	38119	4.58	195.24	10.19
32	39922	4.60	199.80	10.28
33	41724	4.62	204.26	10.35
34	43527	4.64	208.63	10.43

35	45329	4.66	212.91	10.50
36	47131	4.67	217.10	10.58
37	48934	4.69	221.21	10.64
38	50736	4.71	225.25	10.71
39	52538	4.72	229.21	10.77
40	54341	4.74	233.11	10.83
41	56143	4.75	236.95	10.98
42	57946	4.76	240.72	10.94
43	59749	4.78	244.44	11.00
44	61551	4.79	248.09	11.06
45	63354	4.80	251.70	11.11
46	65157	4.81	255.26	11.17
47	66960	4.83	258.77	11.22
48	68763	4.84	262.23	11.28
49	70565	4.85	265.64	11.33
50	72368	4.86	269.01	11.38
51	74170	4.87	272.34	11.43
52	75973	4.88	275.63	11.48

ALPHA: 0.98  
 Ao (sq. mm): 1886.23  
 Lo (mm): 98.01

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 400.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	302.55	0.00	0.00	400.00	0
2	0.00	324.55	0.27	66.89	400.00	1322
3	0.00	342.32	0.59	105.05	400.00	2645
4	-0.00	350.80	0.92	119.40	400.00	3967
5	-0.00	356.43	1.25	127.49	400.00	5290
6	0.00	360.18	1.59	132.56	400.00	6613
7	0.00	363.04	1.93	135.98	400.00	7935
8	-0.00	365.01	2.27	137.68	400.00	9258
9	-0.00	366.57	2.61	137.51	400.00	10580
10	-0.00	367.91	2.97	136.98	400.00	11902
11	-0.00	368.92	3.31	135.89	400.00	13225
12	-0.00	369.91	3.66	134.75	400.00	14547
13	-0.00	370.70	4.01	134.14	400.00	15870
14	-0.00	371.47	4.36	133.57	400.00	17192
15	-0.00	372.01	4.71	132.96	400.00	18515

4	0.0094	462.70	400.00	1.16	111.90	49.20	2.27
5	0.0128	466.73	400.00	1.17	110.30	43.57	2.53
6	0.0162	469.14	400.00	1.17	108.96	39.82	2.74
7	0.0197	470.67	400.00	1.18	107.63	36.96	2.91
8	0.0232	471.30	400.00	1.18	106.29	34.99	3.04
9	0.0267	470.96	400.00	1.18	104.39	33.43	3.12
10	0.0303	470.43	400.00	1.18	102.52	32.09	3.19
11	0.0338	469.61	400.00	1.17	100.69	31.08	3.24
12	0.0374	468.77	400.00	1.17	98.86	30.09	3.29
13	0.0409	468.20	400.00	1.17	97.50	29.30	3.33
14	0.0445	467.66	400.00	1.17	96.19	28.53	3.37
15	0.0481	467.10	400.00	1.17	95.09	27.99	3.40
16	0.0517	466.65	400.00	1.17	94.16	27.52	3.42
17	0.0553	466.09	400.00	1.17	93.22	27.14	3.44
18	0.0589	465.68	400.00	1.16	92.21	26.53	3.48
19	0.0625	465.19	400.00	1.16	91.25	26.05	3.50
20	0.0660	464.86	400.00	1.16	90.44	25.58	3.54
21	0.0696	464.31	400.00	1.16	89.73	25.42	3.53
22	0.0732	463.89	400.00	1.16	89.05	25.16	3.54
23	0.0767	463.48	400.00	1.16	88.26	24.78	3.56
24	0.0803	463.08	400.00	1.16	87.52	24.43	3.58
25	0.0838	462.65	400.00	1.16	87.05	24.40	3.57
26	0.0873	462.30	400.00	1.16	86.36	24.05	3.59
27	0.0909	461.89	400.00	1.15	85.75	23.86	3.59
28	0.0944	461.55	400.00	1.15	85.15	23.61	3.61
29	0.0979	461.14	400.00	1.15	84.68	23.54	3.60
30	0.1013	460.89	400.00	1.15	84.05	23.16	3.63
31	0.1049	460.42	400.00	1.15	83.36	22.94	3.63
32	0.1084	460.10	400.00	1.15	82.91	22.81	3.63
33	0.1120	459.76	400.00	1.15	82.31	22.56	3.65
34	0.1155	459.37	400.00	1.15	81.67	22.30	3.66
35	0.1190	458.91	400.00	1.15	81.15	22.24	3.65
36	0.1225	458.45	400.00	1.15	80.50	22.05	3.65
37	0.1261	458.05	400.00	1.15	79.91	21.86	3.66
38	0.1296	457.68	400.00	1.14	79.35	21.67	3.66
39	0.1331	457.24	400.00	1.14	78.82	21.57	3.65
40	0.1367	456.89	400.00	1.14	78.30	21.41	3.66
41	0.1402	456.58	400.00	1.14	77.71	21.13	3.68
42	0.1438	456.22	400.00	1.14	77.28	21.06	3.67
43	0.1474	455.95	400.00	1.14	77.04	21.10	3.65
44	0.1510	455.45	400.00	1.14	76.36	20.90	3.65
45	0.1547	455.12	400.00	1.14	76.02	20.90	3.64
46	0.1583	454.57	400.00	1.14	75.51	20.94	3.61
47	0.1619	454.31	400.00	1.14	75.19	20.87	3.60
48	0.1805	452.20	400.00	1.13	72.47	20.27	3.58
49	0.1841	451.76	400.00	1.13	71.93	20.17	3.57
50	0.1878	451.43	400.00	1.13	71.48	20.05	3.57
51	0.1914	451.04	400.00	1.13	70.92	19.89	3.57
52	0.1949	450.74	400.00	1.13	70.53	19.79	3.56
53	0.1986	450.35	400.00	1.13	70.08	19.73	3.55
54	0.2021	450.17	400.00	1.13	69.77	19.60	3.56



55	0.2058	449.94	400.00	1.12	69.45	19.51	3.56
56	0.2094	449.82	400.00	1.12	69.01	19.19	3.60

DERIVED PROPERTIES (cont.)

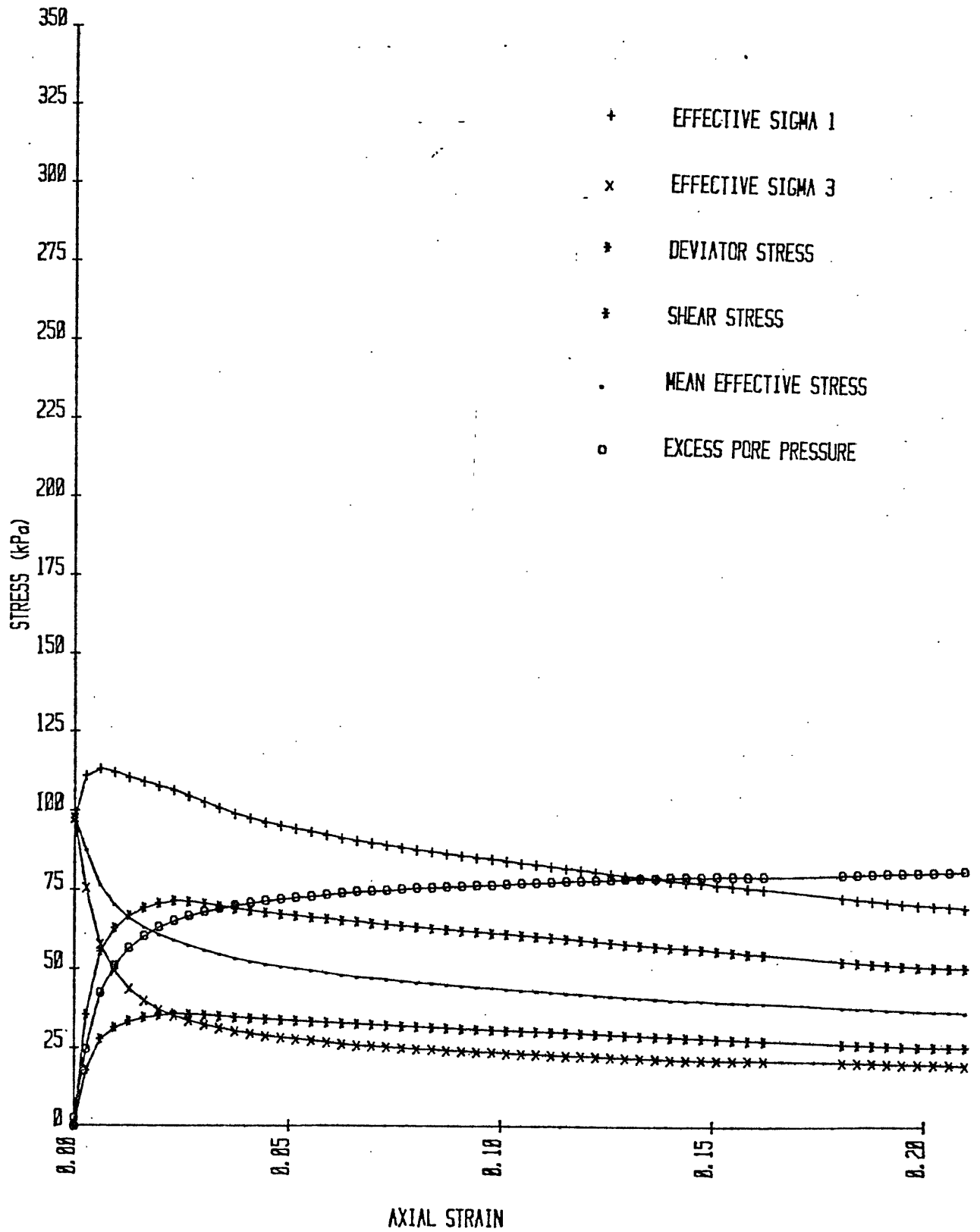
READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.62	0.00	97.45	0.00	0.00	97.45
2	0.62	17.68	93.14	0.19	35.37	87.24
3	0.89	27.68	85.36	0.32	55.36	76.14
4	1.15	31.35	80.55	0.39	62.70	70.10
5	1.40	33.36	76.93	0.43	66.73	65.81
6	1.56	34.57	74.39	0.46	69.14	62.87
7	1.87	35.34	72.29	0.49	70.67	60.52
8	3.13	35.65	70.64	0.50	71.30	58.75
9	-4.53	35.48	68.91	0.51	70.96	57.08
10	-2.51	35.21	67.31	0.52	70.43	55.57
11	-1.25	34.81	65.88	0.53	69.61	54.28
12	-1.17	34.39	64.48	0.53	68.77	53.01
13	-1.40	34.10	63.40	0.54	68.20	52.03
14	-1.41	33.83	62.36	0.54	67.66	51.09
15	-0.96	33.55	61.54	0.55	67.10	50.36
16	-1.05	33.32	60.84	0.55	66.65	49.73
17	-0.68	33.04	60.18	0.55	66.09	49.16
18	-1.50	32.84	59.37	0.55	65.68	48.43
19	-0.97	32.60	58.65	0.56	65.19	47.79
20	-1.43	32.43	58.01	0.56	64.86	47.20
21	-0.29	32.16	57.57	0.56	64.31	46.86
22	-0.60	31.95	57.11	0.56	63.89	46.46
23	-0.92	31.74	56.52	0.56	63.48	45.94
24	-0.89	31.54	55.97	0.56	63.08	45.46
25	-0.07	31.32	55.72	0.56	62.65	45.28
26	-1.02	31.15	55.20	0.56	62.30	44.82
27	-0.46	30.94	54.81	0.56	61.89	44.49
28	-0.74	30.77	54.38	0.57	61.55	44.12
29	-0.15	30.57	54.11	0.56	61.14	43.92
30	-1.51	30.44	53.60	0.57	60.89	43.46
31	-0.47	30.21	53.15	0.57	60.42	43.08
32	-0.40	30.05	52.86	0.57	60.10	42.84
33	-0.75	29.88	52.43	0.57	59.76	42.48
34	-0.66	29.69	51.99	0.57	59.37	42.09
35	-0.14	29.46	51.70	0.57	58.91	41.88
36	-0.41	29.23	51.28	0.57	58.45	41.53
37	-0.48	29.03	50.88	0.57	58.05	41.21
38	-0.51	28.84	50.51	0.57	57.68	40.89
39	-0.22	28.62	50.19	0.57	57.24	40.65
40	-0.45	28.44	49.86	0.57	56.89	40.38
41	-0.93	28.29	49.42	0.57	56.58	39.99
42	-0.18	28.11	49.17	0.57	56.22	39.80
43	0.12	27.97	49.07	0.57	55.95	39.74

16	-0.00	372.48	5.07	132.56	400.00	19837
17	-0.01	372.87	5.42	131.95	400.00	21160
18	-0.00	373.47	5.77	131.65	400.00	22482
19	-0.01	373.95	6.12	131.16	400.00	23804
20	-0.01	374.42	6.47	130.99	400.00	25127
21	-0.00	374.58	6.82	130.38	400.00	26450
22	-0.01	374.84	7.17	130.03	400.00	27772
23	-0.00	375.22	7.52	129.68	400.00	29095
24	-0.00	375.57	7.87	129.37	400.00	30417
25	-0.00	375.60	8.21	128.98	400.00	31740
26	-0.00	375.95	8.56	128.76	400.00	33062
27	0.00	376.14	8.91	128.41	400.00	34385
28	0.00	376.39	9.25	128.19	400.00	35707
29	0.00	376.46	9.60	127.84	400.00	37030
30	0.00	376.84	9.93	127.80	400.00	38353
31	0.00	377.06	10.28	127.31	400.00	39676
32	0.00	377.19	10.63	127.14	400.00	40998
33	0.00	377.44	10.97	126.92	400.00	42321
34	0.00	377.70	11.32	126.61	400.00	43660
35	0.00	377.76	11.66	126.13	400.00	44982
36	0.00	377.95	12.01	125.65	400.00	46305
37	0.00	378.14	12.36	125.30	400.00	47628
38	-0.00	378.33	12.70	125.00	400.00	48950
39	-0.00	378.43	13.05	124.56	400.00	50273
40	-0.00	378.59	13.40	124.30	400.00	51595
41	-0.00	378.87	13.74	124.12	400.00	52918
42	-0.00	378.94	14.10	123.86	400.00	54240
43	-0.00	378.91	14.45	123.77	400.00	55563
44	-0.01	379.10	14.80	123.20	400.00	56885
45	-0.01	379.10	15.16	122.98	400.00	58207
46	-0.01	379.06	15.51	122.28	400.00	59530
47	-0.01	379.13	15.87	122.24	400.00	60852
48	-0.02	379.73	17.69	120.14	400.00	67618
49	-0.02	379.83	18.05	119.66	400.00	68940
50	-0.02	379.95	18.40	119.44	400.00	70263
51	-0.02	380.11	18.76	119.05	400.00	71586
52	-0.02	380.21	19.10	118.87	400.00	72908
53	-0.02	380.27	19.47	118.52	400.00	74231
54	-0.02	380.40	19.81	118.61	400.00	75562
55	-0.02	380.49	20.17	118.61	400.00	76885
56	-0.01	380.81	20.52	118.87	400.00	78207

DERIVED PROPERTIES

READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	400.00	400.00	1.00	97.45	97.45	1.00
2	0.0028	435.37	400.00	1.09	110.82	75.46	1.47
3	0.0060	455.36	400.00	1.14	113.04	57.69	1.96

44	-0.39	27.73	48.63	0.57	55.45	39.39
45	0.00	27.56	48.46	0.57	55.12	39.28
46	0.06	27.29	48.22	0.57	54.57	39.13
47	-0.25	27.16	48.03	0.57	54.31	38.98
48	-0.29	26.10	46.37	0.56	52.20	37.67
49	-0.22	25.88	46.05	0.56	51.76	37.43
50	-0.39	25.72	45.76	0.56	51.43	37.19
51	-0.40	25.52	45.40	0.56	51.04	36.90
52	-0.32	25.37	45.16	0.56	50.74	36.70
53	0.00	25.18	44.91	0.56	50.35	36.51
54	0.00	25.09	44.69	0.56	50.17	36.32
55	0.00	24.97	44.48	0.56	49.94	36.15
56	0.00	24.91	44.10	0.56	49.82	35.80



## TRIAXIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-12, PC-40; 300/500  
INTERVAL (meters): 6.62-6.74  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/31/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.46  
BULK DENSITY (g/cc): 1.79  
VOID RATIO: 1.22  
POROSITY: 0.55  
GRAIN SPEC GRAVITY (g/cc): 2.72

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 342.60

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		47.50		
2	100.00	50.00	97.40	49.90	1.00
3	150.00	50.00	146.90	49.50	0.99
4	250.00	100.00	246.90	100.00	1.00
5	500.00	250.00	497.20	250.30	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 500.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 200.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 49.97

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	96.31
AREA (sq. mm):	1963.50	1821.36
VOLUME (cc):	196.35	175.42
WATER CONTENT:	0.46	0.37
POROSITY:	0.55	0.40
VOID RATIO:	1.22	0.65
BULK DENSITY (g/cc):	1.79	1.88
BOUYANT BULK DENSITY (g/cc):	0.76	0.85
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	4	0.60	2.00	0.01
3	11	1.04	3.32	0.04
4	22	1.34	4.69	0.08
5	40	1.60	6.32	0.16
6	75	1.88	8.66	0.29
7	141	2.15	11.87	0.55
8	271	2.43	16.46	1.04
9	530	2.72	23.02	1.93
10	1044	3.02	32.31	3.52
11	2070	3.32	45.50	6.12
12	3873	3.59	62.23	9.45
13	5675	3.75	75.33	11.84
14	7477	3.87	86.47	13.60
15	9279	3.97	96.33	14.92
16	11082	4.04	105.27	15.91
17	12884	4.11	113.51	16.68
18	14687	4.17	121.19	17.29
19	16489	4.22	128.41	17.76
20	18292	4.26	135.25	18.14
21	20094	4.30	141.75	18.46
22	21897	4.34	147.98	18.71
23	23699	4.37	153.94	18.94
24	25501	4.41	159.69	19.11
25	27304	4.44	165.24	19.28
26	29107	4.46	170.61	19.42
27	30909	4.49	175.81	19.54
28	32712	4.51	180.86	19.64
29	34514	4.54	185.78	19.74
30	36317	4.56	190.57	19.83
31	38119	4.58	195.24	19.91
32	39922	4.60	199.80	19.97
33	41724	4.62	204.26	20.04
34	43527	4.64	208.63	20.11

35	45330	4.66	212.91	20.16
36	47132	4.67	217.10	20.22
37	48934	4.69	221.21	20.27
38	50736	4.71	225.25	20.32
39	52539	4.72	229.21	20.37
40	54341	4.74	233.11	20.40
41	56144	4.75	236.95	20.46
42	57946	4.76	240.72	20.51
43	59749	4.78	244.44	20.56
44	61552	4.79	248.10	20.60
45	63355	4.80	251.70	20.65
46	65157	4.81	255.26	20.69
47	66960	4.83	258.77	20.74
48	68763	4.84	262.23	20.77
49	70566	4.85	265.64	20.82
50	72368	4.86	269.01	20.85
51	74171	4.87	272.34	20.89
52	75973	4.88	275.63	20.93

ALPHA: 0.96  
 Ao (sq. mm): 1821.37  
 Lo (mm): 96.31

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 500.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	302.77	0.00	0.00	500.00	0
2	0.00	316.88	0.27	21.20	500.00	1323
3	0.00	367.35	0.55	139.32	500.00	2645
4	0.00	392.38	0.85	171.72	500.00	3968
5	0.00	407.04	1.15	186.76	500.00	5290
6	0.00	416.85	1.46	195.36	500.00	6613
7	-0.00	424.22	1.77	200.91	500.00	7935
8	0.00	429.33	2.11	204.78	500.00	9258
9	0.00	433.24	2.43	207.11	500.00	10580
10	-0.00	436.34	2.76	208.39	500.00	11903
11	0.00	438.94	3.10	208.58	500.00	13226
12	0.00	441.16	3.44	208.35	500.00	14548
13	-0.00	442.63	3.79	207.57	500.00	15870
14	0.00	444.35	4.13	207.69	500.00	17193
15	-0.00	445.49	4.48	207.26	500.00	18515

16	-0.00	446.89	4.84	206.76	500.00	19838
17	0.00	447.81	5.19	206.25	500.00	21160
18	-0.00	448.88	5.54	205.94	500.00	22482
19	-0.00	449.53	5.89	205.60	500.00	23805
20	0.00	450.35	6.24	205.36	500.00	25127
21	0.00	451.00	6.59	205.44	500.00	26450
22	-0.00	451.55	6.95	205.25	500.00	27772
23	0.00	452.08	7.30	205.29	500.00	29095
24	0.01	452.76	7.65	205.17	500.00	30417
25	0.00	453.22	8.01	205.36	500.00	31740
26	0.00	453.77	8.36	205.32	500.00	33063
27	0.00	454.00	8.71	205.29	500.00	34386
28	-0.00	454.32	9.07	205.21	500.00	35708
29	0.00	454.84	9.42	205.29	500.00	37030
30	0.00	455.30	9.76	205.13	500.00	38353
31	0.00	455.56	10.12	205.17	500.00	39676
32	-0.00	455.95	10.46	205.29	500.00	40999
33	-0.00	456.21	10.82	205.17	500.00	42322
34	0.00	456.47	11.16	205.13	500.00	43644
35	-0.00	456.51	11.52	204.63	500.00	44967
36	0.00	456.67	11.87	204.66	500.00	46290
37	-0.00	457.22	12.21	204.36	500.00	47612
38	-0.00	457.39	12.56	204.20	500.00	48935
39	-0.00	457.71	12.91	204.08	500.00	50257
40	-0.00	458.04	13.25	203.97	500.00	51580
41	0.00	458.43	13.60	203.93	500.00	52902
42	-0.01	458.53	13.95	203.74	500.00	54225
43	-0.00	458.43	14.29	203.58	500.00	55547
44	-0.00	458.79	14.64	203.43	500.00	56881
45	-0.00	458.66	14.99	203.00	500.00	58203
46	-0.00	458.95	15.34	202.65	500.00	59525
47	-0.01	458.89	15.69	202.42	500.00	60847
48	-0.01	460.03	17.47	200.21	500.00	67620
49	-0.01	460.61	17.82	199.86	500.00	68943
50	-0.01	460.74	18.17	199.51	500.00	70265
51	-0.01	461.10	18.52	199.12	500.00	71588
52	-0.01	461.17	18.86	199.01	500.00	72911
53	-0.02	461.13	19.20	198.81	500.00	74233
54	-0.01	461.69	19.55	198.81	500.00	75556
55	-0.01	461.85	19.89	199.05	500.00	76879
56	-0.01	462.05	20.24	199.24	500.00	78201

DERIVED PROPERTIES

READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	500.00	500.00	1.00	197.23	197.23	1.00
2	0.0028	511.61	500.00	1.02	194.73	183.12	1.06
3	0.0057	576.06	500.00	1.15	208.71	132.65	1.57



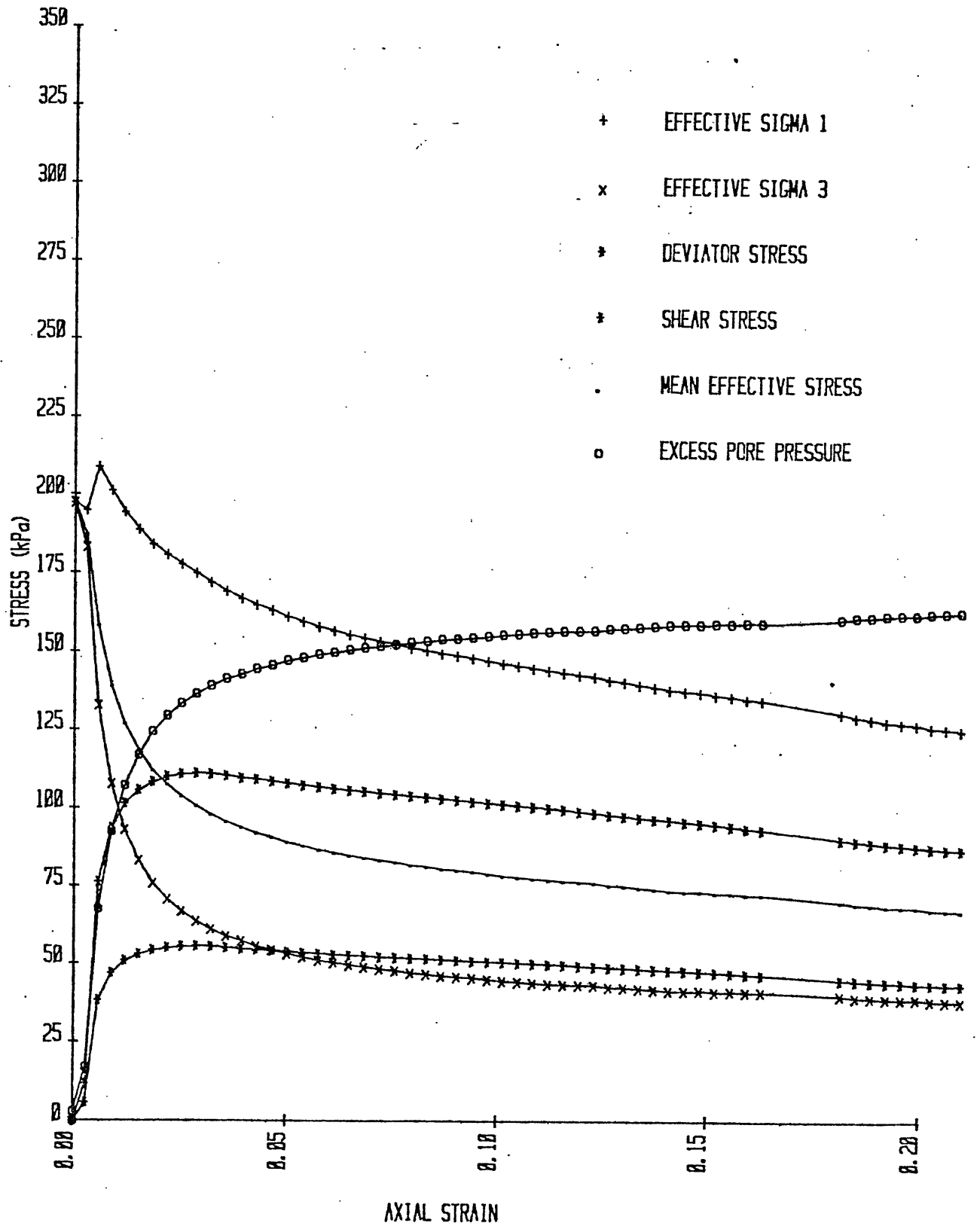
4	0.0088	593.45	500.00	1.19	201.07	107.62	1.87
5	0.0119	601.32	500.00	1.20	194.28	92.96	2.09
6	0.0152	605.63	500.00	1.21	188.78	83.15	2.27
7	0.0184	608.27	500.00	1.22	184.06	75.79	2.43
8	0.0219	609.97	500.00	1.22	180.64	70.67	2.56
9	0.0252	610.85	500.00	1.22	177.60	66.76	2.66
10	0.0287	611.13	500.00	1.22	174.79	63.66	2.75
11	0.0322	610.83	500.00	1.22	171.89	61.06	2.82
12	0.0358	610.30	500.00	1.22	169.14	58.84	2.87
13	0.0394	609.48	500.00	1.22	166.85	57.38	2.91
14	0.0429	609.14	500.00	1.22	164.78	55.65	2.96
15	0.0466	608.50	500.00	1.22	163.00	54.51	2.99
16	0.0502	607.82	500.00	1.22	160.92	53.11	3.03
17	0.0539	607.14	500.00	1.21	159.33	52.19	3.05
18	0.0575	606.57	500.00	1.21	157.68	51.12	3.08
19	0.0612	605.97	500.00	1.21	156.44	50.47	3.10
20	0.0648	605.44	500.00	1.21	155.10	49.65	3.12
21	0.0684	605.08	500.00	1.21	154.08	49.00	3.14
22	0.0721	604.56	500.00	1.21	153.01	48.45	3.16
23	0.0758	604.16	500.00	1.21	152.09	47.93	3.17
24	0.0795	603.69	500.00	1.21	150.94	47.24	3.20
25	0.0832	603.37	500.00	1.21	150.16	46.79	3.21
26	0.0868	602.94	500.00	1.21	149.18	46.23	3.23
27	0.0905	602.51	500.00	1.21	148.51	46.00	3.23
28	0.0941	602.06	500.00	1.20	147.74	45.68	3.23
29	0.0978	601.69	500.00	1.20	146.94	45.16	3.25
30	0.1014	601.21	500.00	1.20	145.91	44.70	3.26
31	0.1050	600.81	500.00	1.20	145.25	44.44	3.27
32	0.1086	600.47	500.00	1.20	144.51	44.05	3.28
33	0.1123	599.99	500.00	1.20	143.78	43.79	3.28
34	0.1159	599.57	500.00	1.20	143.10	43.53	3.29
35	0.1196	598.91	500.00	1.20	142.40	43.49	3.27
36	0.1232	598.52	500.00	1.20	141.85	43.33	3.27
37	0.1268	597.97	500.00	1.20	140.75	42.78	3.29
38	0.1304	597.49	500.00	1.19	140.11	42.61	3.29
39	0.1340	597.03	500.00	1.19	139.32	42.29	3.29
40	0.1376	596.58	500.00	1.19	138.54	41.96	3.30
41	0.1412	596.16	500.00	1.19	137.73	41.57	3.31
42	0.1448	595.66	500.00	1.19	137.13	41.47	3.31
43	0.1484	595.19	500.00	1.19	136.76	41.57	3.29
44	0.1520	594.71	500.00	1.19	135.92	41.21	3.30
45	0.1556	594.11	500.00	1.19	135.45	41.34	3.28
46	0.1593	593.54	500.00	1.19	134.59	41.05	3.28
47	0.1629	593.03	500.00	1.19	134.15	41.12	3.26
48	0.1814	589.98	500.00	1.18	129.95	39.98	3.25
49	0.1850	589.43	500.00	1.18	128.81	39.39	3.27
50	0.1887	588.87	500.00	1.18	128.13	39.26	3.26
51	0.1923	588.31	500.00	1.18	127.21	38.90	3.27
52	0.1958	587.86	500.00	1.18	126.70	38.83	3.26
53	0.1994	587.39	500.00	1.17	126.26	38.87	3.25
54	0.2030	587.00	500.00	1.17	125.31	38.31	3.27

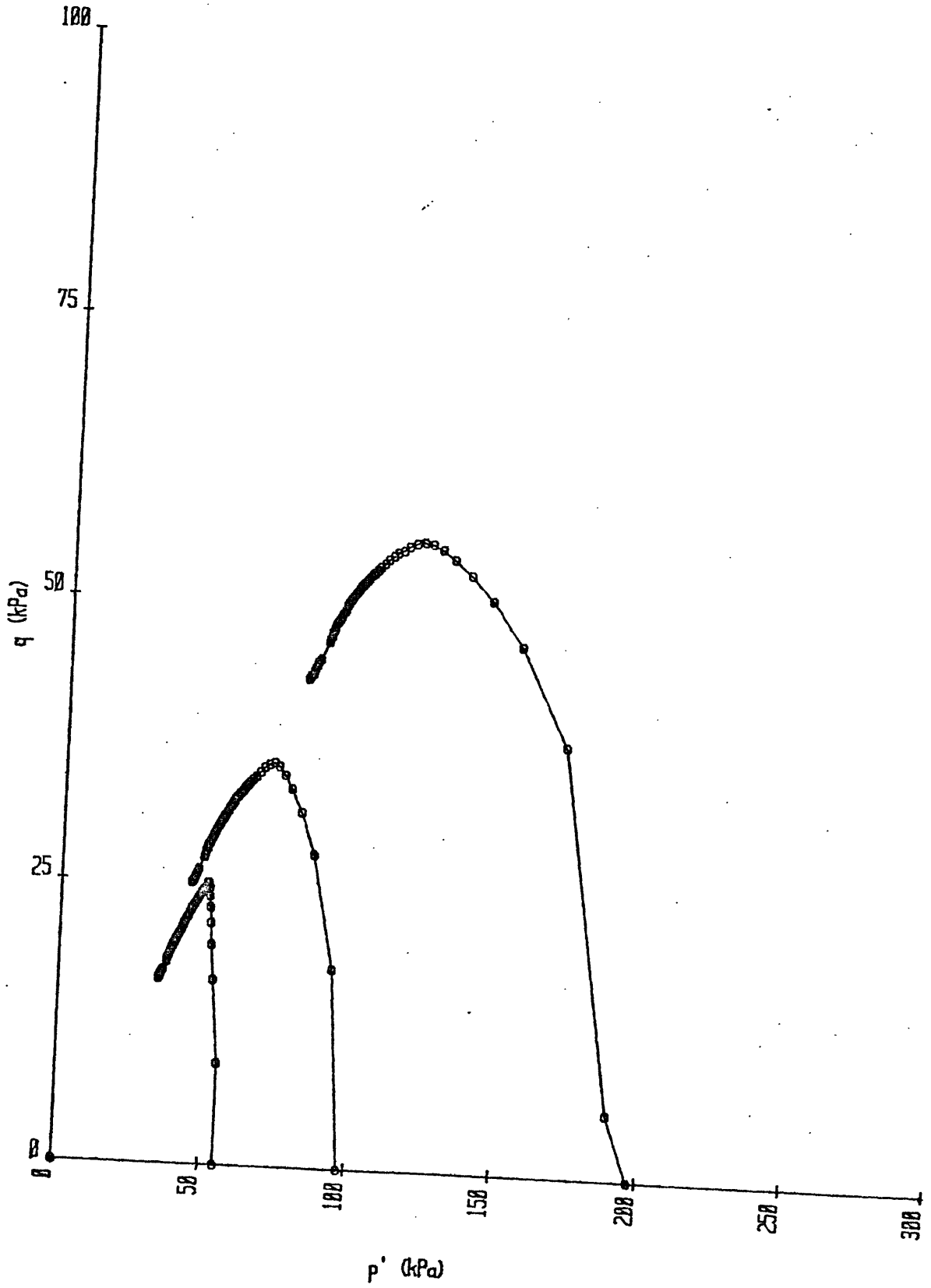
55	0.2065	586.71	500.00	1.17	124.86	38.15	3.27
56	0.2102	586.40	500.00	1.17	124.35	37.95	3.28

DERIVED PROPERTIES (cont.)

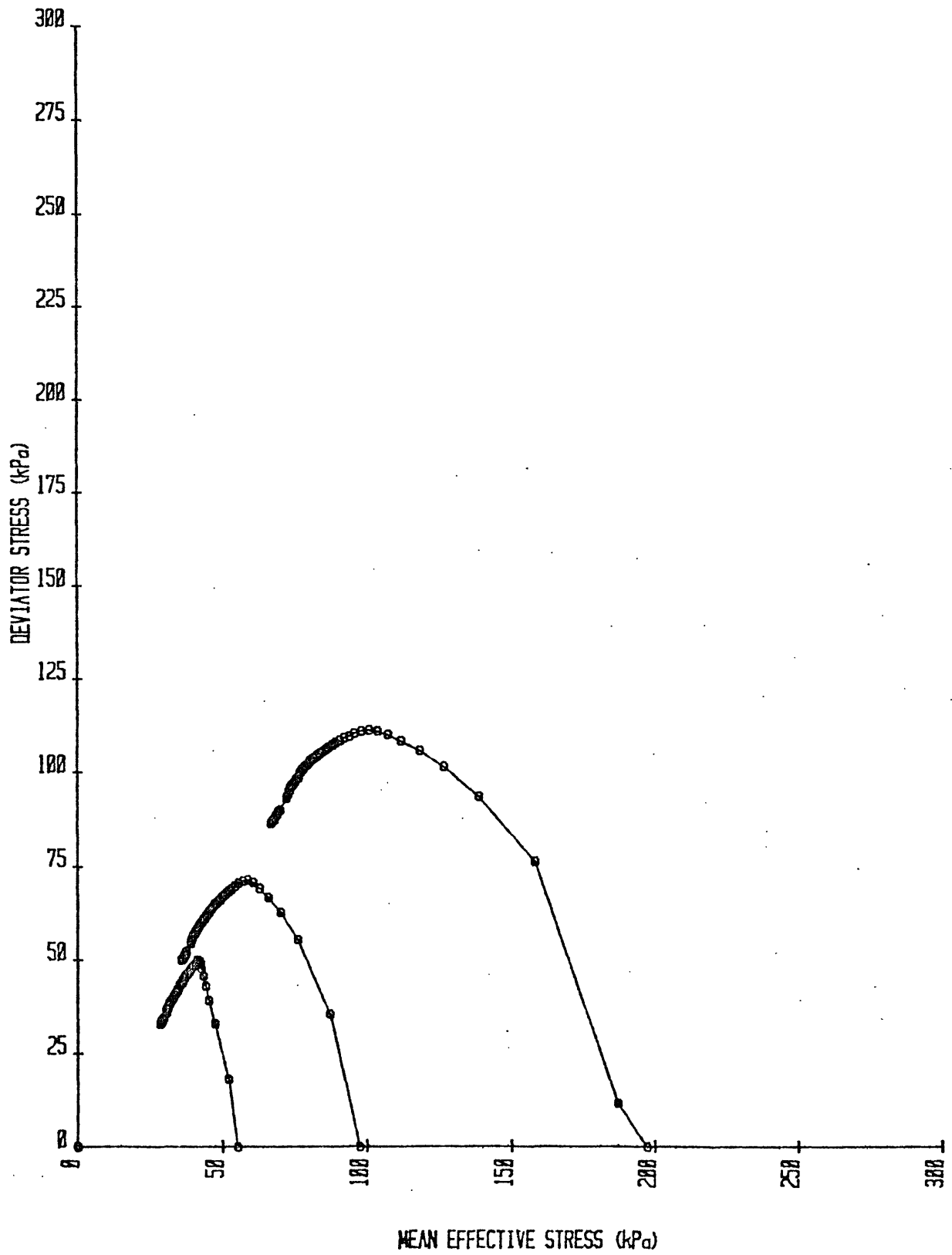
READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	1.22	0.00	197.23	0.00	0.00	197.23
2	1.22	5.80	188.92	0.03	11.61	186.99
3	0.78	38.03	170.68	0.22	76.06	158.00
4	1.44	46.73	154.35	0.30	93.45	138.77
5	1.86	50.66	143.62	0.35	101.32	126.73
6	2.27	52.82	135.97	0.39	105.63	118.36
7	2.79	54.14	129.92	0.42	108.27	111.88
8	3.01	54.99	125.66	0.44	109.97	107.33
9	4.48	55.42	122.18	0.45	110.85	103.71
10	10.95	55.56	119.23	0.47	111.13	100.71
11	-8.88	55.42	116.47	0.48	110.83	98.00
12	-4.14	55.15	113.99	0.48	110.30	95.61
13	-1.78	54.74	112.11	0.49	109.48	93.87
14	-5.06	54.57	110.22	0.50	109.14	92.03
15	-1.78	54.25	108.76	0.50	108.50	90.67
16	-2.06	53.91	107.01	0.50	107.82	89.04
17	-1.35	53.57	105.76	0.51	107.14	87.91
18	-1.87	53.28	104.40	0.51	106.57	86.64
19	-1.10	52.99	103.45	0.51	105.97	85.79
20	-1.54	52.72	102.37	0.51	105.44	84.80
21	-1.76	52.54	101.54	0.52	105.08	84.03
22	-1.08	52.28	100.73	0.52	104.56	83.30
23	-1.31	52.08	100.01	0.52	104.16	82.65
24	-1.46	51.85	99.09	0.52	103.69	81.81
25	-1.41	51.69	98.47	0.52	103.37	81.24
26	-1.30	51.47	97.70	0.53	102.94	80.55
27	-0.53	51.26	97.26	0.53	102.51	80.17
28	-0.72	51.03	96.71	0.53	102.06	79.70
29	-1.39	50.84	96.00	0.53	101.69	79.05
30	-0.96	50.60	95.30	0.53	101.21	78.44
31	-0.66	50.41	94.85	0.53	100.81	78.04
32	-1.12	50.23	94.28	0.53	100.47	77.54
33	-0.55	50.00	93.79	0.53	99.99	77.12
34	-0.62	49.79	93.31	0.53	99.57	76.72
35	-0.05	49.46	92.95	0.53	98.91	76.46
36	-0.42	49.26	92.59	0.53	98.52	76.17
37	-1.01	48.99	91.76	0.53	97.97	75.44
38	-0.34	48.75	91.36	0.53	97.49	75.11
39	-0.71	48.52	90.80	0.53	97.03	74.63
40	-0.71	48.29	90.25	0.54	96.58	74.15
41	-0.94	48.08	89.65	0.54	96.16	73.62
42	-0.20	47.83	89.30	0.54	95.66	73.36
43	0.21	47.59	89.17	0.53	95.19	73.30

44	-0.75	47.36	88.57	0.53	94.71	72.78
45	0.22	47.05	88.40	0.53	94.11	72.71
46	-0.52	46.77	87.82	0.53	93.54	72.23
47	0.13	46.52	87.63	0.53	93.03	72.13
48	-0.37	44.99	84.96	0.53	89.98	69.97
49	-1.06	44.71	84.10	0.53	89.43	69.20
50	-0.24	44.44	83.69	0.53	88.87	68.88
51	-0.63	44.15	83.05	0.53	88.31	68.33
52	-0.15	43.93	82.77	0.53	87.86	68.12
53	0.00	43.70	82.56	0.53	87.39	68.00
54	0.00	43.50	81.81	0.53	87.00	67.31
55	0.00	43.36	81.51	0.53	86.71	67.05
56	0.00	43.20	81.15	0.53	86.40	66.75





GO-12, PC-40: 300/350, 400, 500



GD-12, PC-40; 300/350, 400, 500

## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-15, PC-43; 300/370  
INTERVAL (meters): 9.13-9.25  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 3/17/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.28  
BULK DENSITY (g/cc): 1.99  
VOID RATIO: 0.74  
POROSITY: 0.43  
GRAIN SPEC GRAVITY (g/cc): 2.71

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 375.00

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		47.00		
2	100.00	50.00	97.00	50.00	1.00
3	200.00	100.00	196.00	93.00	0.99
4	300.00	100.00	295.00	99.00	0.99
5	370.00	70.00	366.00	71.00	1.01

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 370.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 70.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 87.20

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	97.11
AREA (sq. mm):	1963.50	1851.52
VOLUME (cc):	196.35	179.79
WATER CONTENT:	0.28	0.22
POROSITY:	0.43	0.21
VOID RATIO:	0.74	0.27
BULK DENSITY (g/cc):	1.99	2.08
BOUYANT BULK DENSITY (g/cc):	0.97	1.05
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	5	0.70	2.24	0.12
3	12	1.08	3.46	0.27
4	23	1.36	4.80	0.47
5	41	1.61	6.40	0.78
6	76	1.88	8.72	1.22
7	143	2.16	11.36	1.88
8	273	2.44	16.52	2.85
9	532	2.73	23.07	4.28
10	1046	3.02	32.34	6.32
11	55321	4.74	235.20	16.22
12	57371	4.76	239.52	16.28
13	60374	4.78	245.71	16.32
14	63376	4.80	251.75	16.34
15	66378	4.82	257.64	16.38
16	69381	4.84	263.40	16.40
17	72384	4.86	269.04	16.42
18	75386	4.88	274.57	16.44
19	78389	4.89	279.98	16.47
20	81391	4.91	285.29	16.49
21	84394	4.93	290.51	16.56

ALPHA: 0.97  
Ao (sq. mm): 1851.52  
Lo (mm): 97.11

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 370.00  
STRAIN RATE: .015 mm/min



MEASURED PROPERTIES

READING	DVDL (cc)	PORP (kPa)	DLHG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	332.36	0.00	0.00	370.00	0
2	0.00	338.58	0.24	45.15	370.00	1322
3	0.00	341.78	0.53	71.27	370.00	2645
4	0.01	343.73	0.83	82.55	370.00	3967
5	0.00	345.07	1.13	89.99	370.00	5290
6	0.00	345.91	1.44	96.11	370.00	6612
7	0.01	346.34	1.75	100.57	370.00	7934
8	0.00	346.50	2.07	104.02	370.00	9256
9	0.01	346.57	2.40	105.80	370.00	10579
10	0.01	346.66	2.73	108.32	370.00	11902
11	0.01	346.30	3.07	110.41	370.00	13225
12	0.01	346.47	3.41	112.85	370.00	14547
13	0.00	346.30	3.75	114.91	370.00	15870
14	0.01	346.57	4.09	117.12	370.00	17193
15	0.01	346.34	4.43	119.25	370.00	18515
16	0.01	346.24	4.77	121.38	370.00	19838
17	0.01	345.98	5.12	123.63	370.00	21161
18	0.01	345.85	5.47	125.68	370.00	22483
19	0.01	346.01	5.82	127.89	370.00	23806
20	0.01	345.98	6.17	129.71	370.00	25129
21	0.01	345.55	6.53	131.42	370.00	26451
22	0.01	345.39	6.88	132.89	370.00	27774
23	0.01	345.36	7.24	134.67	370.00	29097
24	0.01	345.23	7.59	136.11	370.00	30420
25	0.00	345.10	7.95	137.58	370.00	31742
26	0.01	344.87	8.30	139.13	370.00	33065
27	0.01	344.68	8.65	140.53	370.00	34388
28	0.01	344.35	9.01	142.04	370.00	35711
29	0.00	344.48	9.36	143.55	370.00	37034
30	0.01	344.19	9.71	144.83	370.00	38356
31	0.01	343.99	10.07	146.18	370.00	39679
32	0.00	343.99	10.42	147.54	370.00	41002
33	0.01	343.89	10.77	148.59	370.00	42325
34	0.01	343.89	11.12	149.87	370.00	43647
35	0.01	343.83	11.47	150.87	370.00	44970
36	0.00	343.63	11.82	152.15	370.00	46292
37	0.01	343.60	12.17	153.12	370.00	47614
38	0.01	343.14	12.52	154.36	370.00	48937
39	0.01	343.47	12.88	155.29	370.00	50259
40	0.01	343.37	13.23	156.38	370.00	51582
41	0.01	343.24	13.58	157.31	370.00	52905
42	0.00	343.11	13.93	158.12	370.00	54227
43	0.00	343.24	14.28	159.09	370.00	55550
44	0.01	343.05	14.63	159.75	370.00	56872
45	0.00	343.08	14.97	160.76	370.00	58194
46	0.01	342.98	15.32	161.53	370.00	59517
47	0.00	342.88	15.67	162.42	370.00	60839

48	0.00	342.65	16.02	162.93	370.00	62162
49	0.00	342.92	16.37	163.74	370.00	63484
50	0.01	342.88	16.72	164.13	370.00	64807
51	0.00	342.72	17.07	164.86	370.00	66130
52	0.00	342.46	17.42	165.33	370.00	67453
53	0.00	342.79	17.76	165.99	370.00	68775
54	0.01	342.62	18.12	166.45	370.00	70098
55	0.01	342.39	18.46	167.03	370.00	71420
56	0.00	342.23	18.81	167.62	370.00	72743
57	0.00	342.13	19.16	167.89	370.00	74066
58	-0.00	342.07	19.51	168.58	370.00	75388
59	0.00	342.17	19.86	168.78	370.00	76710
60	0.00	342.10	20.20	169.32	370.00	78033

DERIVED PROPERTIES

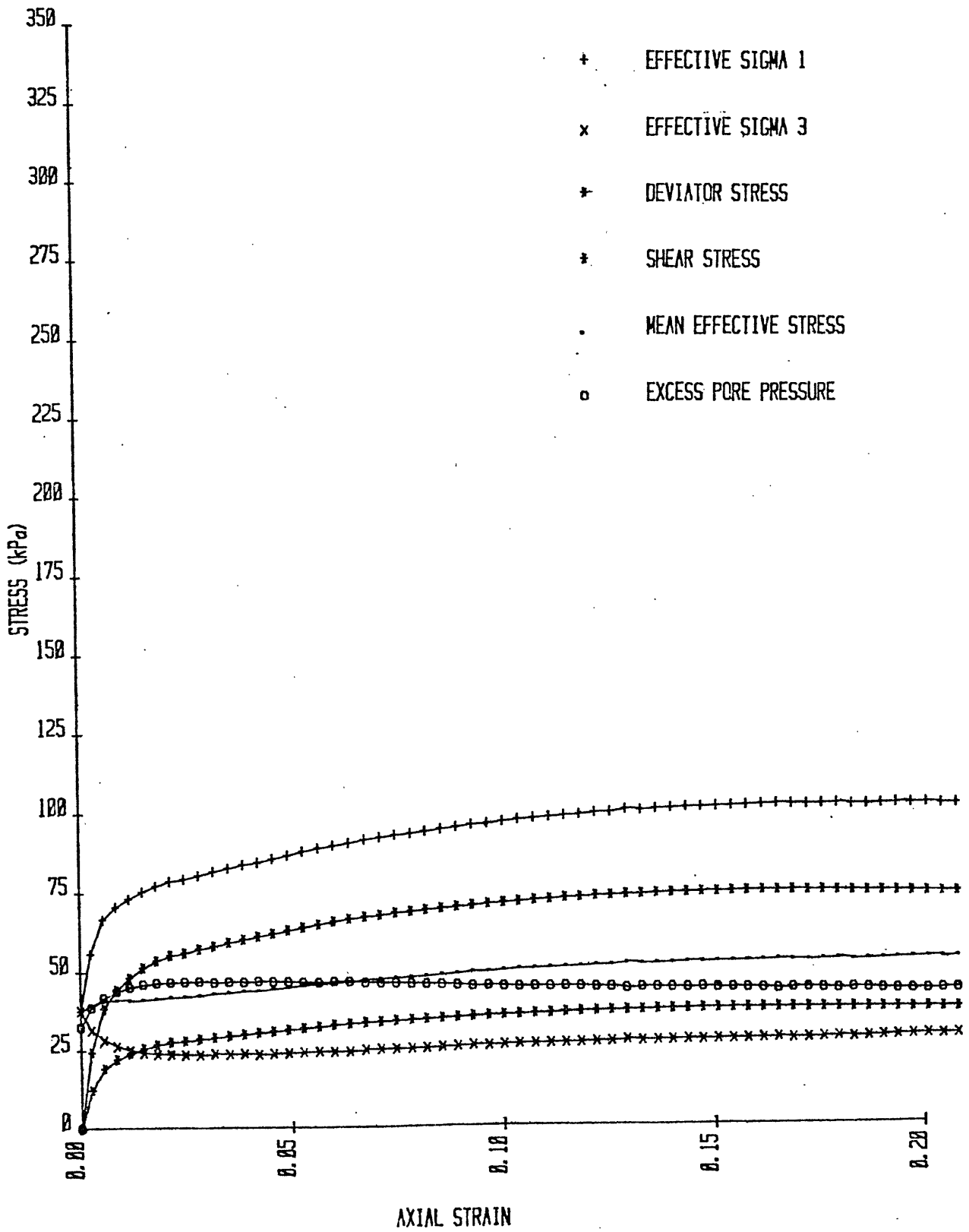
READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	370.00	370.00	1.00	37.64	37.64	1.00
2	0.0025	394.32	370.00	1.07	55.74	31.42	1.77
3	0.0055	408.28	370.00	1.10	66.51	28.23	2.36
4	0.0085	414.20	370.00	1.12	70.47	26.27	2.68
5	0.0116	418.04	370.00	1.13	72.97	24.93	2.93
6	0.0148	421.14	370.00	1.14	75.23	24.09	3.12
7	0.0180	423.34	370.00	1.14	77.00	23.66	3.25
8	0.0213	424.99	370.00	1.15	78.49	23.50	3.34
9	0.0247	425.73	370.00	1.15	79.17	23.44	3.38
10	0.0281	426.86	370.00	1.15	80.20	23.34	3.44
11	0.0316	427.75	370.00	1.16	81.45	23.70	3.44
12	0.0351	428.81	370.00	1.16	82.34	23.53	3.50
13	0.0386	429.67	370.00	1.16	83.36	23.70	3.52
14	0.0421	430.59	370.00	1.16	84.03	23.44	3.59
15	0.0456	431.47	370.00	1.17	85.13	23.66	3.60
16	0.0491	432.34	370.00	1.17	86.10	23.76	3.62
17	0.0527	433.25	370.00	1.17	87.28	24.02	3.63
18	0.0563	434.06	370.00	1.17	88.21	24.15	3.65
19	0.0599	434.94	370.00	1.18	88.92	23.99	3.71
20	0.0636	435.60	370.00	1.18	89.63	24.02	3.73
21	0.0672	436.21	370.00	1.18	90.65	24.45	3.71
22	0.0709	436.69	370.00	1.18	91.30	24.61	3.71
23	0.0745	437.32	370.00	1.18	91.96	24.64	3.73
24	0.0782	437.76	370.00	1.18	92.54	24.77	3.74
25	0.0818	438.23	370.00	1.18	93.13	24.90	3.74
26	0.0855	438.72	370.00	1.19	93.85	25.13	3.73
27	0.0891	439.13	370.00	1.19	94.46	25.33	3.73
28	0.0927	439.60	370.00	1.19	95.25	25.65	3.71
29	0.0964	440.06	370.00	1.19	95.58	25.52	3.75
30	0.1000	440.40	370.00	1.19	96.21	25.81	3.73
31	0.1037	440.77	370.00	1.19	96.78	26.01	3.72

32	0.1073	441.13	370.00	1.19	97.14	26.01	3.73
33	0.1109	441.35	370.00	1.19	97.45	26.11	3.73
34	0.1145	441.67	370.00	1.19	97.78	26.11	3.75
35	0.1181	441.86	370.00	1.19	98.03	26.17	3.75
36	0.1217	442.17	370.00	1.20	98.54	26.37	3.74
37	0.1253	442.34	370.00	1.20	98.74	26.40	3.74
38	0.1289	442.62	370.00	1.20	99.48	26.86	3.70
39	0.1326	442.75	370.00	1.20	99.28	26.53	3.74
40	0.1362	442.95	370.00	1.20	99.58	26.63	3.74
41	0.1398	443.08	370.00	1.20	99.84	26.76	3.73
42	0.1434	443.15	370.00	1.20	100.04	26.89	3.72
43	0.1471	443.29	370.00	1.20	100.05	26.76	3.74
44	0.1506	443.28	370.00	1.20	100.24	26.96	3.72
45	0.1542	443.44	370.00	1.20	100.36	26.92	3.73
46	0.1578	443.48	370.00	1.20	100.50	27.02	3.72
47	0.1614	443.57	370.00	1.20	100.68	27.12	3.71
48	0.1650	443.48	370.00	1.20	100.82	27.35	3.69
49	0.1686	443.53	370.00	1.20	100.61	27.09	3.71
50	0.1722	443.38	370.00	1.20	100.50	27.12	3.71
51	0.1758	443.39	370.00	1.20	100.67	27.28	3.69
52	0.1794	443.28	370.00	1.20	100.82	27.54	3.66
53	0.1829	443.25	370.00	1.20	100.47	27.22	3.69
54	0.1865	443.13	370.00	1.20	100.51	27.38	3.67
55	0.1901	443.06	370.00	1.20	100.67	27.61	3.65
56	0.1937	442.99	370.00	1.20	100.76	27.77	3.63
57	0.1973	442.79	370.00	1.20	100.65	27.87	3.61
58	0.2009	442.76	370.00	1.20	100.69	27.93	3.60
59	0.2045	442.52	370.00	1.20	100.35	27.83	3.61
60	0.2080	442.42	370.00	1.20	100.32	27.90	3.60

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.26	0.00	37.64	0.00	0.00	37.64
2	0.26	12.16	43.58	0.28	24.32	39.53
3	0.23	19.14	47.37	0.40	38.28	40.99
4	0.33	22.10	48.37	0.46	44.20	41.00
5	0.35	24.02	48.95	0.49	48.04	40.95
6	0.27	25.57	49.66	0.51	51.14	41.13
7	0.19	26.67	50.33	0.53	53.34	41.44
8	0.10	27.49	50.99	0.54	54.99	41.83
9	0.09	27.87	51.30	0.54	55.73	42.01
10	0.09	28.43	51.77	0.55	56.86	42.29
11	-0.40	28.87	52.57	0.55	57.75	42.95
12	0.15	29.41	52.94	0.56	58.81	43.14
13	-0.19	29.83	53.53	0.56	59.67	43.58
14	0.28	30.30	53.73	0.56	60.59	43.63
15	-0.26	30.73	54.40	0.56	61.47	44.15
16	-0.11	31.17	54.93	0.57	62.34	44.54

17	-0.28	31.63	55.65	0.57	63.25	45.11
18	-0.16	32.03	56.18	0.57	64.06	45.50
19	0.19	32.47	56.46	0.58	64.94	45.63
20	-0.05	32.80	56.82	0.58	65.60	45.89
21	-0.70	33.10	57.55	0.58	66.21	46.51
22	0.00	33.34	57.95	0.58	66.69	46.84
23	0.00	33.66	58.30	0.58	67.32	47.08
24	0.00	33.88	58.65	0.58	67.76	47.36
25	0.00	34.11	59.02	0.58	68.23	47.64
26	0.00	34.36	59.49	0.58	68.72	48.04
27	0.00	34.57	59.89	0.58	69.13	48.37
28	0.00	34.80	60.45	0.58	69.60	48.85
29	0.00	35.03	60.55	0.58	70.06	48.87
30	0.00	35.20	61.01	0.58	70.40	49.28
31	0.00	35.38	61.39	0.58	70.77	49.60
32	0.00	35.57	61.58	0.58	71.13	49.72
33	0.00	35.67	61.78	0.58	71.35	49.89
34	0.00	35.84	61.94	0.58	71.67	50.00
35	0.00	35.93	62.10	0.58	71.86	50.13
36	0.00	36.09	62.45	0.58	72.17	50.43
37	0.00	36.17	62.57	0.58	72.34	50.51
38	0.00	36.31	63.17	0.57	72.62	51.06
39	0.00	36.38	62.91	0.58	72.75	50.78
40	0.00	36.48	63.11	0.58	72.95	50.95
41	0.00	36.54	63.30	0.58	73.08	51.12
42	0.00	36.58	63.46	0.58	73.15	51.27
43	0.00	36.64	63.40	0.58	73.29	51.19
44	0.00	36.64	63.60	0.58	73.28	51.38
45	0.00	36.72	63.64	0.58	73.44	51.40
46	0.00	36.74	63.76	0.58	73.48	51.51
47	0.00	36.78	63.90	0.58	73.57	51.64
48	0.00	36.74	64.09	0.57	73.48	51.84
49	0.00	36.76	63.85	0.58	73.53	51.59
50	0.00	36.69	63.81	0.58	73.38	51.58
51	0.00	36.69	63.98	0.57	73.39	51.74
52	0.00	36.64	64.18	0.57	73.28	51.97
53	0.00	36.63	63.84	0.57	73.25	51.63
54	0.00	36.56	63.94	0.57	73.13	51.75
55	0.00	36.53	64.14	0.57	73.06	51.96
56	0.00	36.50	64.27	0.57	72.99	52.10
57	0.00	36.39	64.26	0.57	72.79	52.13
58	0.00	36.38	64.31	0.57	72.76	52.19
59	0.00	36.26	64.09	0.57	72.52	52.01
60	0.00	36.21	64.11	0.56	72.42	52.04



## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-15, PC-43; 300/440  
INTERVAL (meters): 9.01-9.13  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 3/17/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.29  
BULK DENSITY (g/cc): 1.98  
VOID RATIO: 0.77  
POROSITY: 0.43  
GRAIN SPEC GRAVITY (g/cc): 2.71  
LIQUID LIMIT (%): 27.00  
PLASTIC LIMIT (%): 15.00

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 379.20

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		50.00		
2	100.00	50.00	100.00	50.00	1.00
3	200.00	100.00	199.00	99.00	0.99
4	300.00	100.00	300.00	101.00	1.01
5	440.00	140.00	440.00	140.00	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 440.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 140.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 84.77

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	96.75
AREA (sq. mm):	1963.50	1837.86
VOLUME (cc):	196.35	177.81
WATER CONTENT:	0.29	0.23
POROSITY:	0.43	0.22
VOID RATIO:	0.77	0.28
BULK DENSITY (g/cc):	1.98	2.08
BOUYANT BULK DENSITY (g/cc):	0.95	1.05
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	6	0.78	2.45	0.24
3	12	1.08	3.46	0.52
4	23	1.36	4.80	0.91
5	41	1.61	6.40	1.50
6	76	1.88	8.72	2.36
7	142	2.15	11.92	3.58
8	273	2.44	16.52	5.31
9	532	2.73	23.07	7.73
10	1046	3.02	32.34	10.90
11	55320	4.74	235.20	18.35
12	57370	4.76	239.52	18.38
13	60373	4.78	245.71	18.43
14	63375	4.80	251.74	18.42
15	66377	4.82	257.64	18.46
16	69380	4.84	263.40	18.48
17	72383	4.86	269.04	18.50
18	75385	4.88	274.56	18.51
19	78388	4.89	279.98	18.52
20	81391	4.91	285.29	18.51
21	84393	4.93	290.50	18.54

ALPHA: 0.97  
A<sub>0</sub> (sq. mm): 1837.87  
L<sub>0</sub> (mm): 96.75

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 440.00  
STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	A%FO (N)	CELF (kPa)	TIME (sec)
1	0.00	357.13	0.00	0.00	440.00	0
2	0.01	369.08	0.08	70.31	440.00	1323
3	0.00	383.90	0.37	136.59	440.00	2645
4	-0.00	390.32	0.67	158.25	440.00	3967
5	0.00	394.51	0.98	171.42	440.00	5290
6	-0.00	397.06	1.29	181.17	440.00	6613
7	-0.00	398.90	1.61	189.40	440.00	7935
8	-0.00	400.14	1.94	196.05	440.00	9257
9	-0.00	400.90	2.27	202.04	440.00	10580
10	-0.00	401.44	2.61	207.38	440.00	11903
11	-0.00	401.64	2.95	211.58	440.00	13226
12	0.00	401.83	3.30	214.73	440.00	14548
13	-0.01	401.76	3.64	218.05	440.00	15371
14	-0.01	401.89	3.99	220.94	440.00	17194
15	-0.01	401.73	4.34	224.18	440.00	18516
16	-0.01	401.54	4.69	226.54	440.00	19839
17	-0.01	401.38	5.04	229.52	440.00	21162
18	-0.01	401.13	5.38	232.19	440.00	22484
19	-0.01	400.97	5.74	235.07	440.00	23807
20	-0.01	400.71	6.09	237.74	440.00	25130
21	-0.01	400.46	6.44	240.50	440.00	26453
22	-0.01	400.24	6.79	242.86	440.00	27775
23	-0.01	399.98	7.14	245.35	440.00	29098
24	-0.01	399.82	7.49	247.67	440.00	30421
25	-0.01	399.60	7.84	249.99	440.00	31743
26	-0.01	399.44	8.19	252.57	440.00	33066
27	-0.01	399.22	8.54	254.45	440.00	34389
28	-0.01	398.90	8.89	256.47	440.00	35712
29	-0.01	398.68	9.24	258.48	440.00	37035
30	-0.01	398.58	9.58	260.40	440.00	38357
31	-0.01	398.39	9.93	262.15	440.00	39680
32	-0.01	398.27	10.27	263.99	440.00	41003
33	-0.01	398.17	10.62	265.52	440.00	42326
34	-0.01	397.88	10.96	267.45	440.00	43648
35	-0.01	397.85	11.31	268.54	440.00	44971
36	-0.00	397.66	11.65	270.29	440.00	46293
37	-0.01	397.60	12.00	271.47	440.00	47615
38	-0.01	397.47	12.34	272.96	440.00	48938
39	-0.01	397.41	12.69	274.10	440.00	50261
40	-0.00	397.38	13.03	275.32	440.00	51583
41	-0.01	397.28	13.38	276.37	440.00	52906
42	-0.00	397.34	13.72	277.64	440.00	54229
43	-0.00	397.25	14.07	278.56	440.00	55551
44	0.00	397.25	14.42	279.39	440.00	56886
45	0.00	397.15	14.77	280.31	440.00	58208
46	-0.00	397.18	15.12	281.10	440.00	59531
47	-0.00	397.12	15.47	281.75	440.00	60853



48	-0.00	397.18	15.82	282.41	440.00	62176
49	-0.00	397.22	16.18	282.98	440.00	63499
50	-0.01	397.22	16.53	283.33	440.00	64821
51	-0.01	397.28	16.88	284.03	440.00	66144
52	-0.01	397.25	17.23	284.07	440.00	67467
53	-0.01	397.41	17.59	284.64	440.00	68789
54	-0.01	397.31	17.95	284.64	440.00	70112
55	-0.01	397.47	18.30	285.30	440.00	71434
56	-0.01	397.38	18.66	285.34	440.00	72757
57	-0.01	397.34	19.02	286.09	440.00	74080
58	-0.01	397.53	19.37	286.04	440.00	75402
59	-0.01	397.50	19.73	286.74	440.00	76724
60	-0.01	397.53	20.09	286.61	440.00	78047

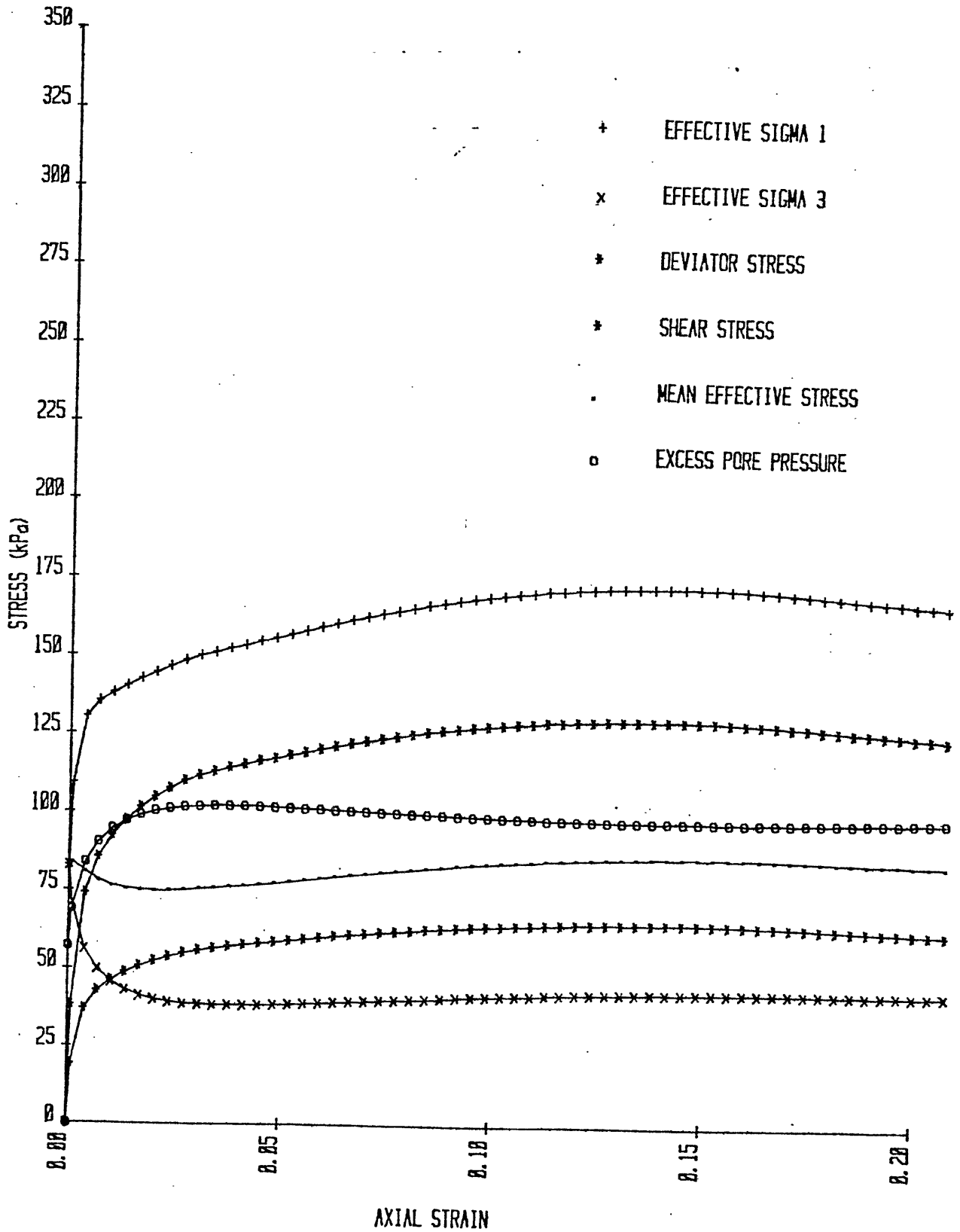
DERIVED PROPERTIES

READING	STRAIN	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	440.00	440.00	1.00	82.87	82.87	1.00
2	0.0008	478.22	440.00	1.09	109.14	70.92	1.54
3	0.0038	514.04	440.00	1.17	130.14	56.10	2.32
4	0.0069	525.51	440.00	1.19	135.19	49.68	2.72
5	0.0101	532.33	440.00	1.21	137.81	45.49	3.03
6	0.0133	537.26	440.00	1.22	140.21	42.94	3.26
7	0.0167	541.33	440.00	1.23	142.43	41.10	3.47
8	0.0201	544.53	440.00	1.24	144.39	39.86	3.62
9	0.0235	547.35	440.00	1.24	146.45	39.10	3.75
10	0.0270	549.79	440.00	1.25	148.35	38.56	3.85
11	0.0305	551.61	440.00	1.25	149.97	38.37	3.91
12	0.0341	552.85	440.00	1.26	151.03	38.18	3.96
13	0.0376	554.18	440.00	1.26	152.42	38.24	3.99
14	0.0412	555.26	440.00	1.26	153.37	38.11	4.02
15	0.0448	556.51	440.00	1.26	154.78	38.27	4.04
16	0.0484	557.29	440.00	1.27	155.75	38.46	4.05
17	0.0521	558.38	440.00	1.27	157.00	38.62	4.07
18	0.0556	559.30	440.00	1.27	158.18	38.87	4.07
19	0.0593	560.32	440.00	1.27	159.35	39.03	4.08
20	0.0629	561.22	440.00	1.28	160.51	39.29	4.09
21	0.0666	562.15	440.00	1.28	161.69	39.54	4.09
22	0.0702	562.87	440.00	1.28	162.63	39.76	4.09
23	0.0738	563.64	440.00	1.28	163.66	40.02	4.09
24	0.0774	564.33	440.00	1.28	164.50	40.18	4.09
25	0.0811	565.00	440.00	1.28	165.40	40.40	4.09
26	0.0847	565.79	440.00	1.29	166.35	40.56	4.10
27	0.0883	566.23	440.00	1.29	167.01	40.78	4.10
28	0.0919	566.72	440.00	1.29	167.82	41.10	4.08
29	0.0955	567.21	440.00	1.29	168.53	41.32	4.08
30	0.0991	567.65	440.00	1.29	169.07	41.42	4.08
31	0.1026	568.00	440.00	1.29	169.61	41.61	4.08

32	0.1062	568.39	440.00	1.29	170.12	41.74	4.08
33	0.1097	568.62	440.00	1.29	170.45	41.83	4.07
34	0.1133	569.03	440.00	1.29	171.15	42.12	4.06
35	0.1169	569.04	440.00	1.29	171.19	42.15	4.06
36	0.1204	569.36	440.00	1.29	171.69	42.34	4.06
37	0.1240	569.39	440.00	1.29	171.80	42.40	4.05
38	0.1276	569.57	440.00	1.29	172.10	42.53	4.05
39	0.1311	569.58	440.00	1.29	172.17	42.59	4.04
40	0.1347	569.63	440.00	1.29	172.26	42.63	4.04
41	0.1383	569.59	440.00	1.29	172.31	42.72	4.03
42	0.1418	569.65	440.00	1.29	172.30	42.66	4.04
43	0.1455	569.52	440.00	1.29	172.27	42.75	4.03
44	0.1490	569.36	440.00	1.29	172.11	42.75	4.03
45	0.1527	569.24	440.00	1.29	172.08	42.85	4.02
46	0.1563	569.04	440.00	1.29	171.86	42.82	4.01
47	0.1599	568.79	440.00	1.29	171.67	42.88	4.00
48	0.1635	568.54	440.00	1.29	171.35	42.82	4.00
49	0.1672	568.23	440.00	1.29	171.01	42.78	4.00
50	0.1708	567.83	440.00	1.29	170.61	42.78	3.99
51	0.1745	567.58	440.00	1.29	170.30	42.72	3.99
52	0.1781	567.03	440.00	1.29	169.78	42.75	3.97
53	0.1819	566.71	440.00	1.29	169.30	42.59	3.97
54	0.1855	566.15	440.00	1.29	168.84	42.69	3.96
55	0.1892	565.87	440.00	1.29	168.40	42.53	3.96
56	0.1929	565.31	440.00	1.28	167.94	42.63	3.94
57	0.1966	565.06	440.00	1.28	167.72	42.66	3.93
58	0.2003	564.47	440.00	1.28	166.94	42.47	3.93
59	0.2039	564.20	440.00	1.28	166.70	42.50	3.92
60	0.2076	563.57	440.00	1.28	166.03	42.47	3.91

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.31	0.00	82.87	0.00	0.00	82.87
2	0.31	19.11	90.03	0.21	38.22	83.66
3	0.41	37.02	93.12	0.40	74.04	80.78
4	0.56	42.76	92.44	0.46	85.51	78.19
5	0.62	46.16	91.65	0.50	92.33	76.26
6	0.52	48.63	91.57	0.53	97.26	75.36
7	0.45	50.67	91.77	0.55	101.33	74.88
8	0.39	52.27	92.13	0.57	104.53	74.70
9	0.27	53.67	92.77	0.58	107.35	74.88
10	0.22	54.90	93.45	0.59	109.79	75.15
11	0.11	55.80	94.17	0.59	111.61	75.57
12	0.15	56.43	94.60	0.60	112.85	75.79
13	-0.05	57.09	95.33	0.60	114.18	76.30
14	0.12	57.63	95.74	0.60	115.26	76.53
15	-0.13	58.26	96.53	0.60	116.51	77.11
16	-0.24	58.65	97.11	0.60	117.29	77.56



## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-15, PC-43; 300/580  
INTERVAL (meters): 8.89-9.01  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 3/17/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.28  
BULK DENSITY (g/cc): 1.99  
VOID RATIO: 0.74  
POPOsITY: 0.43  
GRAIN SPEC GRAVITY (g/cc): 2.71

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 382.00

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		42.00		
2	100.00	50.00	91.00	49.00	0.98
3	200.00	100.00	189.00	98.00	0.98
4	300.00	100.00	287.00	98.00	0.98
5	580.00	280.00	567.00	280.00	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 580.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 280.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 84.92

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	96.97
AREA (sq. mm):	1963.50	1846.37
VOLUME (cc):	196.35	179.05
WATER CONTENT:	0.28	0.22
POROSITY:	0.43	0.21
VOID RATIO:	0.74	0.27
BULK DENSITY (g/cc):	1.99	2.09
BOUYANT BULK DENSITY (g/cc):	0.97	1.06
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	6	0.78	2.45	0.18
3	13	1.11	3.61	0.39
4	23	1.36	4.80	0.68
5	51	1.71	7.14	1.24
6	89	1.95	9.43	1.88
7	155	2.19	12.45	2.78
8	286	2.46	16.91	4.20
9	544	2.74	23.32	6.40
10	1059	3.02	32.54	9.51
11	52988	4.72	230.19	18.72
12	57086	4.76	238.93	18.55
13	60088	4.78	245.13	18.35
14	63091	4.80	251.18	18.16
15	66094	4.82	257.09	18.02
16	69096	4.84	262.86	17.86
17	72098	4.86	268.51	17.73
18	75101	4.88	274.05	17.58
19	78103	4.89	279.47	17.44
20	81106	4.91	284.79	17.35
21	84108	4.92	290.01	17.30

ALPHA: 0.97  
Ao (sq. mm): 1846.37  
Lo (mm): 96.97

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 580.00  
STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	307.66	0.00	0.00	580.00	1
2	0.00	310.33	3.36	14.11	580.00	1444
3	-0.01	310.88	3.72	20.42	580.00	2886
4	0.01	311.41	4.10	26.00	580.00	4328
5	0.01	311.54	4.47	31.12	580.00	5771
6	0.01	311.21	4.85	35.15	580.00	7213
7	0.05	311.24	5.23	37.32	580.00	8656
8	0.04	310.92	5.61	40.27	580.00	10098
9	0.07	310.62	6.00	43.64	580.00	11541
10	0.08	310.59	6.39	46.66	580.00	12996
11	0.10	310.14	6.77	49.18	580.00	14439
12	0.11	310.07	7.15	51.35	580.00	15882
13	0.13	309.71	7.54	54.10	580.00	17324
14	0.13	309.48	7.92	56.81	580.00	18767
15	0.15	309.42	8.31	59.80	580.00	20209
16	0.14	308.73	8.68	62.71	580.00	21651
17	0.15	308.57	9.06	65.26	580.00	23093
18	0.15	308.15	9.45	67.86	580.00	24536
19	0.18	307.95	9.83	70.53	580.00	25979
20	0.17	307.66	10.21	73.13	580.00	27421
21	0.18	307.20	10.59	75.61	580.00	28864
22	0.19	306.94	10.96	78.05	580.00	30307
23	0.19	306.65	11.35	80.26	580.00	31749
24	0.16	305.83	11.73	82.43	580.00	33191
25	0.16	305.41	12.11	84.64	580.00	34634
26	0.16	304.89	12.49	86.58	580.00	36077
27	0.18	304.63	12.87	88.44	580.00	37519
28	0.18	304.47	13.25	90.11	580.00	38962
29	0.17	303.75	13.63	91.66	580.00	40405
30	0.19	303.91	14.00	93.13	580.00	41848
31	0.19	303.29	14.38	94.41	580.00	43290
32	0.20	303.13	14.76	95.69	580.00	44732
33	0.20	302.97	15.14	96.85	580.00	46175
34	0.18	302.48	15.51	97.93	580.00	47618
35	0.21	302.31	15.89	98.83	580.00	49060
36	0.22	302.15	16.27	99.79	580.00	50503
37	0.21	301.63	16.65	100.69	580.00	51946
38	0.19	301.43	17.02	101.46	580.00	53388
39	0.20	301.43	17.40	102.62	580.00	54830
40	0.22	301.14	17.78	103.48	580.00	56273
41	0.25	301.21	18.17	104.21	580.00	57715
42	0.24	300.91	18.55	104.95	580.00	59158
43	0.16	300.26	18.94	105.30	580.00	60601
44	0.20	300.00	19.32	105.69	580.00	62043
45	0.18	299.90	19.70	105.88	580.00	63486
46	0.13	299.58	20.07	106.19	580.00	64928
47	0.13	299.68	20.46	106.38	580.00	66371

48	0.07	299.54	20.83	106.61	580.00	67314
49	0.05	299.32	21.21	106.73	580.00	69256
50	0.01	299.35	21.60	106.73	580.00	70699
51	-0.04	299.25	21.98	107.04	580.00	72142
52	-0.09	299.35	22.35	107.27	580.00	73584
53	-0.15	298.83	22.74	107.24	580.00	75026
54	-0.19	298.96	23.11	107.31	580.00	76469

DERIVED PROPERTIES

READING	STRAIN A	TOTAL STRESS			EFFECTIVE STRESS		
		SIG1 (kPa)	SIG3 (kPa)	RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	580.00	580.00	1.00	272.34	272.34	1.00
2	0.0347	587.38	580.00	1.01	277.05	269.67	1.03
3	0.0384	590.64	580.00	1.02	279.75	269.12	1.04
4	0.0423	593.49	580.00	1.02	282.08	268.60	1.05
5	0.0461	596.08	580.00	1.03	284.54	268.46	1.06
6	0.0500	598.09	580.00	1.03	286.88	268.79	1.07
7	0.0540	599.12	580.00	1.03	287.88	268.76	1.07
8	0.0579	600.55	580.00	1.04	289.63	269.08	1.08
9	0.0619	602.17	580.00	1.04	291.55	269.38	1.08
10	0.0659	603.61	580.00	1.04	293.02	269.41	1.09
11	0.0698	604.78	580.00	1.04	294.64	269.87	1.09
12	0.0738	605.76	580.00	1.04	295.69	269.93	1.10
13	0.0777	607.02	580.00	1.05	297.31	270.29	1.10
14	0.0816	608.26	580.00	1.05	298.78	270.52	1.10
15	0.0857	609.61	580.00	1.05	300.19	270.58	1.11
16	0.0895	610.92	580.00	1.05	302.19	271.27	1.11
17	0.0934	612.04	580.00	1.06	303.47	271.43	1.12
18	0.0974	613.17	580.00	1.06	305.03	271.35	1.12
19	0.1014	614.33	580.00	1.06	306.38	272.05	1.13
20	0.1053	615.44	580.00	1.06	307.78	272.34	1.13
21	0.1092	616.48	580.00	1.06	309.28	272.80	1.13
22	0.1131	617.49	580.00	1.06	310.55	273.06	1.14
23	0.1170	618.38	580.00	1.07	311.73	273.35	1.14
24	0.1210	619.24	580.00	1.07	313.41	274.17	1.14
25	0.1249	620.12	580.00	1.07	314.71	274.59	1.15
26	0.1288	620.85	580.00	1.07	315.96	275.11	1.15
27	0.1328	621.54	580.00	1.07	316.91	275.37	1.15
28	0.1367	622.13	580.00	1.07	317.67	275.54	1.15
29	0.1405	622.67	580.00	1.07	318.92	276.25	1.15
30	0.1444	623.16	580.00	1.07	319.24	276.09	1.16
31	0.1483	623.55	580.00	1.08	320.26	276.71	1.16
32	0.1522	623.94	580.00	1.08	320.81	276.87	1.16
33	0.1561	624.27	580.00	1.08	321.30	277.03	1.16
34	0.1600	624.56	580.00	1.08	322.08	277.52	1.16
35	0.1639	624.75	580.00	1.08	322.44	277.69	1.16
36	0.1678	624.98	580.00	1.08	322.83	277.85	1.16
37	0.1717	625.17	580.00	1.08	323.54	278.37	1.16

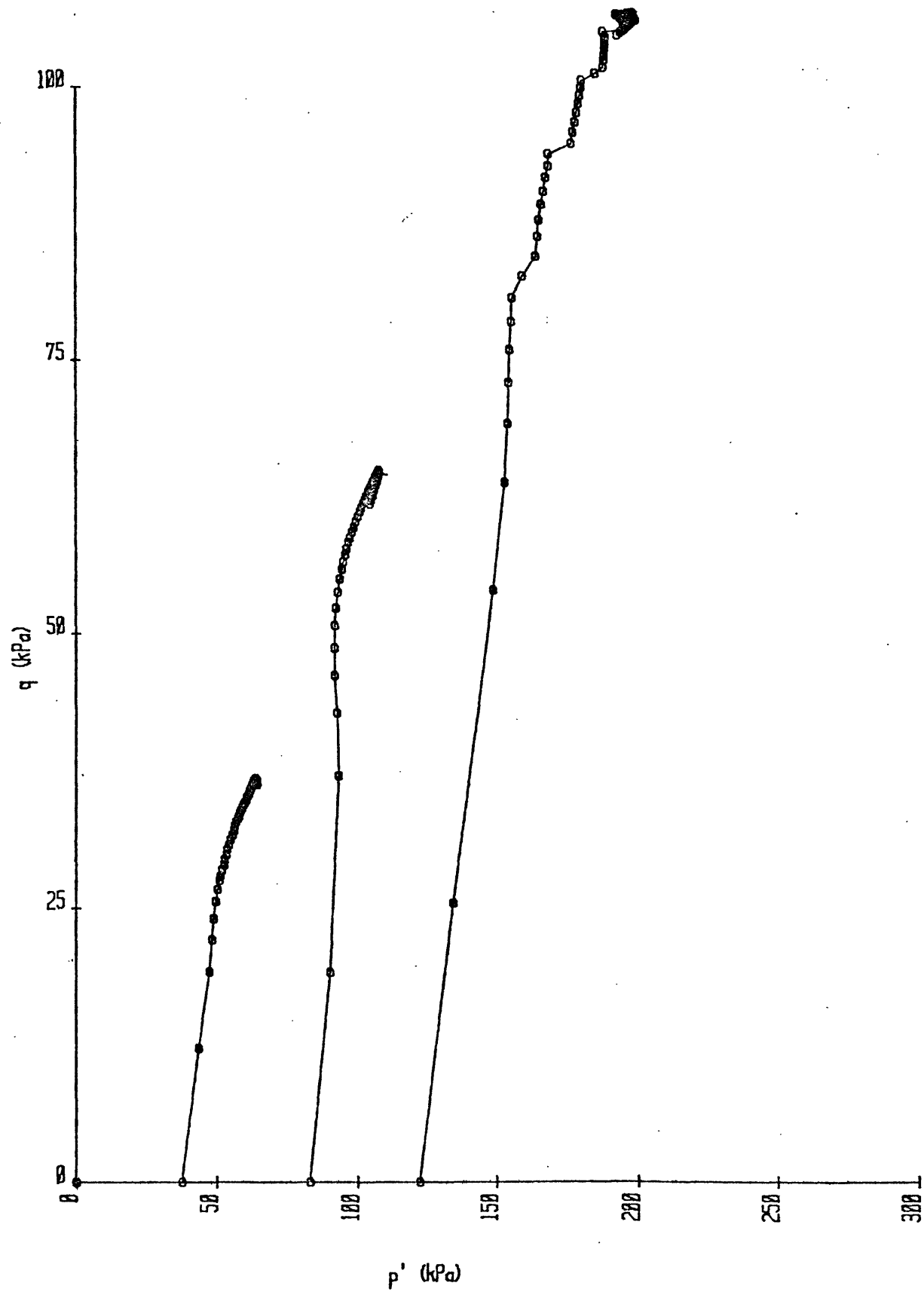
38	0.1756	625.30	580.00	1.08	323.87	278.57	1.16
39	0.1794	625.61	580.00	1.08	324.17	278.57	1.16
40	0.1834	625.77	580.00	1.08	324.62	278.86	1.16
41	0.1873	625.87	580.00	1.08	324.66	278.79	1.16
42	0.1913	625.97	580.00	1.08	325.05	279.09	1.16
43	0.1953	625.89	580.00	1.08	325.63	279.74	1.16
44	0.1992	625.84	580.00	1.08	325.84	280.00	1.16
45	0.2031	625.70	580.00	1.08	325.79	280.10	1.16
46	0.2070	625.61	580.00	1.08	326.03	280.42	1.16
47	0.2110	625.46	580.00	1.08	325.79	280.33	1.16
48	0.2148	625.34	580.00	1.08	325.79	280.46	1.16
49	0.2188	625.16	580.00	1.08	325.84	280.68	1.16
50	0.2227	624.93	580.00	1.08	325.58	280.65	1.16
51	0.2266	624.83	580.00	1.08	325.58	280.75	1.16
52	0.2305	624.71	580.00	1.08	325.36	280.65	1.16
53	0.2345	624.46	580.00	1.08	325.63	281.17	1.16
54	0.2383	624.27	580.00	1.08	325.31	281.04	1.16

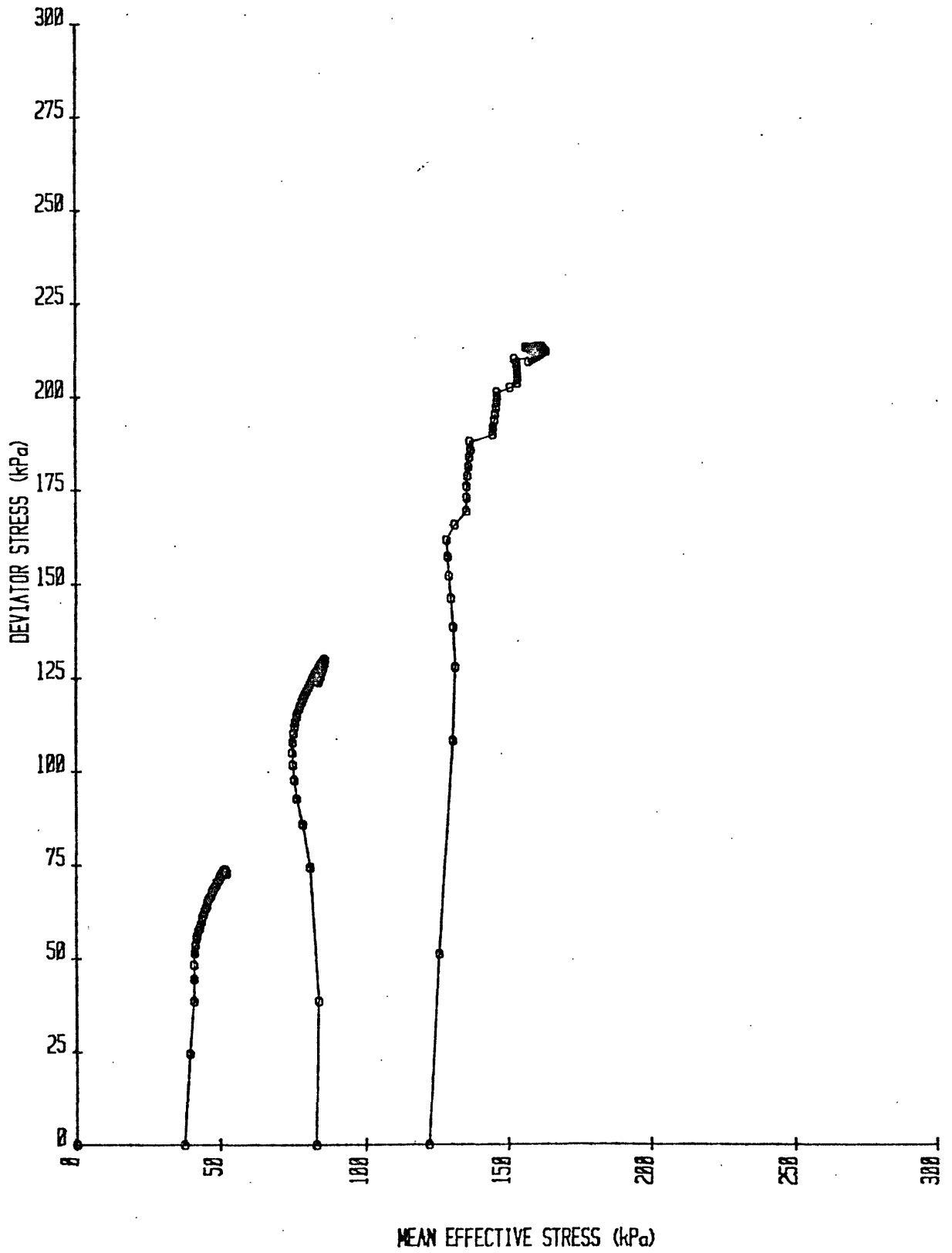
DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.36	0.00	272.34	0.00	0.00	272.34
2	0.36	3.69	273.36	0.01	7.38	272.13
3	0.17	5.32	274.43	0.02	10.64	272.66
4	0.18	6.74	275.34	0.02	13.49	273.09
5	0.05	8.04	276.50	0.03	16.08	273.82
6	-0.16	9.04	277.83	0.03	18.99	274.82
7	0.03	9.56	278.32	0.03	19.12	275.13
8	-0.23	10.27	279.36	0.04	20.55	275.93
9	-0.18	11.09	280.46	0.04	22.17	276.77
10	-0.02	11.80	281.21	0.04	23.61	277.28
11	-0.39	12.39	282.25	0.04	24.78	278.12
12	-0.07	12.88	282.81	0.05	25.76	278.52
13	-0.28	13.51	283.80	0.05	27.02	279.30
14	-0.18	14.13	284.65	0.05	28.26	279.94
15	-0.05	14.81	285.39	0.05	29.61	280.45
16	-0.52	15.46	286.73	0.05	30.92	281.57
17	-0.15	16.02	287.45	0.06	32.04	282.11
18	-0.37	16.59	288.44	0.06	33.17	282.91
19	-0.17	17.16	289.21	0.06	34.33	283.49
20	-0.26	17.72	290.06	0.06	35.44	284.15
21	-0.44	18.24	291.04	0.06	36.48	284.96
22	0.00	18.75	291.81	0.06	37.49	285.56
23	0.00	19.19	292.54	0.07	38.38	286.15
24	0.00	19.62	293.79	0.07	39.24	287.25
25	0.00	20.06	294.65	0.07	40.12	287.93
26	0.00	20.42	295.54	0.07	40.85	288.73
27	0.00	20.77	296.14	0.07	41.54	289.22
28	0.00	21.07	296.60	0.07	42.13	289.58



29	0.00	21.33	297.58	0.07	42.67	290.47
30	0.00	21.58	297.67	0.07	43.16	290.47
31	0.00	21.77	298.43	0.07	43.55	291.22
32	0.00	21.97	298.84	0.07	43.94	291.52
33	0.00	22.13	299.17	0.07	44.27	291.79
34	0.00	22.28	299.80	0.07	44.56	292.37
35	0.00	22.38	300.06	0.07	44.75	292.60
36	0.00	22.49	300.34	0.07	44.98	292.84
37	0.00	22.59	300.96	0.08	45.17	293.43
38	0.00	22.65	301.22	0.08	45.30	293.67
39	0.00	22.80	301.37	0.08	45.61	293.77
40	0.00	22.88	301.74	0.08	45.77	294.11
41	0.00	22.93	301.73	0.08	45.87	294.08
42	0.00	22.98	302.07	0.08	45.97	294.41
43	0.00	22.95	302.69	0.08	45.89	295.04
44	0.00	22.92	302.92	0.08	45.84	295.28
45	0.00	22.85	302.94	0.08	45.70	295.33
46	0.00	22.80	303.23	0.08	45.61	295.63
47	0.00	22.73	303.06	0.08	45.46	295.48
48	0.00	22.67	303.12	0.07	45.34	295.57
49	0.00	22.58	303.26	0.07	45.16	295.74
50	0.00	22.47	303.12	0.07	44.93	295.63
51	0.00	22.42	303.17	0.07	44.83	295.69
52	0.00	22.35	303.00	0.07	44.71	295.55
53	0.00	22.23	303.40	0.07	44.46	295.99
54	0.00	22.13	303.18	0.07	44.27	295.80





TRIAxIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-23, PC-44; 300/330  
INTERVAL (meters): 4.00-4.12  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/8/80

INDEX PROPERTIES

MOISTURE CONTENT: 0.43  
BULK DENSITY (g/cc): 1.81  
VOID RATIO: 1.14  
POROSITY: 0.53  
GRAIN SPEC GRAVITY (g/cc): 2.71

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 360.20

TEST RESULTS

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		44.92		
2	100.00	50.00	94.22	49.30	0.99
3	200.00	100.00	192.14	97.92	0.98
4	250.00	50.00	241.18	49.04	0.98
5	300.00	50.00	289.19	48.01	0.96

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 330.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 30.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 31.37

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	97.62
AREA (sq. mm):	1963.50	1871.17
VOLUME (cc):	196.35	182.67
WATER CONTENT:	0.43	0.37
POROSITY:	0.53	0.39
VOID RATIO:	1.14	0.63
BULK DENSITY (g/cc):	1.81	1.87
BOUYANT BULK DENSITY (g/cc):	0.79	0.85
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	6	0.78	2.45	13.21
3	19	1.28	4.36	13.20
4	29	1.46	5.39	13.22
5	64	1.81	8.00	13.26
6	99	2.00	9.95	13.16
7	165	2.22	12.85	13.17
8	295	2.47	17.18	13.18
9	553	2.74	23.52	13.15
10	1067	3.03	32.66	13.23
11	2094	3.32	45.76	14.68
12	3896	3.59	62.42	14.73
13	5699	3.76	75.49	13.76
14	7592	3.88	86.61	14.00
15	9304	3.97	96.46	14.03
16	11106	4.05	105.39	14.22
17	12908	4.11	113.61	13.42
18	14711	4.17	121.29	13.94
19	16513	4.22	128.50	13.33
20	18316	4.26	135.34	13.29
21	20118	4.30	141.84	13.50
22	21921	4.34	148.06	13.60
23	23723	4.38	154.02	13.64
24	25525	4.41	159.77	14.85
25	27328	4.44	165.31	13.42
26	29130	4.46	170.68	13.42
27	30932	4.49	175.87	13.81
28	32735	4.52	180.93	13.62
29	34537	4.54	185.84	13.47
30	36339	4.56	190.63	13.33
31	38142	4.58	195.30	13.60
32	39944	4.60	199.86	13.55
33	41747	4.62	204.32	13.06
34	43549	4.64	208.68	13.07

35	45352	4.66	212.96	13.10
36	47155	4.67	217.15	13.07
37	48957	4.69	221.26	13.08
38	50760	4.71	225.30	13.09
39	52563	4.72	229.27	13.11
40	54366	4.74	233.17	13.11
41	56168	4.75	237.00	13.12
42	57971	4.76	240.77	13.13
43	59773	4.78	244.49	13.15
44	61576	4.79	248.15	13.18
45	63379	4.80	251.75	13.21
46	65181	4.81	255.31	13.25
47	66984	4.83	258.81	13.23
48	68786	4.84	262.27	13.29
49	70588	4.85	265.68	13.32
50	72390	4.86	269.05	13.47
51	74192	4.87	272.38	13.63
52	75995	4.88	275.67	13.68

ALPHA: 0.98  
 Ao (sq. mm): 1871.18  
 Lo (mm): 97.62

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 330.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	296.47	0.00	0.00	330.00	0
2	-1.22	301.24	0.15	27.26	330.00	1503
3	-1.12	305.32	0.39	42.24	330.00	3006
4	-1.45	307.40	0.67	49.34	330.00	4508
5	-1.43	308.69	0.96	53.80	330.00	6011
6	-1.39	309.25	1.27	56.41	330.00	7513
7	-1.37	309.54	1.59	58.64	330.00	9016
8	-1.37	309.67	1.92	58.37	330.00	10519
9	-1.35	309.70	2.26	60.21	330.00	12022
10	-1.34	309.96	2.62	61.44	330.00	13524
11	-1.34	310.15	2.98	62.98	330.00	15027
12	-1.33	310.22	3.35	64.01	330.00	16529
13	-1.31	310.22	3.74	65.66	330.00	18031
14	-1.31	310.28	4.12	67.47	330.00	19533
15	-1.27	310.41	4.51	68.93	330.00	21035

16	0.17	310.25	4.89	70.50	330.00	22537
17	-1.60	310.54	5.29	71.92	330.00	24040
18	-1.58	310.22	5.68	73.54	330.00	25542
19	-1.66	310.12	6.08	74.88	330.00	27044
20	-1.53	310.19	6.48	76.26	330.00	28546
21	-1.26	310.02	6.88	77.57	330.00	30049
22	-0.89	309.86	7.28	78.87	330.00	31551
23	-1.24	309.89	7.68	80.18	330.00	33053
24	-1.17	309.76	8.08	81.10	330.00	34556
25	-1.11	309.73	8.49	82.18	330.00	36058
26	-1.02	309.34	8.88	83.14	330.00	37560
27	-1.56	309.34	9.28	84.17	330.00	39063
28	-1.65	309.21	9.68	85.21	330.00	40565
29	-1.65	309.15	10.08	86.17	330.00	42068
30	-1.65	309.31	10.48	87.13	330.00	43570
31	-1.71	308.92	10.87	87.94	330.00	45073
32	-1.71	308.99	11.27	88.82	330.00	46575
33	-1.71	308.73	11.66	89.66	330.00	48078
34	-1.71	308.82	12.05	90.32	330.00	49581
35	-1.71	308.92	12.44	91.09	330.00	51083
36	-1.70	308.69	12.82	91.74	330.00	52586
37	-1.71	308.69	13.21	92.43	330.00	54089
38	-1.75	308.63	13.60	92.85	330.00	55591
39	-1.74	308.56	13.99	93.20	330.00	57093
40	-1.69	308.56	14.38	93.50	330.00	58596
41	-1.68	308.44	14.77	93.89	330.00	60098
42	-1.69	308.34	15.15	94.27	330.00	61601
43	-1.67	308.53	15.53	94.62	330.00	63104
44	-1.66	308.37	15.93	94.77	330.00	64606
45	-1.66	308.69	16.31	95.73	330.00	66117
46	-1.65	308.79	16.70	97.58	330.00	67619
47	-1.67	308.47	17.10	98.80	330.00	69121
48	-1.66	308.01	17.49	99.15	330.00	70624
49	-1.67	307.59	17.89	99.23	330.00	72127
50	-1.73	308.14	18.27	99.53	330.00	73629
51	-1.67	307.88	18.67	100.22	330.00	75132
52	-1.66	307.72	19.06	100.49	330.00	76635

DERIVED PROPERTIES

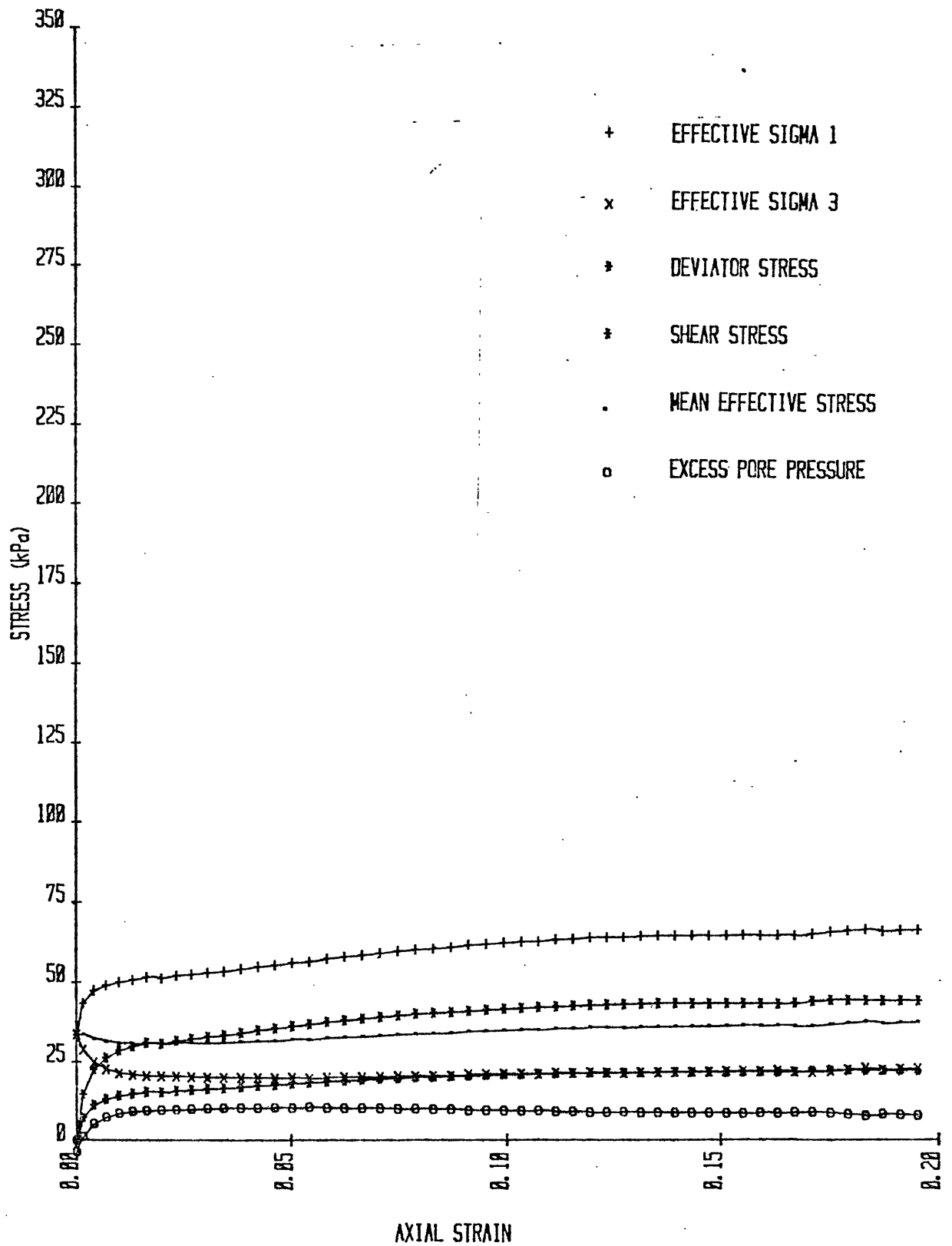
READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	330.00	330.00	1.00	33.53	33.53	1.00
2	0.0015	344.55	330.00	1.04	43.31	28.76	1.51
3	0.0040	352.48	330.00	1.07	47.16	24.68	1.91
4	0.0069	356.19	330.00	1.08	48.79	22.60	2.16
5	0.0099	358.47	330.00	1.09	49.77	21.31	2.34
6	0.0130	359.75	330.00	1.09	50.51	20.76	2.43
7	0.0163	360.83	330.00	1.09	51.29	20.46	2.51

8	0.0197	360.58	330.00	1.09	50.91	20.33	2.50
9	0.0232	361.43	330.00	1.10	51.73	20.30	2.55
10	0.0268	361.96	330.00	1.10	52.00	20.04	2.59
11	0.0305	362.63	330.00	1.10	52.48	19.85	2.64
12	0.0343	363.04	330.00	1.10	52.82	19.78	2.67
13	0.0383	363.75	330.00	1.10	53.53	19.78	2.71
14	0.0422	364.54	330.00	1.10	54.25	19.72	2.75
15	0.0462	365.14	330.00	1.11	54.72	19.59	2.79
16	0.0501	365.79	330.00	1.11	55.54	19.75	2.81
17	0.0542	366.36	330.00	1.11	55.81	19.46	2.87
18	0.0582	367.01	330.00	1.11	56.80	19.78	2.87
19	0.0622	367.53	330.00	1.11	57.41	19.88	2.89
20	0.0663	368.05	330.00	1.12	57.87	19.82	2.92
21	0.0705	368.53	330.00	1.12	58.51	19.98	2.93
22	0.0746	369.01	330.00	1.12	59.15	20.14	2.94
23	0.0787	369.48	330.00	1.12	59.58	20.11	2.96
24	0.0828	369.75	330.00	1.12	59.99	20.24	2.96
25	0.0869	370.10	330.00	1.12	60.37	20.27	2.98
26	0.0910	370.39	330.00	1.12	61.04	20.66	2.96
27	0.0951	370.71	330.00	1.12	61.36	20.66	2.97
28	0.0992	371.02	330.00	1.12	61.81	20.79	2.97
29	0.1033	371.29	330.00	1.13	62.15	20.85	2.98
30	0.1073	371.57	330.00	1.13	62.26	20.69	3.01
31	0.1114	371.76	330.00	1.13	62.84	21.08	2.98
32	0.1154	371.99	330.00	1.13	63.00	21.01	3.00
33	0.1194	372.20	330.00	1.13	63.47	21.27	2.98
34	0.1234	372.31	330.00	1.13	63.49	21.18	3.00
35	0.1274	372.48	330.00	1.13	63.56	21.08	3.02
36	0.1314	372.59	330.00	1.13	63.89	21.31	3.00
37	0.1354	372.71	330.00	1.13	64.02	21.31	3.00
38	0.1393	372.71	330.00	1.13	64.08	21.37	3.00
39	0.1433	372.67	330.00	1.13	64.11	21.44	2.99
40	0.1473	372.61	330.00	1.13	64.05	21.44	2.99
41	0.1513	372.59	330.00	1.13	64.15	21.57	2.97
42	0.1552	372.56	330.00	1.13	64.23	21.66	2.96
43	0.1591	372.52	330.00	1.13	63.99	21.47	2.98
44	0.1632	372.38	330.00	1.13	64.01	21.63	2.96
45	0.1670	372.61	330.00	1.13	63.92	21.31	3.00
46	0.1710	373.23	330.00	1.13	64.44	21.21	3.04
47	0.1752	373.55	330.00	1.13	65.09	21.53	3.02
48	0.1792	373.49	330.00	1.13	65.48	21.99	2.98
49	0.1832	373.31	330.00	1.13	65.72	22.41	2.93
50	0.1871	373.24	330.00	1.13	65.10	21.86	2.98
51	0.1912	373.32	330.00	1.13	65.44	22.12	2.96
52	0.1953	373.22	330.00	1.13	65.50	22.28	2.94



DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.33	0.00	33.53	0.00	0.00	33.53
2	0.33	7.27	36.04	0.20	14.55	33.61
3	0.51	11.24	35.92	0.31	22.48	32.17
4	0.56	13.09	35.70	0.37	26.19	31.33
5	0.57	14.23	35.54	0.40	28.47	30.80
6	0.43	14.88	35.63	0.42	29.75	30.67
7	0.27	15.41	35.88	0.43	30.83	30.74
8	-0.52	15.29	35.62	0.43	30.58	30.53
9	0.04	15.72	36.02	0.44	31.43	30.78
.....						
10	0.49	15.98	36.02	0.44	31.96	30.69
11	0.29	16.31	36.16	0.45	32.63	30.72
12	0.16	16.52	36.30	0.46	33.04	30.79
13	0.00	16.87	36.66	0.46	33.75	31.03
14	0.08	17.27	36.99	0.47	34.54	31.23
15	0.22	17.57	37.16	0.47	35.14	31.30
16	-0.25	17.89	37.64	0.48	35.79	31.68
17	0.52	18.18	37.64	0.48	36.36	31.58
18	-0.50	18.51	38.29	0.48	37.01	32.12
19	-0.19	18.76	38.64	0.49	37.53	32.39
20	0.12	19.03	38.84	0.49	38.05	32.50
21	-0.34	19.27	39.24	0.49	38.53	32.82
22	-0.34	19.50	39.64	0.49	39.01	33.14
23	0.07	19.74	39.85	0.50	39.48	33.27
24	-0.47	19.88	40.11	0.50	39.75	33.49
25	-0.10	20.05	40.32	0.50	40.10	33.64
26	-1.36	20.19	40.85	0.49	40.39	34.12
27	0.00	20.35	41.01	0.50	40.71	34.23
28	-0.41	20.51	41.30	0.50	41.02	34.46
29	-0.24	20.65	41.50	0.50	41.29	34.62
30	0.60	20.78	41.47	0.50	41.57	34.55
31	-2.01	20.88	41.96	0.50	41.76	35.00
32	0.28	20.99	42.01	0.50	41.99	35.01
33	-1.26	21.10	42.37	0.50	42.20	35.34
34	0.86	21.16	42.33	0.50	42.31	35.28
35	0.58	21.24	42.32	0.50	42.48	35.24
36	-2.08	21.29	42.60	0.50	42.59	35.50
37	0.00	21.36	42.66	0.50	42.71	35.54
38	24.64	21.35	42.72	0.50	42.71	35.61
39	1.73	21.34	42.77	0.50	42.67	35.66
40	0.00	21.31	42.74	0.50	42.61	35.64
41	5.20	21.29	42.86	0.50	42.59	35.76
42	4.15	21.28	42.94	0.50	42.56	35.85
43	-4.54	21.26	42.73	0.50	42.52	35.64
44	1.20	21.19	42.82	0.49	42.38	35.76
45	1.41	21.31	42.61	0.50	42.61	35.51
46	0.16	21.61	42.82	0.50	43.23	35.62
47	-1.00	21.78	43.31	0.50	43.55	36.05
48	7.68	21.75	43.73	0.50	43.49	36.48
49	2.34	21.66	44.06	0.49	43.31	36.85
50	-7.42	21.62	43.48	0.50	43.24	36.27
51	-3.21	21.66	43.78	0.49	43.32	36.56
52	1.63	21.61	43.89	0.49	43.22	36.69



TRIAXIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-23, PC-44; 300/360  
INTERVAL (meters): 4.12-4.24  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/8/80

INDEX PROPERTIES

MOISTURE CONTENT: 0.45  
BULK DENSITY (g/cc): 1.79  
VOID RATIO: 1.19  
POROSITY: 0.54  
GRAIN SPEC GRAVITY (g/cc): 2.71  
LIQUID LIMIT (%): 41.00  
PLASTIC LIMIT (%): 21.00

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 353.60

TEST RESULTS

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		47.98		
2	100.00	50.00	97.41	49.43	0.99
3	200.00	100.00	196.75	99.34	0.99
4	250.00	50.00	246.66	49.91	1.00
5	300.00	50.00	296.09	49.43	0.99

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 360.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 60.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 31.52

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	96.25
AREA (sq. mm):	1963.50	1819.09
VOLUME (cc):	196.35	175.09
WATER CONTENT:	0.45	0.36
POROSITY:	0.54	0.38
VOID RATIO:	1.19	0.62
BULK DENSITY (g/cc):	1.79	1.89
BOUYANT BULK DENSITY (g/cc):	0.77	0.86
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	14	1.15	3.74	20.66
3	23	1.36	4.80	20.66
4	41	1.61	6.40	20.66
5	59	1.77	7.68	20.66
6	94	1.97	9.70	20.66
7	160	2.20	12.65	20.67
8	291	2.46	17.06	20.67
9	549	2.74	23.43	20.67
10	1064	3.03	32.62	20.67
11	2091	3.32	45.73	20.69
12	3893	3.59	62.39	20.71
13	5696	3.76	75.47	20.73
14	7498	3.87	86.59	20.75
15	9300	3.97	96.44	20.76
16	11103	4.05	105.37	20.77
17	12905	4.11	113.60	20.79
18	14707	4.17	121.27	20.80
19	16510	4.22	128.49	20.81
20	18312	4.26	135.32	20.83
21	20115	4.30	141.83	20.94
22	21917	4.34	148.04	20.85
23	23720	4.38	154.01	20.86
24	25522	4.41	159.76	20.97
25	27324	4.44	165.30	20.89
26	29127	4.46	170.67	20.90
27	30929	4.49	175.87	20.92
28	32731	4.51	180.92	20.93
29	34534	4.54	185.83	20.94
30	36336	4.56	190.62	20.95
31	38138	4.58	195.29	20.96
32	39941	4.60	199.85	20.98
33	41743	4.62	204.31	20.99
34	43546	4.64	208.68	21.00

35	45348	4.66	212.95	21.02
36	47151	4.67	217.14	21.03
37	48954	4.69	221.26	21.04
38	50757	4.71	225.29	21.06
39	52560	4.72	229.26	21.07
40	54362	4.74	233.16	21.08
41	56165	4.75	236.99	21.09
42	57967	4.76	240.76	21.10
43	59770	4.78	244.48	21.12
44	61573	4.79	248.14	21.14
45	63376	4.80	251.75	21.15
46	65178	4.81	255.30	21.17
47	66980	4.83	258.80	21.18
48	68783	4.84	262.27	21.20
49	70585	4.85	265.68	21.22
50	72387	4.86	269.05	21.23
51	74189	4.87	272.38	21.24
52	75992	4.88	275.67	21.26

ALPHA: 0.96  
 Ao (sq. mm): 1819.09  
 Lo (mm): 96.25

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 360.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	303.50	0.00	0.00	360.00	0
2	0.00	319.94	0.31	57.09	360.00	1502
3	0.01	326.61	0.67	70.70	360.00	3004
4	0.01	330.43	1.03	78.53	360.00	4507
5	0.01	332.75	1.40	83.83	360.00	6009
6	0.01	334.15	1.77	86.98	360.00	7512
7	0.02	335.00	2.15	86.63	360.00	9015
8	0.02	335.89	2.54	87.46	360.00	10518
9	0.02	336.66	2.93	88.77	360.00	12021
10	0.02	337.45	3.32	90.30	360.00	13523
11	0.02	337.83	3.72	91.88	360.00	15026
12	0.02	338.15	4.12	93.50	360.00	16528
13	0.02	338.50	4.52	95.25	360.00	18030
14	0.02	338.85	4.91	96.65	360.00	19532
15	0.02	339.01	5.31	98.09	360.00	21034

16	0.02	339.26	5.71	99.80	360.00	22536
17	0.01	339.42	6.11	101.33	360.00	24039
18	0.01	339.42	6.51	102.90	360.00	25541
19	0.01	339.61	6.90	104.30	360.00	27043
20	0.02	339.68	7.30	105.75	360.00	28545
21	0.01	339.61	7.69	107.23	360.00	30047
22	0.01	339.68	8.09	108.55	360.00	31550
23	0.01	339.77	8.48	109.86	360.00	33052
24	0.02	339.71	8.88	111.21	360.00	34554
25	0.02	339.65	9.27	112.35	360.00	36057
26	0.02	339.68	9.67	113.75	360.00	37559
27	0.02	339.61	10.06	114.76	360.00	39062
28	0.02	339.58	10.45	115.98	360.00	40564
29	0.02	339.61	10.84	116.90	360.00	42066
30	0.02	339.65	11.23	118.17	360.00	43569
31	0.02	339.68	11.62	119.13	360.00	45071
32	0.03	339.42	12.01	120.23	360.00	46574
33	0.03	339.39	12.40	121.06	360.00	48077
34	0.02	339.45	12.79	121.39	360.00	49579
35	0.02	339.45	13.19	123.11	360.00	51082
36	0.02	339.45	13.58	123.86	360.00	52585
37	0.03	339.42	13.97	124.60	360.00	54087
38	0.02	339.33	14.37	125.13	360.00	55590
39	0.02	339.33	14.77	125.61	360.00	57092
40	0.02	339.30	15.17	126.05	360.00	58595
41	0.02	339.20	15.57	126.57	360.00	60097
42	0.02	338.98	15.98	126.79	360.00	61600
43	0.01	339.01	16.37	127.23	360.00	63102
44	0.01	339.14	16.78	127.40	360.00	64605
45	0.02	339.71	17.17	128.98	360.00	66107
46	0.04	339.93	17.57	132.00	360.00	67609
47	0.04	339.36	17.97	133.57	360.00	69112
48	0.03	338.88	18.38	133.70	360.00	70615
49	0.03	338.60	18.79	133.83	360.00	72117
50	0.03	339.01	19.18	133.92	360.00	73620
51	0.03	339.04	19.59	134.66	360.00	75123
52	0.02	338.72	20.00	134.66	360.00	76625

DERIVED PROPERTIES

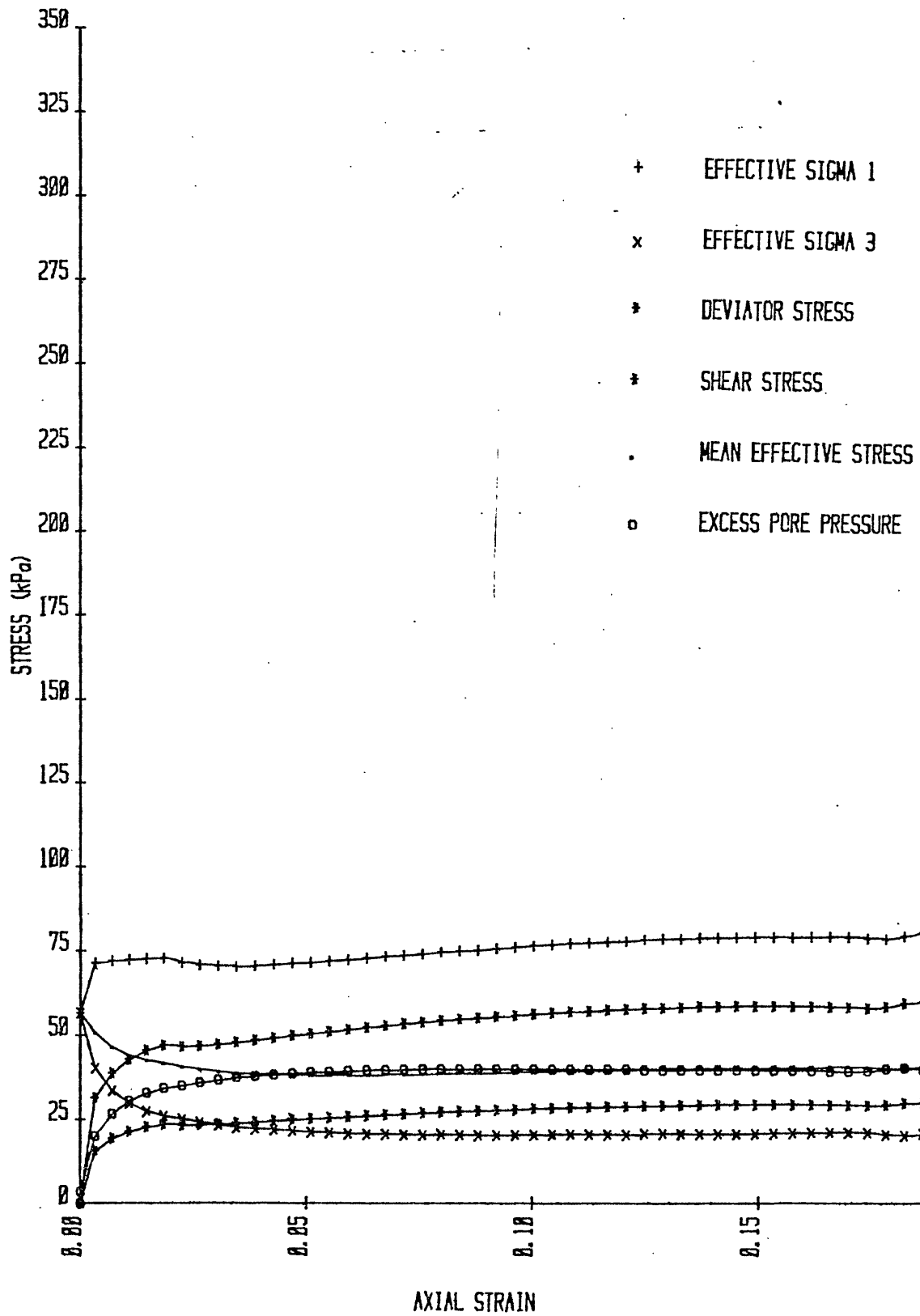
READING	STRAIN A	TOTAL STRESS			EFFECTIVE STRESS		
		SIG1 (kPa)	SIG3 (kPa)	RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	360.00	360.00	1.00	56.50	56.50	1.00
2	0.0033	391.28	360.00	1.09	71.35	40.07	1.78
3	0.0070	398.59	360.00	1.11	71.98	33.39	2.16
4	0.0107	402.71	360.00	1.12	72.28	29.57	2.44
5	0.0146	405.41	360.00	1.13	72.66	27.25	2.67
6	0.0184	406.93	360.00	1.13	72.79	25.86	2.82
7	0.0224	406.56	360.00	1.13	71.55	25.00	2.86

8	0.0264	406.81	360.00	1.13	70.92	24.11	2.94
9	0.0304	407.31	360.00	1.13	70.66	23.34	3.03
10	0.0345	407.93	360.00	1.13	70.48	22.55	3.13
11	0.0386	408.56	360.00	1.13	70.72	22.17	3.19
12	0.0428	409.20	360.00	1.14	71.05	21.85	3.25
13	0.0469	409.90	360.00	1.14	71.40	21.50	3.32
14	0.0510	410.42	360.00	1.14	71.57	21.15	3.38
15	0.0552	410.95	360.00	1.14	71.94	20.99	3.43
16	0.0593	411.61	360.00	1.14	72.34	20.74	3.49
17	0.0635	412.17	360.00	1.14	72.74	20.58	3.54
18	0.0676	412.74	360.00	1.15	73.32	20.58	3.56
19	0.0717	413.22	360.00	1.15	73.61	20.39	3.61
20	0.0759	413.72	360.00	1.15	74.04	20.32	3.64
21	0.0799	414.24	360.00	1.15	74.62	20.39	3.66
22	0.0840	414.66	360.00	1.15	74.98	20.32	3.69
23	0.0882	415.07	360.00	1.15	75.30	20.23	3.72
24	0.0923	415.50	360.00	1.15	75.79	20.29	3.73
25	0.0964	415.81	360.00	1.16	76.17	20.36	3.74
26	0.1004	416.25	360.00	1.16	76.58	20.32	3.77
27	0.1045	416.49	360.00	1.16	76.88	20.39	3.77
28	0.1086	416.84	360.00	1.16	77.26	20.42	3.78
29	0.1126	417.03	360.00	1.16	77.41	20.39	3.80
30	0.1166	417.38	360.00	1.16	77.74	20.36	3.82
31	0.1208	417.58	360.00	1.16	77.90	20.32	3.83
32	0.1248	417.84	360.00	1.16	78.42	20.58	3.81
33	0.1289	417.97	360.00	1.16	78.58	20.61	3.81
34	0.1329	418.10	360.00	1.16	78.65	20.55	3.83
35	0.1370	418.41	360.00	1.16	78.95	20.55	3.84
36	0.1411	418.48	360.00	1.16	79.03	20.55	3.85
37	0.1452	418.55	360.00	1.16	79.13	20.58	3.85
38	0.1493	418.51	360.00	1.16	79.19	20.67	3.83
39	0.1535	418.45	360.00	1.16	79.13	20.67	3.83
40	0.1576	418.37	360.00	1.16	79.07	20.71	3.82
41	0.1618	418.32	360.00	1.16	79.12	20.80	3.80
42	0.1660	418.13	360.00	1.16	79.15	21.02	3.77
43	0.1701	418.04	360.00	1.16	79.03	20.99	3.77
44	0.1743	417.83	360.00	1.16	78.69	20.86	3.77
45	0.1784	418.25	360.00	1.16	78.55	20.29	3.87
46	0.1825	419.32	360.00	1.16	79.39	20.07	3.96
47	0.1867	419.72	360.00	1.17	80.36	20.64	3.89
48	0.1910	419.46	360.00	1.17	80.58	21.12	3.82
49	0.1952	419.21	360.00	1.16	80.61	21.40	3.77
50	0.1993	418.95	360.00	1.16	79.94	20.99	3.81
51	0.2035	418.96	360.00	1.16	79.92	20.96	3.81
52	0.2077	418.65	360.00	1.16	79.93	21.28	3.76

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.53	0.00	56.50	0.00	0.00	56.50
2	0.53	15.64	55.71	0.28	31.28	50.49
3	0.91	19.30	52.69	0.37	38.59	46.25
4	0.93	21.35	50.93	0.42	42.71	43.81
5	0.86	22.71	49.96	0.45	45.41	42.39
6	0.92	23.47	49.32	0.48	46.93	41.50
7	-2.27	23.28	48.27	0.48	46.56	40.51
8	3.51	23.40	47.51	0.49	46.81	39.71
9	1.51	23.66	47.00	0.50	47.31	39.11
10	1.29	23.96	46.51	0.52	47.93	38.53
11	0.61	24.28	46.44	0.52	48.56	38.35
12	0.50	24.60	46.45	0.53	49.20	38.25
13	0.50	24.95	46.45	0.54	49.90	38.13
14	0.68	25.21	46.36	0.54	50.42	37.96
15	0.30	25.47	46.46	0.55	50.95	37.97
16	0.39	25.80	46.54	0.55	51.61	37.94
17	0.28	26.08	46.66	0.56	52.17	37.97
18	0.00	26.37	46.95	0.56	52.74	38.16
19	0.40	26.61	47.00	0.57	53.22	38.13
20	0.13	26.86	47.18	0.57	53.72	38.23
21	-0.12	27.12	47.51	0.57	54.24	38.47
22	0.15	27.33	47.65	0.57	54.66	38.54
23	0.23	27.53	47.76	0.58	55.07	38.58
24	-0.15	27.75	48.04	0.58	55.50	38.79
25	-0.20	27.91	48.26	0.58	55.81	38.96
26	0.07	28.13	48.45	0.58	56.25	39.07
27	-0.27	28.25	48.63	0.58	56.49	39.22
28	-0.09	28.42	48.84	0.58	56.84	39.36
29	0.17	28.51	48.90	0.58	57.03	39.40
30	0.09	28.69	49.05	0.58	57.38	39.48
31	0.16	28.79	49.11	0.59	57.58	39.52
32	-0.97	28.92	49.50	0.58	57.84	39.86
33	-0.25	28.99	49.60	0.58	57.97	39.93
34	0.49	29.05	49.60	0.59	58.10	39.91
35	0.00	29.20	49.75	0.59	58.41	40.02
36	0.00	29.24	49.79	0.59	58.48	40.04
37	-0.45	29.28	49.85	0.59	58.55	40.10
38	2.41	29.26	49.93	0.59	58.51	40.18
39	0.00	29.23	49.90	0.59	58.45	40.16
40	0.38	29.18	49.89	0.58	58.37	40.16
41	1.98	29.16	49.96	0.58	58.32	40.24
42	1.18	29.07	50.09	0.58	58.13	40.40
43	-0.37	29.02	50.01	0.58	58.04	40.34
44	-0.59	28.91	49.78	0.58	57.83	40.14
45	1.34	29.13	49.42	0.59	58.25	39.71
46	0.21	29.66	49.73	0.60	59.32	39.84
47	-1.43	29.86	50.50	0.59	59.72	40.55
48	1.88	29.73	50.85	0.58	59.46	40.94
49	1.12	29.61	51.01	0.58	59.21	41.14
50	-1.57	29.47	50.46	0.58	58.95	40.64
51	2.35	29.48	50.44	0.58	58.96	40.61
52	1.02	29.32	50.60	0.58	58.65	40.83





## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-23, PC-44; 300/420  
INTERVAL (meters): 4.24-4.36  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/8/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.43  
BULK DENSITY (g/cc): 1.81  
VOID RATIO: 1.14  
POROSITY: 0.53  
GRAIN SPEC GRAVITY (g/cc): 2.71

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 353.00

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		47.99		
2	100.00	50.00	98.36	50.37	1.01
3	200.00	100.00	196.28	97.92	0.98
4	250.00	50.00	246.46	50.18	1.00
5	300.00	50.00	296.22	49.76	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 420.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 120.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 33.23

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	95.41
AREA (sq. mm):	1963.50	1787.51
VOLUME (cc):	196.35	170.55
WATER CONTENT:	0.43	0.32
POROSITY:	0.53	0.34
VOID RATIO:	1.14	0.52
BULK DENSITY (g/cc):	1.81	1.93
BOUYANT BULK DENSITY (g/cc):	0.79	0.91
% SATURATION:	100.00	100.00

MEASURED PROPERTIES.

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	8	0.90	2.83	25.55
3	19	1.28	4.36	25.54
4	29	1.46	5.39	25.54
5	47	1.67	6.86	25.54
6	82	1.91	9.06	25.55
7	148	2.17	12.17	25.53
8	279	2.45	16.70	25.54
9	537	2.73	23.17	25.55
10	1051	3.02	32.42	25.55
11	2078	3.32	45.59	25.55
12	3880	3.59	62.29	25.57
13	5683	3.75	75.39	25.57
14	7485	3.87	86.52	25.57
15	9287	3.97	96.37	25.57
16	11090	4.04	105.31	25.57
17	12892	4.11	113.54	25.58
18	14694	4.17	121.22	25.58
19	16497	4.22	128.44	25.58
20	18299	4.26	135.27	25.59
21	20102	4.30	141.78	25.58
22	21904	4.34	148.00	25.58
23	23707	4.37	153.97	25.59
24	25509	4.41	159.72	25.59
25	27311	4.44	165.26	25.59
26	29114	4.46	170.63	25.59
27	30916	4.49	175.83	25.60
28	32718	4.51	180.88	25.60
29	34521	4.54	185.80	25.60
30	36323	4.56	190.59	25.60
31	38125	4.58	195.26	25.61
32	39928	4.60	199.82	25.61
33	41730	4.62	204.28	25.62
34	43533	4.64	208.65	25.62

35	45335	4.66	212.92	25.62
36	47138	4.67	217.11	25.64
37	48941	4.69	221.23	25.63
38	50744	4.71	225.26	25.65
39	52547	4.72	229.23	25.65
40	54349	4.74	233.13	25.66
41	56152	4.75	236.96	25.66
42	57954	4.76	240.74	25.67
43	59757	4.78	244.45	25.68
44	61560	4.79	248.11	25.70
45	63363	4.80	251.72	25.70
46	65165	4.81	255.27	25.72
47	66967	4.83	258.78	25.73
48	68770	4.84	262.24	25.75
49	70572	4.85	265.65	25.76
50	72374	4.86	269.02	25.77
51	74176	4.87	272.35	25.78
52	75979	4.88	275.64	25.80

ALPHA: 0.95  
 Ao (sq. mm): 1787.51  
 Lo (mm): 95.41

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 420.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFD (N)	CELP (kPa)	TIME (sec)
1	0.00	312.45	0.00	0.00	420.00	1
2	0.00	330.73	0.29	57.59	420.00	1503
3	0.01	349.14	0.61	96.34	420.00	3006
4	0.01	359.21	0.95	111.58	420.00	4508
5	0.01	366.18	1.29	121.15	420.00	6011
6	0.01	370.42	1.65	128.05	420.00	7514
7	0.02	373.94	2.01	133.74	420.00	9016
8	0.02	376.28	2.39	137.85	420.00	10519
9	0.02	378.21	2.78	140.64	420.00	12021
10	0.02	379.54	3.17	141.92	420.00	13523
11	0.03	380.71	3.56	143.43	420.00	15026
12	0.03	381.11	3.95	144.56	420.00	16528
13	0.02	382.02	4.34	145.91	420.00	18030
14	0.02	382.77	4.74	147.35	420.00	19533
15	0.02	383.09	5.13	149.48	420.00	21036

16	0.03	383.52	5.53	151.18	420.00	22538
17	0.02	383.87	5.93	152.85	420.00	24040
18	0.03	383.78	6.33	154.36	420.00	25542
19	0.03	384.17	6.73	155.95	420.00	27044
20	0.03	384.40	7.14	157.73	420.00	28547
21	0.02	384.62	7.53	159.36	420.00	30049
22	0.04	384.40	7.94	161.07	420.00	31551
23	0.02	384.62	8.34	162.69	420.00	33054
24	0.04	384.69	8.74	164.28	420.00	34556
25	0.03	384.79	9.14	165.56	420.00	36058
26	0.03	384.59	9.54	166.88	420.00	37561
27	0.04	384.53	9.94	168.16	420.00	39063
28	0.04	384.53	10.34	169.75	420.00	40566
29	0.03	384.43	10.74	170.79	420.00	42068
30	0.03	384.23	11.13	172.07	420.00	43570
31	0.04	384.30	11.54	173.35	420.00	45073
32	0.04	384.36	11.93	174.36	420.00	46576
33	0.04	384.30	12.33	175.56	420.00	48078
34	0.03	384.10	12.73	176.57	420.00	49581
35	0.04	384.27	13.12	177.50	420.00	51084
36	0.04	384.20	13.52	178.47	420.00	52586
37	0.04	384.20	13.91	179.09	420.00	54089
38	0.04	384.10	14.31	179.94	420.00	55591
39	0.04	383.97	14.71	180.52	420.00	57094
40	0.04	384.04	15.10	180.75	420.00	58596
41	0.04	383.74	15.50	181.30	420.00	60098
42	0.04	383.81	15.90	181.45	420.00	61601
43	0.02	383.87	16.29	181.92	420.00	63104
44	0.03	384.10	16.68	182.15	420.00	64606
45	0.05	384.07	17.05	183.70	420.00	66109
46	0.05	384.46	17.45	186.57	420.00	67611
47	0.05	383.81	17.86	188.04	420.00	69114
48	0.04	383.39	18.26	188.66	420.00	70616
49	0.04	383.16	18.66	188.39	420.00	72119
50	0.04	383.97	19.05	188.97	420.00	73622
51	0.05	383.65	19.45	189.67	420.00	75124
52	0.05	383.71	19.84	189.74	420.00	76627

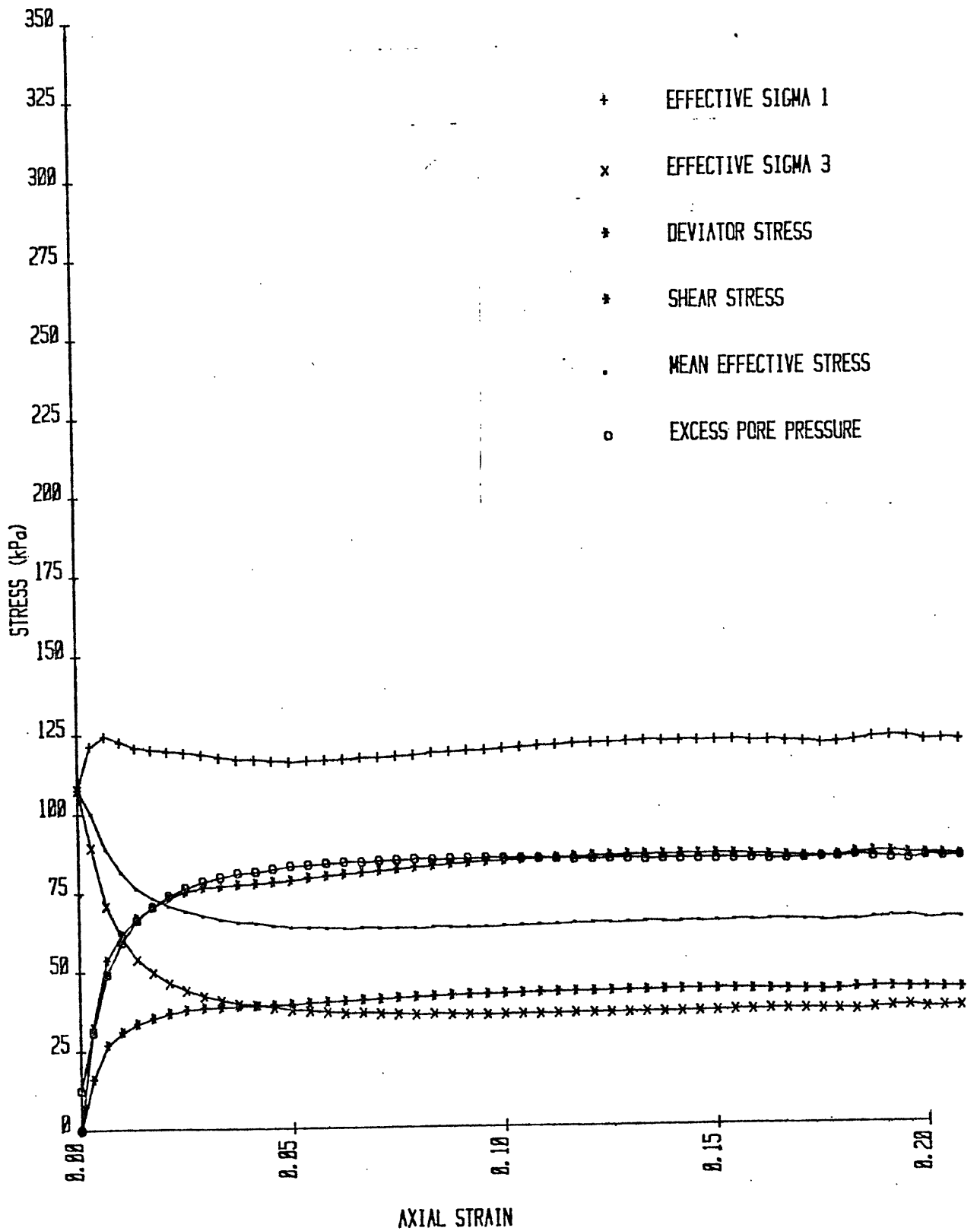
DERIVED PROPERTIES

READING	STRAIN	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	420.00	420.00	1.00	107.55	107.55	1.00
2	0.0030	452.12	420.00	1.08	121.39	89.27	1.36
3	0.0064	473.55	420.00	1.13	124.42	70.86	1.76
4	0.0100	481.80	420.00	1.15	122.59	60.79	2.02
5	0.0135	486.86	420.00	1.16	120.68	53.82	2.24
6	0.0172	490.40	420.00	1.17	119.98	49.58	2.42
7	0.0211	493.25	420.00	1.17	119.31	46.06	2.59

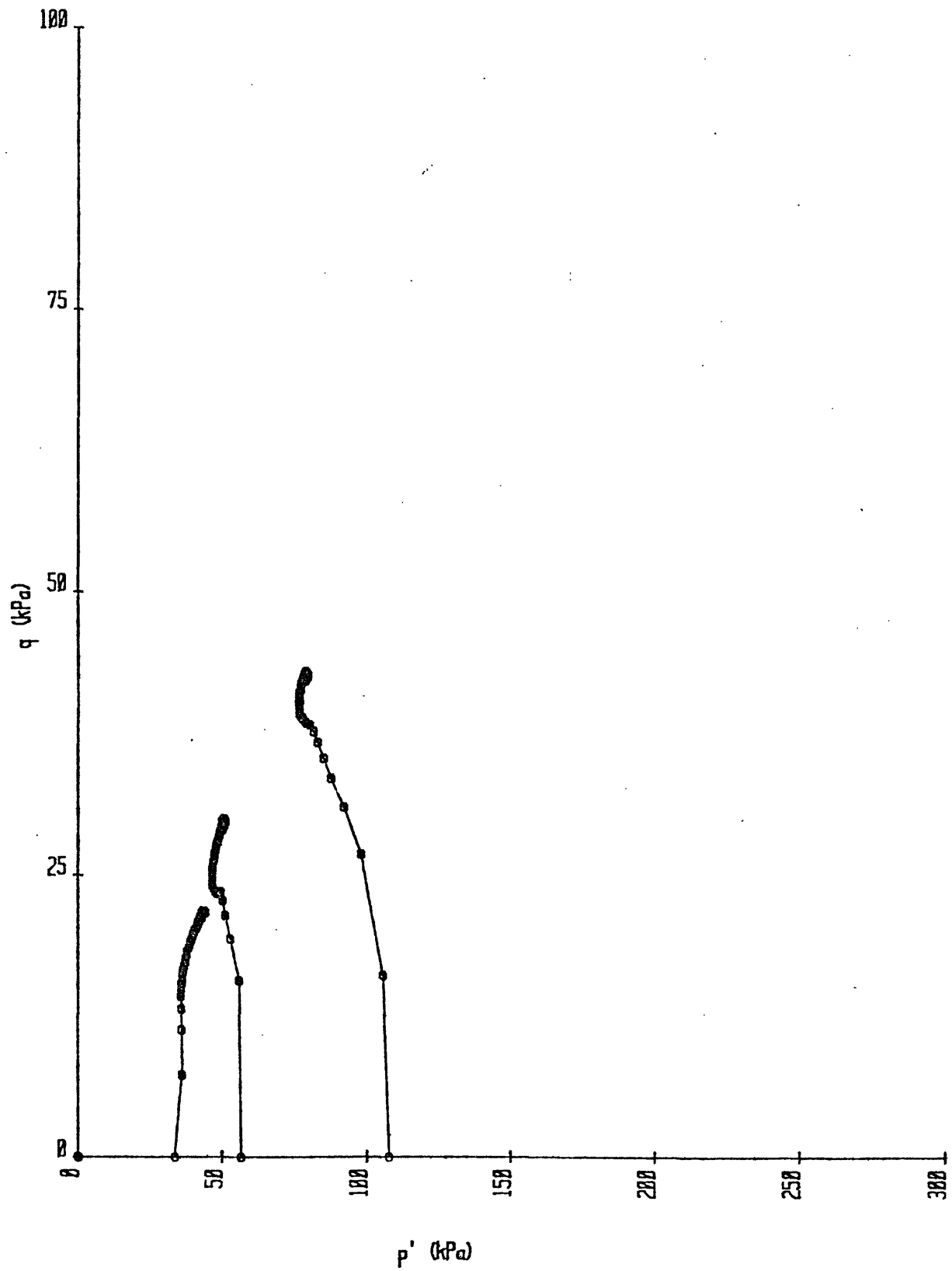
8	0.0250	495.19	420.00	1.18	118.91	43.72	2.72
9	0.0291	496.39	420.00	1.18	118.18	41.80	2.83
10	0.0332	496.76	420.00	1.18	117.22	40.46	2.90
11	0.0373	497.25	420.00	1.18	116.54	39.29	2.97
12	0.0414	497.52	420.00	1.18	116.42	38.90	2.99
13	0.0455	497.92	420.00	1.19	115.90	37.98	3.05
14	0.0496	498.34	420.00	1.19	115.57	37.23	3.10
15	0.0538	499.12	420.00	1.19	116.03	36.91	3.14
16	0.0580	499.67	420.00	1.19	116.16	36.48	3.18
17	0.0622	500.19	420.00	1.19	116.32	36.13	3.22
18	0.0664	500.62	420.00	1.19	116.85	36.22	3.23
19	0.0706	501.09	420.00	1.19	116.92	35.83	3.26
20	0.0748	501.64	420.00	1.19	117.25	35.60	3.29
21	0.0789	502.11	420.00	1.20	117.49	35.38	3.32
22	0.0832	502.61	420.00	1.20	118.22	35.60	3.32
23	0.0874	503.06	420.00	1.20	118.44	35.38	3.35
24	0.0916	503.49	420.00	1.20	118.80	35.31	3.36
25	0.0958	503.75	420.00	1.20	118.96	35.21	3.38
26	0.1000	504.02	420.00	1.20	119.43	35.41	3.37
27	0.1042	504.27	420.00	1.20	119.75	35.47	3.38
28	0.1083	504.67	420.00	1.20	120.15	35.47	3.39
29	0.1125	504.80	420.00	1.20	120.37	35.57	3.38
30	0.1167	505.03	420.00	1.20	120.80	35.77	3.38
31	0.1209	505.25	420.00	1.20	120.95	35.70	3.39
32	0.1251	505.34	420.00	1.20	120.98	35.64	3.39
33	0.1292	505.52	420.00	1.20	121.22	35.70	3.40
34	0.1334	505.60	420.00	1.20	121.50	35.90	3.38
35	0.1375	505.64	420.00	1.20	121.38	35.74	3.40
36	0.1417	505.70	420.00	1.20	121.50	35.80	3.39
37	0.1458	505.58	420.00	1.20	121.38	35.80	3.39
38	0.1500	505.57	420.00	1.20	121.46	35.90	3.38
39	0.1542	505.42	420.00	1.20	121.45	36.03	3.37
40	0.1583	505.11	420.00	1.20	121.08	35.96	3.37
41	0.1625	504.94	420.00	1.20	121.20	36.26	3.34
42	0.1666	504.60	420.00	1.20	120.79	36.19	3.34
43	0.1707	504.39	420.00	1.20	120.52	36.13	3.34
44	0.1748	504.08	420.00	1.20	119.98	35.90	3.34
45	0.1787	504.40	420.00	1.20	120.33	35.93	3.35
46	0.1829	505.28	420.00	1.20	120.82	35.54	3.40
47	0.1872	505.50	420.00	1.20	121.69	36.19	3.36
48	0.1914	505.34	420.00	1.20	121.95	36.61	3.33
49	0.1956	504.78	420.00	1.20	121.62	36.84	3.30
50	0.1996	504.61	420.00	1.20	120.64	36.03	3.35
51	0.2038	504.48	420.00	1.20	120.83	36.35	3.32
52	0.2079	504.08	420.00	1.20	120.37	36.29	3.32

DERIVED PROPERTIES (cont.)

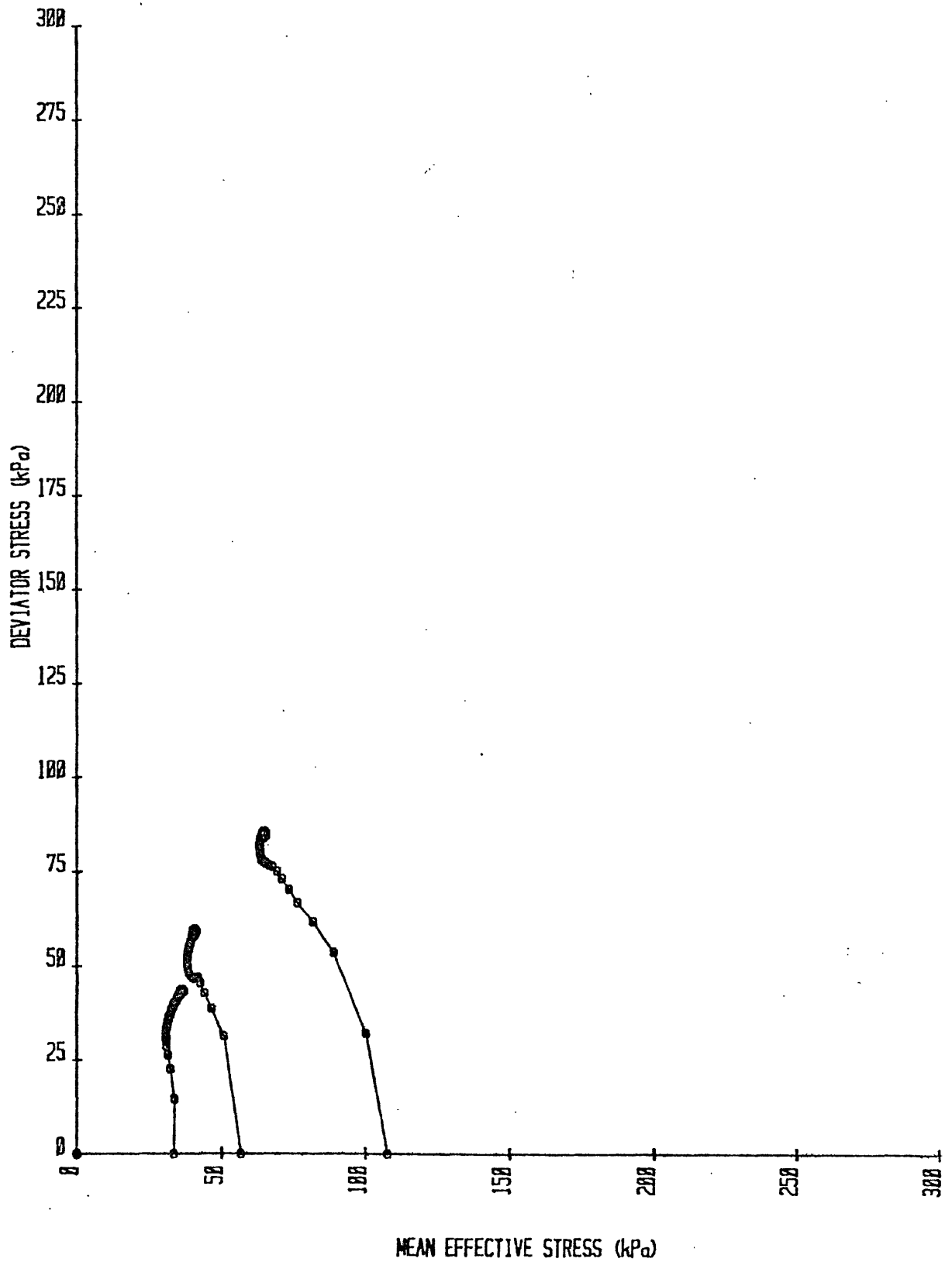
READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR STRESS (kPa)	MEAN EFFECTIVE STRESS (kPa)
1	0.57	0.00	107.55	0.00	0.00	107.55
2	0.57	16.06	105.33	0.15	32.12	99.98
3	0.86	26.78	97.64	0.27	53.55	88.71
4	1.22	30.90	91.69	0.34	61.80	81.39
5	1.38	33.43	87.25	0.38	66.86	76.10
6	1.20	35.20	84.78	0.42	70.40	73.05
7	1.24	36.62	82.69	0.44	73.25	70.48
8	1.21	37.60	81.31	0.46	75.19	68.78
9	1.60	38.19	79.99	0.48	76.39	67.26
10	3.61	38.38	78.84	0.49	76.76	66.05
11	2.39	38.62	77.91	0.50	77.25	65.04
12	1.44	38.76	77.66	0.50	77.52	64.74
13	2.32	38.96	76.94	0.51	77.92	63.95
14	1.77	39.17	76.40	0.51	78.34	63.35
15	0.42	39.56	76.47	0.52	79.12	63.28
16	0.77	39.84	76.32	0.52	79.67	63.04
17	0.69	40.10	76.22	0.53	80.19	62.86
18	-0.23	40.31	76.53	0.53	80.62	63.10
19	-0.84	40.54	76.38	0.53	81.09	62.86
20	0.41	40.82	76.43	0.53	81.64	62.82
21	0.48	41.06	76.43	0.54	82.11	62.75
22	-0.46	41.31	76.91	0.54	82.61	63.14
23	0.51	41.53	76.91	0.54	83.06	63.06
24	0.15	41.74	77.05	0.54	83.49	63.14
25	0.38	41.87	77.09	0.54	83.75	63.13
26	-0.71	42.01	77.42	0.54	84.02	63.42
27	-0.26	42.14	77.61	0.54	84.27	63.56
28	0.00	42.34	77.81	0.54	84.67	63.70
29	-0.80	42.40	77.97	0.54	84.80	63.84
30	-0.83	42.52	78.28	0.54	85.03	64.11
31	0.30	42.63	78.33	0.54	85.25	64.12
32	0.73	42.67	78.31	0.54	85.34	64.08
33	-0.36	42.76	78.46	0.54	85.52	64.21
34	-2.39	42.80	78.70	0.54	85.60	64.43
35	4.30	42.82	78.56	0.55	85.64	64.28
36	-1.18	42.85	78.65	0.54	85.70	64.37
37	0.00	42.79	78.59	0.54	85.58	64.33
38	9.38	42.78	78.68	0.54	85.57	64.42
39	0.90	42.71	78.74	0.54	85.42	64.50
40	-0.21	42.56	78.52	0.54	85.11	64.33
41	1.74	42.47	78.73	0.54	84.94	64.57
42	-0.19	42.30	78.49	0.54	84.60	64.39
43	-0.32	42.20	78.32	0.54	84.39	64.26
44	-0.74	42.04	77.94	0.54	84.06	63.93
45	-0.10	42.20	78.13	0.54	84.40	64.06
46	0.44	42.64	78.18	0.55	85.28	63.97
47	-2.95	42.75	78.94	0.54	85.50	64.69
48	2.58	42.67	79.28	0.54	85.34	65.06
49	0.41	42.39	79.23	0.53	84.78	65.10
50	-5.06	42.31	78.33	0.54	84.61	64.23
51	2.41	42.24	78.59	0.54	84.48	64.51
52	-0.16	42.04	78.33	0.54	84.08	64.31







GD-23, PC-44: 300/330, 360, 420



## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-19, PC-45; 306/350  
INTERVAL (meters): 6.42-6.54  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/5/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.51  
BULK DENSITY (g/cc): 1.74  
VOID RATIO: 1.35  
POROSITY: 0.57  
GRAIN SPEC GRAVITY (g/cc): 2.71

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 340.00

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		46.18		
2	100.00	50.00	93.86	47.68	0.95
3	200.00	100.00	191.46	97.60	0.98
4	250.00	50.00	241.41	49.95	1.00
5	350.00	100.00	342.18	100.77	1.01

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 350.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 50.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 45.56

### CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	96.42
AREA (sq. mm):	1963.50	1825.51
VOLUME (cc):	196.35	176.02
WATER CONTENT:	0.51	0.42
POROSITY:	0.57	0.45
VOID RATIO:	1.35	0.83
BULK DENSITY (g/cc):	1.74	1.83
BOUYANT BULK DENSITY (g/cc):	0.72	0.80
% SATURATION:	100.00	100.00

### MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	6	0.78	2.45	18.99
3	13	1.11	3.61	18.99
4	23	1.36	4.80	18.99
5	57	1.76	7.55	18.99
6	123	2.09	11.09	18.99
7	190	2.28	13.78	18.99
8	321	2.51	17.92	18.99
9	579	2.76	24.06	18.99
10	1094	3.04	33.08	19.01
11	2120	3.33	46.04	19.03
12	4171	3.62	64.58	19.06
13	7773	3.89	88.16	19.12
14	11376	4.06	106.66	19.21
15	14978	4.18	122.38	19.29
16	18581	4.27	136.31	19.38
17	22183	4.35	148.94	19.45
18	25785	4.41	160.58	19.53
19	29388	4.47	171.43	19.60
20	32990	4.52	181.63	19.66
21	36593	4.56	191.29	19.70
22	40195	4.60	200.49	19.76
23	43797	4.64	209.28	19.80
24	47400	4.68	217.72	19.85
25	51002	4.71	225.84	19.90
26	54605	4.74	233.68	19.95
27	58207	4.76	241.26	19.99
28	61810	4.79	248.62	20.02
29	65412	4.82	255.76	20.06
30	69014	4.84	262.71	20.09
31	72616	4.86	269.47	20.13
32	76219	4.88	276.08	20.16
33	79821	4.90	282.53	20.18
34	83423	4.92	288.83	20.21

35	87026	4.94	295.00	20.24
36	90628	4.96	301.04	20.25
37	94231	4.97	306.97	20.28
38	97834	4.99	312.78	20.30
39	101436	5.01	318.49	20.31
40	105038	5.02	324.10	20.33
41	108641	5.04	329.61	20.35
42	112243	5.05	335.03	20.35
43	115845	5.06	340.36	20.36
44	119448	5.08	345.61	20.37
45	123050	5.09	350.78	20.39
46	126652	5.10	355.88	20.39
47	130255	5.11	360.91	20.41
48	133857	5.13	365.86	20.40
49	137459	5.14	370.75	20.38
50	141062	5.15	375.58	20.37
51	144665	5.16	380.35	20.37
52	148268	5.17	385.06	20.36
53	151870	5.18	389.71	20.36
54	155473	5.19	394.30	20.36
55	159075	5.20	398.84	20.34
56	162678	5.21	403.33	20.34
57	166280	5.22	407.77	20.33
58	169882	5.23	412.17	20.33
59	173484	5.24	416.51	20.33
60	177086	5.25	420.82	20.33

ALPHA: 0.96  
 Ao (sq. mm): 1825.51  
 Lo (mm): 96.42

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 350.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	302.02	0.00	0.00	350.00	1
2	-0.01	311.71	0.21	41.40	350.00	1323
3	-0.01	315.83	0.45	52.80	350.00	2645
4	-0.01	318.81	0.70	59.52	350.00	3968
5	-0.01	320.43	0.95	64.17	350.00	5290
6	-0.01	321.63	1.23	65.93	350.00	6613
7	-0.00	322.50	1.51	65.32	350.00	7935

8	-0.91	323.31	1.81	66.59	350.00	9258
9	0.00	324.12	2.11	67.05	350.00	10581
10	0.00	324.67	2.42	68.62	350.00	11903
11	0.00	325.06	2.74	69.89	350.00	13226
12	0.00	325.32	3.07	70.81	350.00	14548
13	0.01	325.58	3.41	71.65	350.00	15870
14	0.02	325.91	3.74	72.31	350.00	17193
15	0.02	326.00	4.08	73.11	350.00	18515
16	1.68	326.10	4.43	73.58	350.00	19838
17	2.17	326.10	4.77	74.42	350.00	21161
18	2.17	326.43	5.11	75.11	350.00	22483
19	2.29	326.36	5.46	76.03	350.00	23806
20	2.07	326.39	5.81	76.65	350.00	25128
21	2.21	326.52	6.16	77.49	350.00	26451
22	2.17	326.68	6.51	78.18	350.00	27773
23	1.94	326.75	6.86	79.26	350.00	29096
24	2.25	326.68	7.21	80.14	350.00	30418
25	1.84	326.81	7.57	80.95	350.00	31741
26	1.84	326.88	7.92	81.79	350.00	33064
27	1.98	326.75	8.27	82.75	350.00	34386
28	2.20	326.88	8.62	83.67	350.00	35708
29	2.32	326.81	8.98	84.52	350.00	37031
30	2.57	326.98	9.32	85.29	350.00	38353
31	2.31	326.94	9.68	86.09	350.00	39675
32	2.30	326.85	10.03	86.90	350.00	40998
33	2.44	326.85	10.37	87.59	350.00	42320
34	2.51	326.88	10.72	88.40	350.00	43643
35	2.61	326.88	11.07	88.82	350.00	44977
36	2.15	326.81	11.42	89.63	350.00	46299
37	2.61	326.88	11.76	90.13	350.00	47622
38	2.02	326.78	12.11	90.82	350.00	48945
39	1.94	327.01	12.45	91.32	350.00	50267
40	2.11	326.68	12.79	91.93	350.00	51589
41	2.21	326.98	13.13	92.43	350.00	52912
42	1.87	326.91	13.47	93.01	350.00	54234
43	2.26	326.94	13.81	93.47	350.00	55556
44	1.97	326.85	14.15	94.08	350.00	56879
45	2.26	326.85	14.49	94.54	350.00	58201
46	2.05	326.81	14.83	95.12	350.00	59523
47	2.07	326.62	15.17	95.69	350.00	60846
48	1.21	326.91	15.51	96.15	350.00	62168
49	2.26	327.01	15.86	96.73	350.00	63491
50	1.30	326.91	16.20	97.08	350.00	64813
51	2.41	327.07	16.54	97.69	350.00	66136
52	2.34	326.94	16.89	98.11	350.00	67459
53	1.93	326.94	17.23	98.69	350.00	68781
54	2.05	327.07	17.58	99.03	350.00	70104
55	1.88	327.01	17.92	99.65	350.00	71427
56	1.91	327.07	18.27	99.99	350.00	72749
57	2.01	327.01	18.62	100.53	350.00	74072
58	2.28	327.24	18.96	100.95	350.00	75394

59	2.17	327.24	19.31	101.49	350.00	76717
60	2.16	327.20	19.65	101.95	350.00	78039

DERIVED PROPERTIES.

READING	STRAIN <sub>A</sub>	TOTAL STRESS			EFFECTIVE STRESS		
		SIG <sub>1</sub> (kPa)	SIG <sub>3</sub> (kPa)	RATIO	EFFSIG <sub>1</sub> (kPa)	EFFSIG <sub>3</sub> (kPa)	RATIO
1	0.0000	350.00	350.00	1.00	47.98	47.98	1.00
2	0.0021	372.63	350.00	1.06	60.92	38.29	1.59
3	0.0046	378.79	350.00	1.08	62.97	34.18	1.84
4	0.0072	382.37	350.00	1.09	63.56	31.19	2.04
5	0.0099	384.80	350.00	1.10	64.37	29.57	2.18
6	0.0128	385.66	350.00	1.10	64.03	28.37	2.26
7	0.0157	385.22	350.00	1.10	62.72	27.50	2.28
8	0.0187	385.79	350.00	1.10	62.48	26.69	2.34
9	0.0219	385.92	350.00	1.10	61.80	25.88	2.39
10	0.0251	386.65	350.00	1.10	61.97	25.33	2.45
11	0.0284	387.20	350.00	1.11	62.13	24.94	2.49
12	0.0319	387.55	350.00	1.11	62.23	24.68	2.52
13	0.0353	387.87	350.00	1.11	62.28	24.42	2.55
14	0.0388	388.07	350.00	1.11	62.17	24.09	2.58
15	0.0423	388.36	350.00	1.11	62.35	24.00	2.60
16	0.0459	388.45	350.00	1.11	62.35	23.90	2.61
17	0.0495	388.75	350.00	1.11	62.65	23.90	2.62
18	0.0530	388.97	350.00	1.11	62.54	23.58	2.65
19	0.0566	389.29	350.00	1.11	62.93	23.64	2.66
20	0.0602	389.46	350.00	1.11	63.07	23.61	2.67
21	0.0639	389.74	350.00	1.11	63.22	23.48	2.69
22	0.0675	389.94	350.00	1.11	63.25	23.32	2.71
23	0.0712	390.33	350.00	1.12	63.58	23.25	2.73
24	0.0748	390.62	350.00	1.12	63.93	23.32	2.74
25	0.0785	390.86	350.00	1.12	64.05	23.19	2.76
26	0.0821	391.13	350.00	1.12	64.25	23.12	2.78
27	0.0858	391.44	350.00	1.12	64.69	23.25	2.78
28	0.0894	391.74	350.00	1.12	64.86	23.12	2.81
29	0.0931	391.99	350.00	1.12	65.17	23.19	2.81
30	0.0967	392.20	350.00	1.12	65.23	23.02	2.83
31	0.1004	392.43	350.00	1.12	65.48	23.06	2.84
32	0.1040	392.65	350.00	1.12	65.81	23.15	2.84
33	0.1076	392.82	350.00	1.12	65.97	23.15	2.85
34	0.1112	393.04	350.00	1.12	66.16	23.12	2.86
35	0.1148	393.07	350.00	1.12	66.19	23.12	2.86
36	0.1184	393.28	350.00	1.12	66.47	23.19	2.87
37	0.1220	393.35	350.00	1.12	66.47	23.12	2.87
38	0.1256	393.50	350.00	1.12	66.72	23.22	2.87
39	0.1291	393.56	350.00	1.12	66.56	22.99	2.89
40	0.1326	393.68	350.00	1.12	67.00	23.32	2.87
41	0.1362	393.74	350.00	1.12	66.76	23.02	2.90
42	0.1397	393.83	350.00	1.13	66.92	23.09	2.90

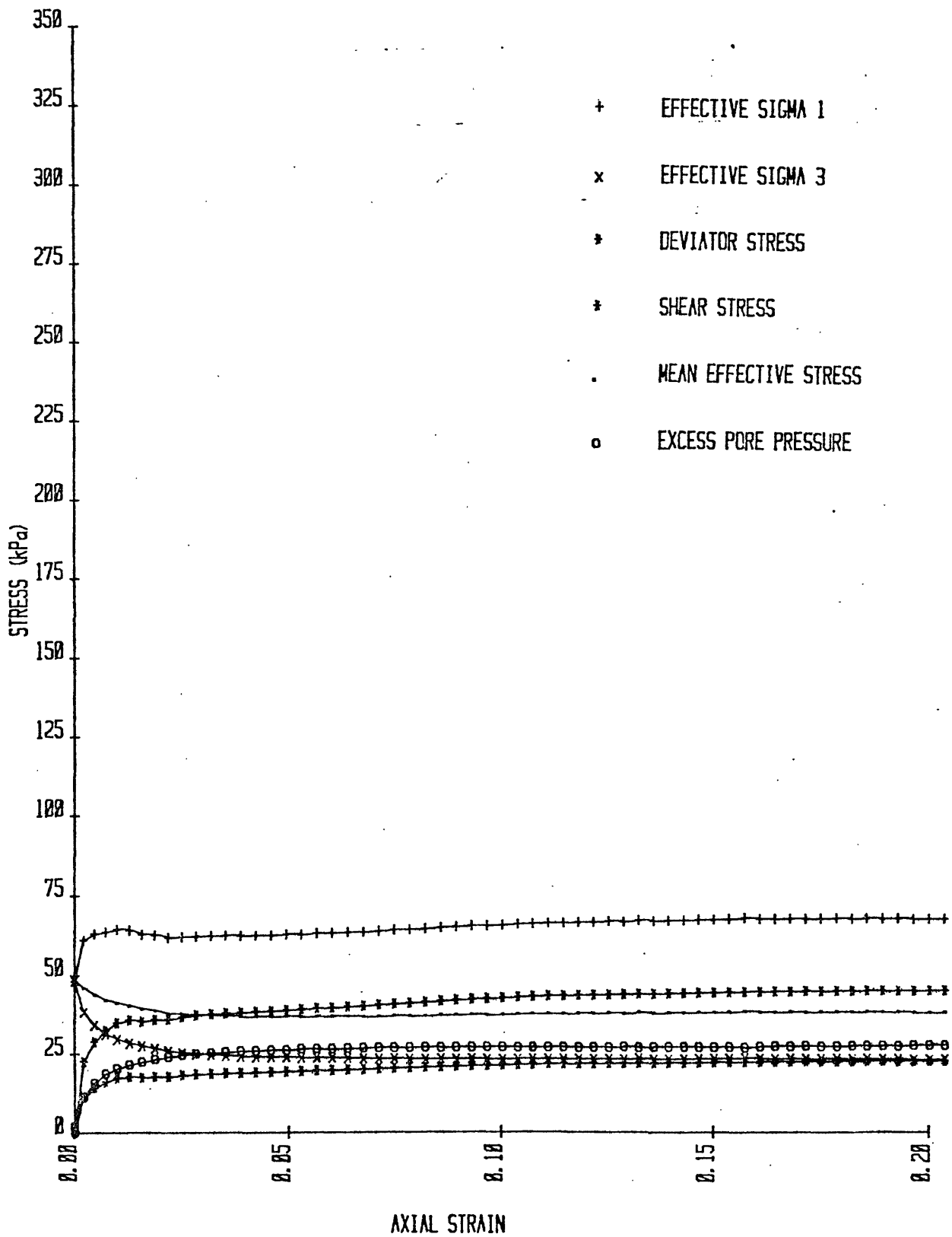
43	0.1432	393.87	350.00	1.13	66.92	23.06	2.90
44	0.1467	393.97	350.00	1.13	67.13	23.15	2.90
45	0.1503	394.01	350.00	1.13	67.16	23.15	2.90
46	0.1538	394.09	350.00	1.13	67.28	23.19	2.90
47	0.1573	394.17	350.00	1.13	67.55	23.38	2.89
48	0.1609	394.20	350.00	1.13	67.29	23.09	2.91
49	0.1644	394.27	350.00	1.13	67.27	22.99	2.93
50	0.1680	394.24	350.00	1.13	67.33	23.09	2.92
51	0.1715	394.33	350.00	1.13	67.26	22.93	2.93
52	0.1752	394.33	350.00	1.13	67.39	23.06	2.92
53	0.1787	394.40	350.00	1.13	67.46	23.06	2.93
54	0.1823	394.36	350.00	1.13	67.29	22.93	2.93
55	0.1859	394.44	350.00	1.13	67.43	22.99	2.93
56	0.1895	394.40	350.00	1.13	67.32	22.93	2.94
57	0.1931	394.43	350.00	1.13	67.43	22.99	2.93
58	0.1967	394.43	350.00	1.13	67.19	22.77	2.95
59	0.2003	394.46	350.00	1.13	67.23	22.77	2.95
60	0.2038	394.47	350.00	1.13	67.26	22.80	2.95

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.43	0.00	47.98	0.00	0.00	47.98
2	0.43	11.31	49.61	0.23	22.63	45.83
3	0.67	14.40	48.57	0.30	28.79	43.77
4	0.83	16.18	47.38	0.34	32.37	41.98
5	0.67	17.40	46.97	0.37	34.80	41.17
6	1.40	17.83	46.20	0.39	35.66	40.26
7	-2.01	17.61	45.11	0.39	35.22	39.24
8	1.42	17.90	44.58	0.40	35.79	38.62
9	6.14	17.96	43.84	0.41	35.92	37.85
10	0.76	18.32	43.65	0.42	36.65	37.54
11	0.71	18.60	43.54	0.43	37.20	37.34
12	0.73	18.78	43.45	0.43	37.55	37.20
13	0.83	18.93	43.35	0.44	37.87	37.04
14	1.57	19.04	43.13	0.44	38.07	36.78
15	0.34	19.18	43.17	0.44	38.36	36.78
16	0.98	19.23	43.13	0.45	38.45	36.72
17	0.00	19.38	43.28	0.45	38.75	36.82
18	1.50	19.48	43.06	0.45	38.97	36.56
19	-0.20	19.65	43.29	0.45	39.29	36.74
20	0.19	19.73	43.34	0.46	39.46	36.76
21	0.46	19.87	43.35	0.46	39.74	36.72
22	0.82	19.97	43.28	0.46	39.94	36.63
23	0.17	20.16	43.41	0.46	40.33	36.69
24	-0.22	20.31	43.62	0.47	40.62	36.86
25	0.53	20.43	43.62	0.47	40.86	36.81
26	0.24	20.56	43.68	0.47	41.13	36.83
27	-0.41	20.72	43.97	0.47	41.44	37.07



28	0.44	20.87	43.99	0.47	41.74	37.03
29	-0.25	20.99	44.18	0.48	41.99	37.18
30	0.76	21.10	44.12	0.48	42.20	37.09
31	-0.15	21.21	44.27	0.48	42.43	37.20
32	-0.43	21.33	44.48	0.48	42.65	37.37
33	0.00	21.41	44.56	0.48	42.82	37.43
34	0.15	21.52	44.64	0.48	43.04	37.47
35	0.00	21.53	44.66	0.48	43.07	37.48
36	-0.30	21.64	44.83	0.48	43.28	37.61
37	0.99	21.67	44.80	0.48	43.35	37.57
38	-0.63	21.75	44.97	0.48	43.50	37.72
39	3.64	21.78	44.77	0.49	43.56	37.51
40	-2.82	21.84	45.16	0.48	43.68	37.88
41	4.99	21.87	44.89	0.49	43.74	37.60
42	-0.69	21.92	45.01	0.49	43.83	37.70
43	0.94	21.93	44.99	0.49	43.87	37.68
44	-0.90	21.99	45.14	0.49	43.97	37.81
45	0.00	22.00	45.16	0.49	44.01	37.82
46	-0.39	22.05	45.23	0.49	44.09	37.88
47	-2.39	22.09	45.47	0.49	44.17	38.10
48	11.01	22.10	45.19	0.49	44.20	37.82
49	1.28	22.14	45.13	0.49	44.27	37.75
50	3.16	22.12	45.21	0.49	44.24	37.84
51	1.79	22.17	45.09	0.49	44.33	37.71
52	54.31	22.17	45.22	0.49	44.33	37.83
53	0.00	22.20	45.26	0.49	44.40	37.86
54	-3.19	22.18	45.11	0.49	44.36	37.71
55	-0.80	22.22	45.21	0.49	44.44	37.81
56	-1.47	22.20	45.12	0.49	44.40	37.73
57	-1.67	22.22	45.21	0.49	44.43	37.80
58	-24.00	22.21	44.98	0.49	44.43	37.57
59	0.00	22.23	45.00	0.49	44.46	37.59
60	-6.97	22.23	45.03	0.49	44.47	37.62



## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-19, PC-45; 300/400  
INTERVAL (meters): 6.54-6.66  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/5/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.55  
BULK DENSITY (g/cc): 1.71  
VOID RATIO: 1.45  
POROSITY: 0.59  
GRAIN SPEC GRAVITY (g/cc): 2.71  
LIQUID LIMIT (%): 58.00  
PLASTIC LIMIT (%): 27.00

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 340.00

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		48.99		
2	100.00	50.00	97.95	48.96	0.98
3	150.00	50.00	148.36	50.41	1.01
4	200.00	50.00	198.63	50.27	1.01
5	250.00	50.00	247.96	49.33	0.99

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 400.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 100.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 44.41

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	90.80
AREA (sq. mm):	1963.50	1618.85
VOLUME (cc):	196.35	146.99
WATER CONTENT:	0.55	0.32
POROSITY:	0.59	0.40
VOID RATIO:	1.45	0.66
BULK DENSITY (g/cc):	1.71	1.94
BOUYANT BULK DENSITY (g/cc):	0.69	0.92
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	6	0.78	2.45	45.45
3	13	1.11	3.61	45.46
4	23	1.36	4.80	45.46
5	57	1.76	7.55	45.46
6	92	1.96	9.59	45.46
7	159	2.20	12.61	45.47
8	289	2.46	17.00	45.48
9	547	2.74	23.39	45.50
10	1062	3.03	32.59	45.54
11	2089	3.32	45.71	45.62
12	4140	3.62	64.34	45.76
13	7742	3.89	87.99	46.00
14	11345	4.05	106.51	46.23
15	14948	4.17	122.26	46.45
16	18550	4.27	136.20	46.64
17	22152	4.35	148.84	46.84
18	25755	4.41	160.48	47.01
19	29358	4.47	171.34	47.17
20	32960	4.52	181.55	47.31
21	36562	4.56	191.21	47.44
22	40165	4.60	200.41	47.57
23	43767	4.64	209.21	47.68
24	47369	4.68	217.64	47.79
25	50972	4.71	225.77	47.89
26	54575	4.74	233.61	47.99
27	58177	4.76	241.23	48.08
28	61779	4.79	248.55	48.16
29	65381	4.82	255.70	48.24
30	68984	4.84	262.65	48.31
31	72586	4.86	269.42	48.38
32	76188	4.88	276.02	48.43
33	79790	4.90	282.47	48.49
34	83393	4.92	288.76	48.56

35	86995	4.94	294.95	48.60
36	90598	4.96	301.00	48.65
37	94201	4.97	306.92	48.70
38	97803	4.99	312.73	48.74
39	101405	5.01	318.44	48.79
40	105007	5.02	324.05	48.83
41	108610	5.04	329.56	48.87
42	112212	5.05	334.98	48.90
43	115815	5.06	340.32	48.94
44	119417	5.08	345.57	48.96
45	123019	5.09	350.74	49.00
46	126622	5.10	355.84	49.02
47	130224	5.11	360.87	49.06
48	133826	5.13	365.82	49.08
49	137429	5.14	370.71	49.11
50	141031	5.15	375.54	49.14
51	144634	5.16	380.31	49.16
52	148237	5.17	385.02	49.18
53	151840	5.18	389.67	49.21
54	155442	5.19	394.26	49.23
55	159045	5.20	398.80	49.25
56	162647	5.21	403.30	49.27
57	166249	5.22	407.74	49.29
58	169851	5.23	412.13	49.31
59	173453	5.24	416.48	49.34
60	177056	5.25	420.78	49.36

ALPHA: 0.91  
 Ao (sq. mm): 1618.85  
 Lo (mm): 90.80

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 400.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PCRP (kPa)	DLNG (mm)	AXFD (N)	CELP (kPa)	TIME (sec)
1	0.00	320.13	0.00	0.00	400.00	1
2	0.00	330.93	0.24	49.53	400.00	1324
3	-0.00	340.92	0.55	80.41	400.00	2646
4	-0.00	347.43	0.87	94.59	400.00	3969
5	0.00	352.01	1.18	103.08	400.00	5291
6	-0.00	355.48	1.51	109.33	400.00	6614
7	0.00	358.12	1.84	112.70	400.00	7936

8	-0.00	360.28	2.17	115.24	400.00	9259
9	-0.00	361.87	2.51	115.98	400.00	10582
10	-0.00	363.20	2.85	117.69	400.00	11904
11	-0.00	364.25	3.19	118.61	400.00	13227
12	-0.01	365.20	3.55	119.83	400.00	14549
13	-0.00	365.87	3.89	120.23	400.00	15871
14	-0.00	366.60	4.24	120.71	400.00	17194
15	-0.01	367.08	4.59	121.01	400.00	18516
16	-0.00	367.62	4.94	121.93	400.00	19839
17	-0.01	368.19	5.29	122.94	400.00	21162
18	-0.00	368.61	5.65	123.46	400.00	22484
19	-0.00	368.86	5.99	124.25	400.00	23807
20	-0.00	369.24	6.35	124.95	400.00	25129
21	-0.01	369.43	6.70	125.91	400.00	26452
22	-0.01	369.75	7.05	126.79	400.00	27774
23	-0.01	369.97	7.39	127.66	400.00	29097
24	-0.01	370.13	7.74	128.54	400.00	30420
25	-0.00	370.35	8.09	129.76	400.00	31742
26	-0.01	370.61	8.44	130.68	400.00	33065
27	-0.01	370.54	8.78	131.86	400.00	34387
28	-0.00	370.67	9.13	132.78	400.00	35710
29	-0.00	370.74	9.48	133.88	400.00	37032
30	-0.00	370.89	9.82	134.53	400.00	38354
31	-0.00	371.02	10.16	135.58	400.00	39676
32	-0.01	371.02	10.50	136.46	400.00	40999
33	-0.00	371.12	10.84	137.25	400.00	42321
34	-0.00	371.18	11.19	137.90	400.00	43644
35	-0.00	371.15	11.54	138.43	400.00	44966
36	-0.00	371.24	11.88	138.91	400.00	46289
37	-0.00	371.24	12.22	139.17	400.00	47611
38	-0.01	371.28	12.57	139.57	400.00	48934
39	-0.00	371.34	12.91	139.70	400.00	50256
40	-0.00	371.37	13.26	140.00	400.00	51578
41	-0.00	371.37	13.61	139.87	400.00	52901
42	0.00	371.50	13.95	140.27	400.00	54223
43	-0.00	371.47	14.29	140.05	400.00	55545
44	-0.00	371.50	14.64	140.13	400.00	56868
45	0.00	371.47	15.00	139.78	400.00	58190
46	-0.00	371.50	15.34	139.96	400.00	59513
47	0.00	371.47	15.69	139.57	400.00	60835
48	-0.00	371.50	16.05	139.61	400.00	62158
49	-0.00	371.66	16.40	138.91	400.00	63480
50	-0.00	371.82	16.76	138.73	400.00	64803
51	0.00	371.82	17.12	137.81	400.00	66125
52	0.00	371.88	17.47	137.42	400.00	67448
53	0.00	372.01	17.83	136.94	400.00	68771
54	0.00	372.13	18.18	136.76	400.00	70093
55	0.00	372.10	18.54	136.50	400.00	71416
56	0.00	372.26	18.89	136.37	400.00	72739
57	0.00	372.39	19.24	136.37	400.00	74061
58	0.00	372.55	19.60	136.41	400.00	75384

59	0.00	372.71	19.95	136.33	400.00	76707
60	0.00	372.77	20.31	136.28	400.00	78030

DERIVED PROPERTIES

READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	400.00	400.00	1.00	79.87	79.87	1.00
2	0.0027	430.51	400.00	1.08	99.58	69.07	1.44
3	0.0061	449.37	400.00	1.12	108.46	59.08	1.84
4	0.0096	457.87	400.00	1.14	110.44	52.57	2.10
5	0.0130	462.85	400.00	1.16	110.84	47.99	2.31
6	0.0166	466.42	400.00	1.17	110.94	44.52	2.49
7	0.0203	468.21	400.00	1.17	110.09	41.89	2.63
8	0.0239	469.48	400.00	1.17	109.21	39.72	2.75
9	0.0276	469.67	400.00	1.17	107.30	38.13	2.83
10	0.0314	470.41	400.00	1.18	107.21	36.80	2.91
11	0.0352	470.69	400.00	1.18	106.44	35.75	2.98
12	0.0391	471.13	400.00	1.18	105.93	34.80	3.04
13	0.0428	471.08	400.00	1.18	105.21	34.13	3.08
14	0.0467	471.08	400.00	1.18	104.48	33.40	3.13
15	0.0506	470.97	400.00	1.18	103.89	32.92	3.16
16	0.0544	471.22	400.00	1.18	103.60	32.38	3.20
17	0.0583	471.52	400.00	1.18	103.32	31.81	3.25
18	0.0622	471.52	400.00	1.18	102.92	31.40	3.28
19	0.0660	471.69	400.00	1.18	102.83	31.14	3.30
20	0.0699	471.79	400.00	1.18	102.55	30.76	3.33
21	0.0738	472.04	400.00	1.18	102.61	30.57	3.36
22	0.0776	472.24	400.00	1.18	102.49	30.25	3.39
23	0.0814	472.44	400.00	1.18	102.47	30.03	3.41
24	0.0852	472.63	400.00	1.18	102.50	29.87	3.43
25	0.0891	473.02	400.00	1.18	102.66	29.65	3.46
26	0.0929	473.23	400.00	1.18	102.62	29.39	3.49
27	0.0967	473.58	400.00	1.18	103.03	29.46	3.50
28	0.1005	473.78	400.00	1.18	103.11	29.33	3.52
29	0.1044	474.07	400.00	1.19	103.33	29.27	3.53
30	0.1081	474.12	400.00	1.19	103.22	29.11	3.55
31	0.1119	474.38	400.00	1.19	103.36	28.98	3.57
32	0.1157	474.54	400.00	1.19	103.52	28.98	3.57
33	0.1194	474.65	400.00	1.19	103.54	28.88	3.58
34	0.1232	474.69	400.00	1.19	103.51	28.82	3.59
35	0.1271	474.64	400.00	1.19	103.49	28.85	3.59
36	0.1308	474.58	400.00	1.19	103.34	28.76	3.59
37	0.1346	474.40	400.00	1.19	103.15	28.76	3.59
38	0.1384	474.28	400.00	1.19	103.00	28.73	3.59
39	0.1422	474.02	400.00	1.19	102.68	28.66	3.58
40	0.1460	473.85	400.00	1.18	102.48	28.63	3.58
41	0.1498	473.45	400.00	1.18	102.08	28.63	3.57
42	0.1536	473.33	400.00	1.18	101.84	28.50	3.57

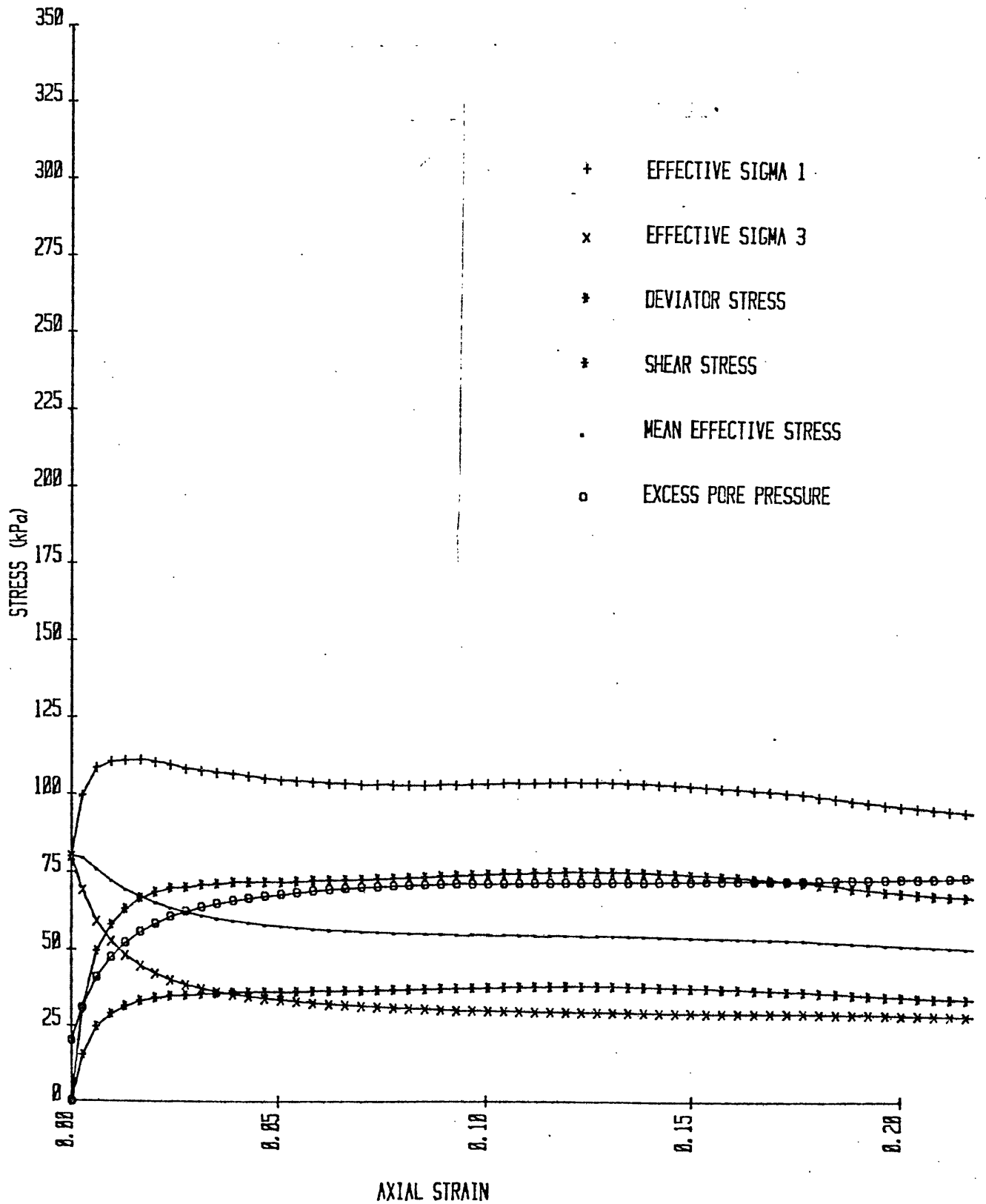
43	0.1574	472.89	400.00	1.18	101.43	28.53	3.55
44	0.1613	472.61	400.00	1.18	101.11	28.50	3.55
45	0.1651	472.09	400.00	1.18	100.62	28.53	3.53
46	0.1689	471.85	400.00	1.18	100.35	28.50	3.52
47	0.1729	471.31	400.00	1.18	99.84	28.53	3.50
48	0.1767	471.00	400.00	1.18	99.50	28.50	3.49
49	0.1806	470.31	400.00	1.18	98.65	28.34	3.48
50	0.1845	469.88	400.00	1.17	98.07	28.18	3.48
51	0.1885	469.08	400.00	1.17	97.26	28.18	3.45
52	0.1924	468.56	400.00	1.17	96.68	28.12	3.44
53	0.1964	467.98	400.00	1.17	95.97	27.99	3.43
54	0.2002	467.57	400.00	1.17	95.44	27.87	3.42
55	0.2042	467.11	400.00	1.17	95.00	27.90	3.41
56	0.2080	466.71	400.00	1.17	94.45	27.74	3.41
57	0.2119	466.39	400.00	1.17	94.00	27.61	3.40
58	0.2158	466.08	400.00	1.17	93.53	27.45	3.41
59	0.2198	465.71	400.00	1.16	93.00	27.29	3.41
60	0.2237	465.36	400.00	1.16	92.59	27.23	3.40

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.35	0.00	79.87	0.00	0.00	79.87
2	0.35	15.26	84.32	0.18	30.51	79.24
3	0.53	24.69	83.77	0.29	49.37	75.54
4	0.77	28.94	81.50	0.36	57.87	71.86
5	0.92	31.42	79.41	0.40	62.85	68.94
6	0.97	33.21	77.73	0.43	66.42	66.66
7	1.47	34.10	75.99	0.45	68.21	64.62
8	1.69	34.74	74.47	0.47	69.48	62.89
9	8.69	34.83	72.97	0.48	69.67	61.36
10	1.79	35.21	72.01	0.49	70.41	60.27
11	3.81	35.34	71.09	0.50	70.69	59.31
12	2.15	35.57	70.36	0.51	71.13	58.51
13	-14.00	35.54	69.67	0.51	71.08	57.82
14	-260.53	35.54	68.94	0.52	71.08	57.09
15	-4.27	35.49	68.41	0.52	70.97	56.58
16	2.16	35.61	67.99	0.52	71.22	56.12
17	1.94	35.76	67.57	0.53	71.52	55.65
18	50.56	35.76	67.16	0.53	71.52	55.24
19	1.56	35.84	66.98	0.54	71.69	55.04
20	3.73	35.89	66.65	0.54	71.79	54.69
21	0.76	36.02	66.59	0.54	72.04	54.58
22	1.59	36.12	66.37	0.54	72.24	54.33
23	1.11	36.22	66.25	0.55	72.44	54.17
24	0.82	36.32	66.19	0.55	72.63	54.08
25	0.58	36.51	66.15	0.55	73.02	53.98
26	1.21	36.61	66.01	0.55	73.23	53.80
27	-0.18	36.79	66.24	0.56	73.58	53.98



28	0.63	36.89	66.22	0.56	73.78	53.92
29	0.22	37.03	66.30	0.56	74.07	53.95
30	3.11	37.06	66.16	0.56	74.12	53.81
31	0.49	37.19	66.17	0.56	74.38	53.77
32	0.00	37.27	66.25	0.56	74.54	53.83
33	0.88	37.33	66.21	0.56	74.65	53.77
34	1.84	37.34	66.16	0.56	74.69	53.72
35	0.70	37.32	66.17	0.56	74.64	53.73
36	-1.55	37.29	66.05	0.56	74.58	53.62
37	0.00	37.20	65.96	0.56	74.40	53.56
38	-0.26	37.14	65.86	0.56	74.28	53.48
39	-0.25	37.01	65.67	0.56	74.02	53.34
40	-0.19	36.93	65.56	0.56	73.85	53.25
41	0.00	36.73	65.36	0.56	73.45	53.11
42	-1.05	36.67	65.17	0.56	73.33	52.95
43	0.07	36.45	64.98	0.56	72.89	52.83
44	-0.11	36.30	64.80	0.56	72.61	52.70
45	0.06	36.04	64.58	0.56	72.09	52.56
46	-0.13	35.92	64.43	0.56	71.85	52.45
47	0.06	35.66	64.19	0.56	71.31	52.30
48	-0.10	35.50	64.00	0.55	71.00	52.17
49	-0.23	35.15	63.50	0.55	70.31	51.78
50	-0.37	34.94	63.13	0.55	69.88	51.48
51	0.00	34.54	62.72	0.55	69.08	51.21
52	-0.12	34.28	62.40	0.55	68.56	50.97
53	-0.22	33.99	61.98	0.55	67.98	50.65
54	-0.31	33.78	61.65	0.55	67.57	50.39
55	0.07	33.55	61.45	0.55	67.11	50.27
56	-0.41	33.36	61.10	0.55	66.71	49.98
57	-0.39	33.19	60.81	0.55	66.39	49.74
58	-0.52	33.04	60.49	0.55	66.08	49.48
59	-0.42	32.85	60.15	0.55	65.71	49.20
60	-0.18	32.68	59.91	0.55	65.36	49.02



## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-19, PC-45; 300/500  
INTERVAL (meters): 6.66-6.78  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/5/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.66  
BULK DENSITY (g/cc): 1.64  
VOID RATIO: 1.74  
POROSITY: 0.64  
GRAIN SPEC GRAVITY (g/cc): 2.71

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 344.70

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		48.05		
2	100.00	50.00	97.52	49.47	0.99
3	200.00	100.00	196.28	98.76	0.99
4	250.00	50.00	246.85	50.57	1.01
5	500.00	250.00	497.30	250.45	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 500.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 200.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 40.43

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	94.24
AREA (sq. mm):	1963.50	1743.96
VOLUME (cc):	196.35	164.36
WATER CONTENT:	0.66	0.49
POROSITY:	0.64	0.59
VOID RATIO:	1.74	1.46
BULK DENSITY (g/cc):	1.64	1.76
BOUYANT BULK DENSITY (g/cc):	0.61	0.73
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	1	0.00	1.00	0.00
2	6	0.78	2.45	31.09
3	12	1.08	3.46	31.09
4	23	1.36	4.80	31.09
5	42	1.62	6.48	31.09
6	76	1.88	8.72	31.09
7	143	2.16	11.96	31.09
8	273	2.44	16.52	31.10
9	531	2.73	23.04	31.10
10	1046	3.02	32.34	31.10
11	2073	3.32	45.53	31.11
12	4124	3.62	64.22	31.12
13	7726	3.89	87.90	31.14
14	11329	4.05	106.44	31.16
15	14931	4.17	122.19	31.18
16	18533	4.27	136.14	31.19
17	22136	4.35	148.78	31.21
18	25738	4.41	160.43	31.23
19	29341	4.47	171.23	31.24
20	32943	4.52	181.50	31.26
21	36546	4.56	191.17	31.27
22	40149	4.60	200.37	31.29
23	43750	4.64	209.17	31.30
24	47352	4.68	217.61	31.31
25	50955	4.71	225.73	31.33
26	54558	4.74	233.58	31.35
27	58160	4.76	241.16	31.37
28	61762	4.79	248.52	31.38
29	65365	4.82	255.67	31.40
30	68967	4.84	262.62	31.41
31	72569	4.86	269.39	31.44
32	76171	4.88	275.99	31.45
33	79774	4.90	282.44	31.48
34	83376	4.92	288.75	31.50

35	86978	4.94	294.92	31.51
36	90581	4.96	300.97	31.53
37	94184	4.97	306.89	31.56
38	97786	4.99	312.71	31.58
39	101389	5.01	318.42	31.60
40	104991	5.02	324.02	31.62
41	108593	5.04	329.53	31.64
42	112196	5.05	334.96	31.66
43	115798	5.06	340.29	31.69
44	119400	5.08	345.54	31.70
45	123003	5.09	350.72	31.73
46	126605	5.10	355.82	31.74
47	130207	5.11	360.84	31.77
48	133810	5.13	365.80	31.78
49	137412	5.14	370.69	31.80
50	141015	5.15	375.52	31.82
51	144618	5.16	380.29	31.85
52	148220	5.17	384.99	31.86
53	151823	5.18	389.64	31.88
54	155425	5.19	394.24	31.90
55	159028	5.20	398.78	31.91
56	162630	5.21	403.27	31.93
57	166233	5.22	407.72	31.94
58	169835	5.23	412.11	31.95
59	173437	5.24	416.46	31.98
60	177039	5.25	420.76	31.99

ALPHA: 0.94  
 Ao (sq. mm): 1743.97  
 Lo (mm): 94.24

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 500.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	329.16	0.00	0.00	500.00	0
2	0.00	361.46	0.29	105.57	500.00	1323
3	0.00	379.74	0.59	133.20	500.00	2645
4	-0.00	392.31	0.91	149.56	500.00	3967
5	0.00	402.06	1.22	160.91	500.00	5290
6	0.00	408.87	1.55	170.02	500.00	6613
7	-0.00	414.77	1.88	177.38	500.00	7935

8	-0.00	419.33	2.23	183.70	500.00	9258
9	-0.00	423.04	2.58	188.78	500.00	10580
10	0.00	426.04	2.92	193.27	500.00	11903
11	0.00	428.19	3.27	196.99	500.00	13225
12	-0.00	430.08	3.62	199.94	500.00	14548
13	-0.01	431.55	3.96	202.15	500.00	15870
14	-0.01	432.98	4.32	203.93	500.00	17193
15	-0.01	434.02	4.67	205.52	500.00	18515
16	-0.01	435.10	5.02	206.95	500.00	19838
17	-0.01	435.88	5.37	208.73	500.00	21160
18	-0.01	436.92	5.72	210.40	500.00	22483
19	-0.01	437.15	6.08	212.07	500.00	23806
20	-0.02	437.87	6.43	213.89	500.00	25128
21	-0.01	438.32	6.78	215.71	500.00	26451
22	-0.01	438.88	7.13	217.69	500.00	27773
23	-0.02	439.30	7.47	219.78	500.00	29096
24	-0.01	439.63	7.82	221.76	500.00	30418
25	-0.01	439.53	8.17	224.04	500.00	31741
26	-0.01	439.69	8.53	226.33	500.00	33064
27	-0.01	439.79	8.88	228.65	500.00	34386
28	-0.00	440.12	9.23	230.71	500.00	35708
29	-0.01	439.79	9.53	232.69	500.00	37030
30	-0.00	440.05	9.93	234.82	500.00	38353
31	-0.01	439.89	10.28	237.03	500.00	39675
32	-0.00	439.79	10.63	239.16	500.00	40998
33	-0.00	439.69	10.97	241.02	500.00	42320
34	-0.00	439.27	11.32	242.96	500.00	43642
35	-0.00	439.43	11.67	244.66	500.00	44965
36	0.00	438.98	12.02	246.40	500.00	46287
37	-0.01	439.07	12.37	247.80	500.00	47610
38	0.00	439.01	12.72	249.35	500.00	48932
39	0.01	438.75	13.06	250.63	500.00	50255
40	0.00	438.58	13.41	252.02	500.00	51577
41	-0.00	438.42	13.75	253.07	500.00	52899
42	-0.00	438.32	14.10	254.16	500.00	54222
43	0.01	438.29	14.44	255.59	500.00	55544
44	0.00	438.13	14.79	256.91	500.00	56866
45	0.00	437.77	15.14	258.15	500.00	58189
46	0.01	437.90	15.49	258.81	500.00	59511
47	0.00	437.74	15.84	259.97	500.00	60834
48	0.00	437.84	16.19	260.86	500.00	62156
49	0.01	437.74	16.53	261.83	500.00	63479
50	0.01	437.77	16.88	262.76	500.00	64801
51	0.01	437.74	17.23	263.88	500.00	66124
52	0.01	437.54	17.57	265.01	500.00	67447
53	0.01	437.51	17.92	266.17	500.00	68769
54	0.01	437.54	18.27	267.18	500.00	70092
55	0.01	437.22	18.62	268.03	500.00	71415
56	0.01	437.31	18.96	269.15	500.00	72737
57	0.01	437.51	19.31	269.81	500.00	74060
58	0.01	437.57	19.66	271.05	500.00	75383

59	0.01	437.51	20.01	271.71	500.00	76706
60	0.01	437.25	20.35	272.72	500.00	78029

DERIVED PROPERTIES

READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL	EFFECTIVE		RATIO
				STRESS RATIO	STRESS RATIO	EFFSIG1 (kPa)	
1	0.0000	500.00	500.00	1.00	170.84	170.84	1.00
2	0.0030	560.35	500.00	1.12	198.89	138.54	1.44
3	0.0063	575.90	500.00	1.15	196.16	120.26	1.63
4	0.0096	584.93	500.00	1.17	192.61	107.69	1.79
5	0.0130	591.07	500.00	1.18	189.01	97.94	1.93
6	0.0165	595.88	500.00	1.19	187.02	91.13	2.05
7	0.0200	599.68	500.00	1.20	184.92	85.24	2.17
8	0.0236	602.84	500.00	1.21	183.52	80.67	2.27
9	0.0273	605.29	500.00	1.21	182.24	76.96	2.37
10	0.0310	607.39	500.00	1.21	181.35	73.96	2.45
11	0.0347	609.04	500.00	1.22	180.85	71.81	2.52
12	0.0384	610.24	500.00	1.22	180.16	69.92	2.58
13	0.0421	611.04	500.00	1.22	179.49	68.45	2.62
14	0.0458	611.58	500.00	1.22	178.60	67.02	2.66
15	0.0495	612.01	500.00	1.22	177.99	65.98	2.70
16	0.0532	612.35	500.00	1.22	177.25	64.90	2.73
17	0.0570	612.87	500.00	1.23	176.99	64.12	2.76
18	0.0607	613.32	500.00	1.23	176.39	63.08	2.80
19	0.0645	613.76	500.00	1.23	176.61	62.85	2.81
20	0.0682	614.28	500.00	1.23	176.41	62.13	2.84
21	0.0719	614.79	500.00	1.23	176.47	61.68	2.86
22	0.0756	615.38	500.00	1.23	176.51	61.12	2.89
23	0.0792	616.04	500.00	1.23	176.74	60.70	2.91
24	0.0830	616.60	500.00	1.23	176.98	60.37	2.93
25	0.0867	617.32	500.00	1.23	177.80	60.47	2.94
26	0.0905	618.03	500.00	1.24	178.34	60.31	2.96
27	0.0942	618.76	500.00	1.24	178.97	60.21	2.97
28	0.0979	619.33	500.00	1.24	179.22	59.88	2.99
29	0.1017	619.86	500.00	1.24	180.07	60.21	2.99
30	0.1054	620.45	500.00	1.24	180.40	59.95	3.01
31	0.1090	621.09	500.00	1.24	181.21	60.11	3.01
32	0.1128	621.67	500.00	1.24	181.88	60.21	3.02
33	0.1164	622.11	500.00	1.24	182.42	60.31	3.02
34	0.1201	622.58	500.00	1.25	183.31	60.73	3.02
35	0.1238	622.92	500.00	1.25	183.49	60.57	3.03
36	0.1275	623.27	500.00	1.25	184.30	61.02	3.02
37	0.1312	623.45	500.00	1.25	184.37	60.93	3.03
38	0.1349	623.68	500.00	1.25	184.68	60.99	3.03
39	0.1386	623.79	500.00	1.25	185.05	61.25	3.02
40	0.1423	623.95	500.00	1.25	185.37	61.42	3.02
41	0.1459	623.94	500.00	1.25	185.52	61.58	3.01
42	0.1496	623.94	500.00	1.25	185.61	61.68	3.01

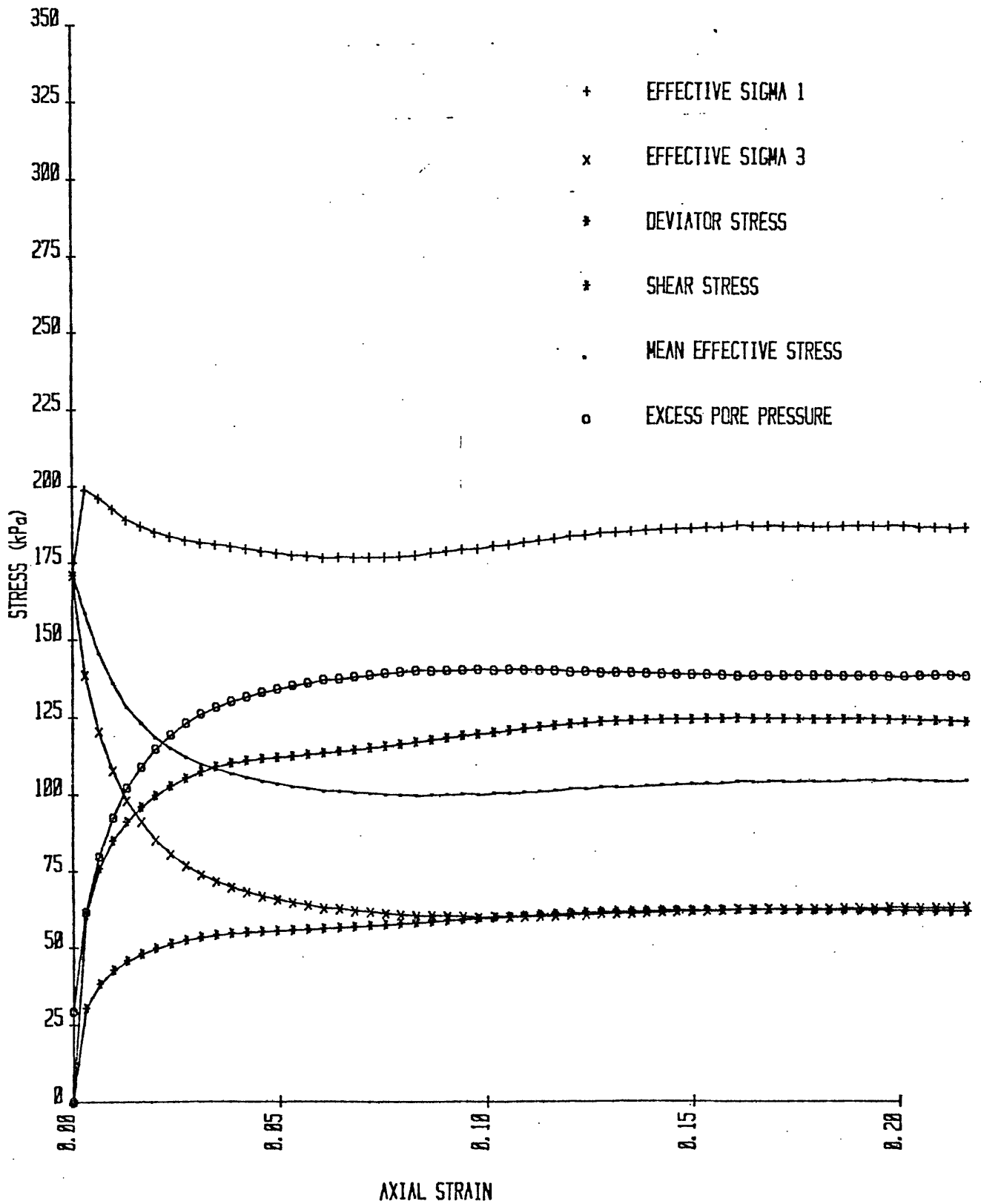
43	0.1532	624.10	500.00	1.25	185.81	61.71	3.01
44	0.1569	624.19	500.00	1.25	186.07	61.87	3.01
45	0.1606	624.25	500.00	1.25	186.48	62.23	3.00
46	0.1643	624.01	500.00	1.25	186.11	62.10	3.00
47	0.1680	624.02	500.00	1.25	186.28	62.26	2.99
48	0.1717	623.89	500.00	1.25	186.06	62.17	2.99
49	0.1754	623.80	500.00	1.25	186.06	62.26	2.99
50	0.1791	623.68	500.00	1.25	185.91	62.23	2.99
51	0.1828	623.66	500.00	1.25	185.92	62.26	2.99
52	0.1864	623.63	500.00	1.25	186.09	62.46	2.98
53	0.1901	623.60	500.00	1.25	186.10	62.49	2.98
54	0.1938	623.51	500.00	1.25	185.97	62.46	2.98
55	0.1975	623.33	500.00	1.25	186.12	62.78	2.96
56	0.2012	623.28	500.00	1.25	185.97	62.69	2.97
57	0.2049	623.00	500.00	1.25	185.50	62.49	2.97
58	0.2086	622.99	500.00	1.25	185.42	62.43	2.97
59	0.2123	622.73	500.00	1.25	185.22	62.49	2.96
60	0.2160	622.61	500.00	1.25	185.36	62.75	2.95

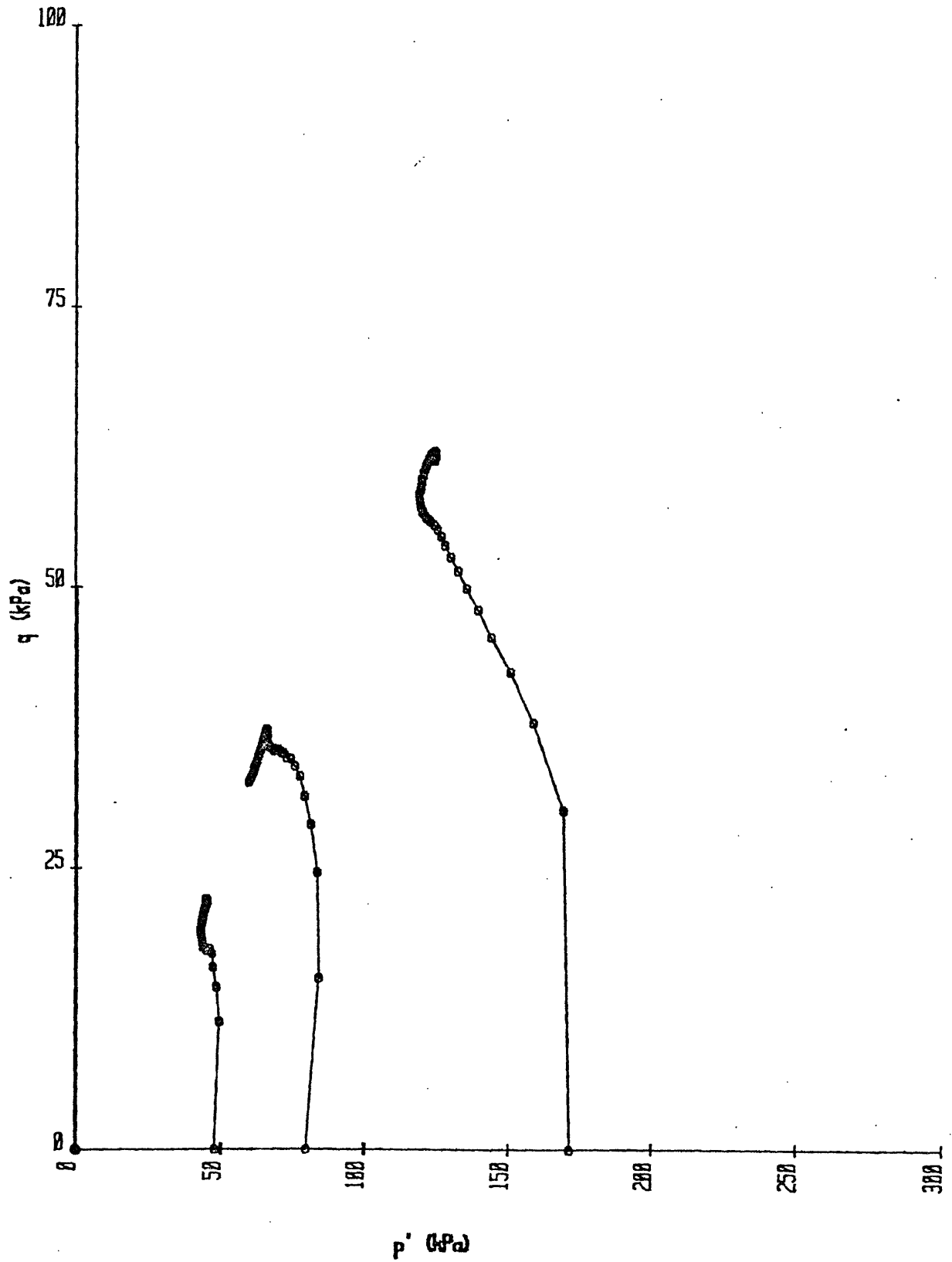
DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR STRESS (kPa)	MEAN EFFECTIVE STRESS (kPa)
1	0.54	0.00	170.84	0.00	0.00	170.84
2	0.54	30.17	168.72	0.18	60.35	158.66
3	1.18	37.95	158.21	0.24	75.90	145.56
4	1.39	42.46	150.15	0.28	84.93	136.00
5	1.59	45.54	143.48	0.32	91.07	128.30
6	1.42	47.94	139.07	0.34	95.88	123.09
7	1.55	49.84	135.08	0.37	99.68	118.46
8	1.44	51.42	132.10	0.39	102.84	114.95
9	1.52	52.64	129.60	0.41	105.29	112.05
10	1.43	53.69	127.65	0.42	107.39	109.76
11	1.30	54.52	126.33	0.43	109.04	108.16
12	1.57	55.12	125.04	0.44	110.24	106.67
13	1.85	55.52	123.97	0.45	111.04	105.47
14	2.64	55.79	122.81	0.45	111.58	104.21
15	2.42	56.01	121.98	0.46	112.01	103.31
16	3.18	56.17	121.08	0.46	112.35	102.35
17	1.49	56.44	120.56	0.47	112.87	101.74
18	2.35	56.66	119.74	0.47	113.32	100.85
19	0.52	56.88	119.73	0.48	113.76	100.77
20	1.38	57.14	119.27	0.48	114.28	100.22
21	0.89	57.40	119.07	0.48	114.79	99.94
22	0.94	57.69	118.81	0.49	115.38	99.58
23	0.65	58.02	118.72	0.49	116.04	99.38
24	0.58	58.30	118.67	0.49	116.60	99.24
25	-0.14	58.66	119.15	0.49	117.32	99.58
26	0.23	59.02	119.33	0.49	118.03	99.65
27	0.14	59.33	119.59	0.50	118.76	99.80

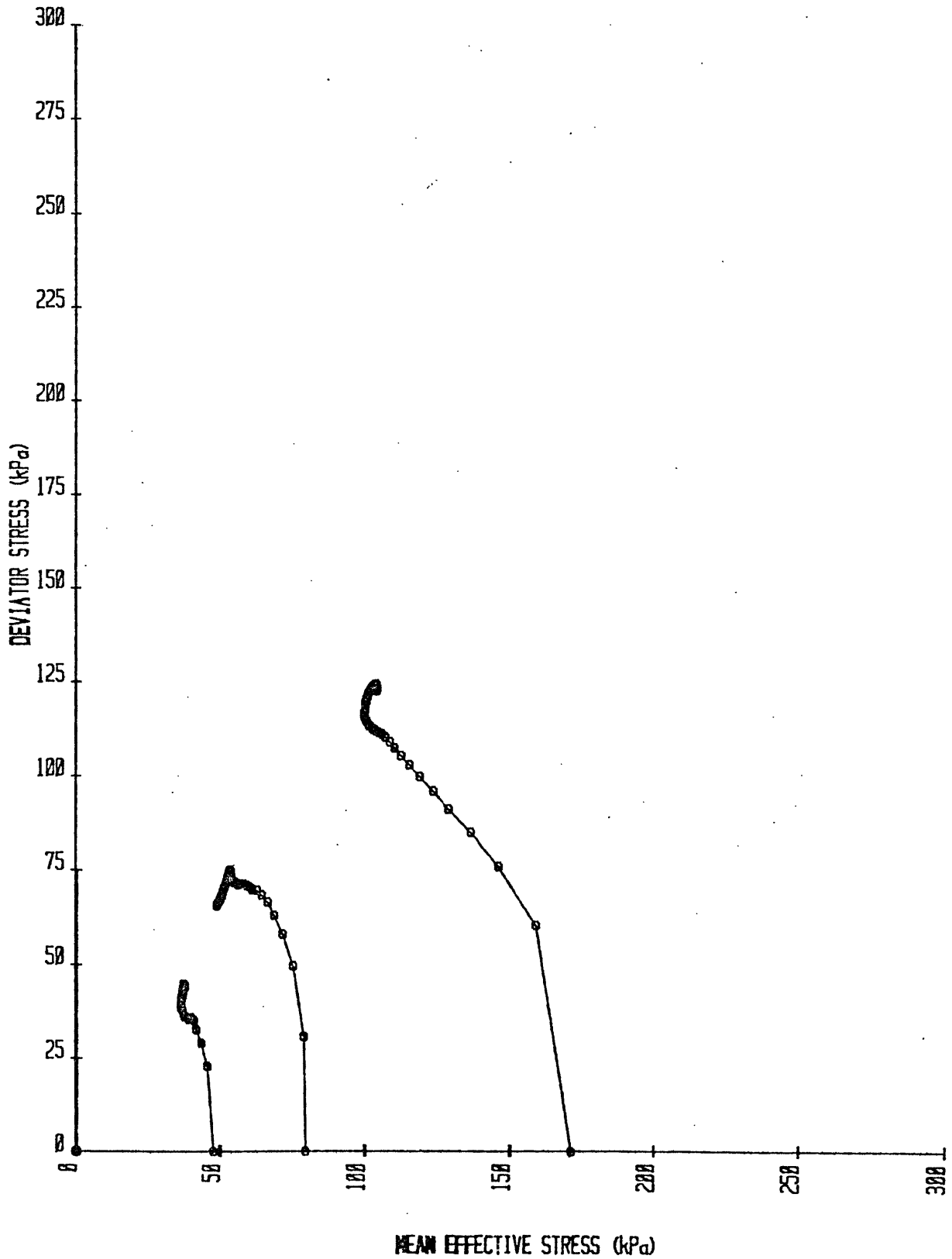


28	0.57	59.67	119.55	0.50	119.33	99.66
29	-0.62	59.93	120.14	0.50	119.86	100.16
30	0.44	60.23	120.18	0.50	120.45	100.10
31	-0.25	60.55	120.66	0.50	121.09	100.48
32	-0.17	60.84	121.05	0.50	121.67	100.77
33	-0.22	61.05	121.36	0.50	122.11	101.01
34	-0.90	61.29	122.02	0.50	122.58	101.59
35	0.48	61.46	122.03	0.50	122.92	101.54
36	-1.28	61.64	122.66	0.50	123.27	102.12
37	0.56	61.72	122.65	0.50	123.45	102.08
38	-0.27	61.84	122.83	0.50	123.68	102.22
39	-2.38	61.90	123.15	0.50	123.79	102.52
40	-1.03	61.98	123.39	0.50	123.95	102.73
41	16.99	61.97	123.55	0.50	123.94	102.89
42	21.87	61.97	123.64	0.50	123.94	102.99
43	-0.20	62.05	123.76	0.50	124.10	103.08
44	-1.74	62.10	123.97	0.50	124.19	103.27
45	-6.85	62.12	124.35	0.50	124.25	103.65
46	-0.56	62.01	124.11	0.50	124.01	103.44
47	-39.25	62.01	124.27	0.50	124.02	103.60
48	-0.77	61.95	124.11	0.50	123.89	103.46
49	1.03	61.90	124.16	0.50	123.80	103.53
50	-0.30	61.84	124.07	0.50	123.68	103.46
51	1.21	61.83	124.09	0.50	123.66	103.48
52	6.68	61.81	124.27	0.50	123.63	103.67
53	1.48	61.80	124.29	0.50	123.60	103.69
54	-0.34	61.75	124.21	0.50	123.51	103.63
55	1.86	61.67	124.45	0.50	123.33	103.89
56	-1.98	61.64	124.33	0.50	123.28	103.78
57	-0.70	61.50	123.99	0.50	123.00	103.49
58	-6.37	61.50	123.92	0.50	122.99	103.42
59	0.24	61.36	123.85	0.50	122.73	103.40
60	2.22	61.30	124.06	0.49	122.61	103.62





GD-19, PC-45: 300/350, 400, 500



GO-19, PC-45: 300/350, 400, 500

## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-7, PC-52; 300/350  
INTERVAL (meters): 6.19-6.31  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/22/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.53  
BULK DENSITY (g/cc): 1.73  
VOID RATIO: 1.41  
POROSITY: 0.59  
GRAIN SPEC GRAVITY (g/cc): 2.73

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 342.30

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		49.00		
2	100.00	50.00	98.00	49.00	0.98
3	200.00	100.00	197.00	99.00	0.99
4	300.00	100.00	298.00	101.00	1.01
5	350.00	50.00	349.00	50.00	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 350.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 50.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 43.30

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	98.00
AREA (sq. mm):	1963.50	1885.74
VOLUME (cc):	196.35	184.80
WATER CONTENT:	0.53	0.53
POROSITY:	0.59	0.53
VOID RATIO:	1.41	1.13
BULK DENSITY (g/cc):	1.73	1.73
BOUYANT BULK DENSITY (g/cc):	0.71	0.71
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	1323	3.12	36.37	0.01
3	2645	3.42	51.43	0.01
4	3968	3.60	62.99	0.00
5	5290	3.72	72.73	0.01
6	6613	3.82	81.32	0.01
7	7936	3.90	89.08	0.01
8	9258	3.97	96.22	0.01
9	10581	4.02	102.86	0.01
10	11904	4.08	109.11	0.01
11	13226	4.12	115.00	0.02
12	14549	4.16	120.62	0.02
13	15871	4.20	125.99	0.01
14	17193	4.24	131.12	0.02
15	18515	4.27	136.07	0.01
16	19838	4.30	140.85	0.01
17	21160	4.33	145.46	0.02
18	22482	4.35	149.94	0.02
19	23805	4.38	154.29	0.02
20	25128	4.40	158.52	0.01
21	26450	4.42	162.63	0.01
22	27773	4.44	166.65	0.01
23	29095	4.46	170.57	0.01
24	30418	4.48	174.41	0.02
25	31740	4.50	178.16	0.01
26	33062	4.52	181.83	0.02
27	34384	4.54	185.43	0.01
28	35707	4.55	188.96	0.02
29	37029	4.57	192.43	0.02
30	38351	4.58	195.83	0.02
31	39673	4.60	199.18	0.02
32	40996	4.61	202.47	0.02
33	42318	4.63	205.71	0.02
34	43640	4.64	208.90	0.02

35	44963	4.65	212.04	0.02
36	46285	4.67	215.14	0.02
37	47608	4.68	218.19	0.02
38	48930	4.69	221.20	0.03
39	50253	4.70	224.17	0.02
40	51576	4.71	227.10	0.02
41	52899	4.72	230.00	0.03
42	54221	4.73	232.85	0.03
43	55544	4.74	235.68	0.03
44	56867	4.75	238.47	0.03
45	58190	4.76	241.23	0.03
46	59512	4.77	243.95	0.03
47	60835	4.78	246.65	0.03
48	62158	4.79	249.32	0.02
49	63480	4.80	251.95	0.03
50	64803	4.81	254.56	0.02
51	66126	4.82	257.15	0.03
52	67449	4.83	259.71	0.03
53	68772	4.84	262.24	0.03
54	70095	4.85	264.75	0.03
55	71418	4.85	267.24	0.03
56	72740	4.86	269.70	0.03
57	74062	4.87	272.14	0.03
58	75384	4.88	274.56	0.04
59	76707	4.88	276.96	0.04

ALPHA: 0.98  
 Ao (sq. mm): 1885.75  
 Lo (mm): 98.00

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 350.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	301.34	0.00	0.00	350.00	0
2	0.01	302.25	0.27	0.00	350.00	1323
3	0.01	303.81	0.55	3.80	350.00	2645
4	0.00	315.22	0.85	42.24	350.00	3968
5	0.01	320.56	1.16	53.33	350.00	5290
6	0.01	323.76	1.49	60.23	350.00	6613
7	0.01	326.13	1.82	64.91	350.00	7936
8	0.01	327.41	2.14	68.56	350.00	9258

9	0.01	328.64	2.46	70.61	350.00	10581
10	0.01	329.26	2.80	70.81	350.00	11904
11	0.02	330.04	3.15	70.61	350.00	13226
12	0.02	330.73	3.49	71.77	350.00	14549
13	0.01	331.15	3.83	73.01	350.00	15871
14	0.02	331.64	4.18	74.60	350.00	17193
15	0.01	331.71	4.52	75.88	350.00	18515
16	0.01	331.97	4.87	77.20	350.00	19838
17	0.02	332.20	5.21	78.05	350.00	21160
18	0.02	332.52	5.57	79.29	350.00	22482
19	0.02	332.68	5.91	80.30	350.00	23805
20	0.01	332.68	6.27	81.31	350.00	25128
21	0.01	332.94	6.62	82.35	350.00	26450
22	0.01	332.91	6.96	83.25	350.00	27773
23	0.01	332.98	7.32	84.25	350.00	29095
24	0.02	332.81	7.67	85.45	350.00	30418
25	0.01	332.75	8.01	86.42	350.00	31740
26	0.02	332.78	8.36	87.55	350.00	33062
27	0.01	332.94	8.72	88.48	350.00	34384
28	0.02	332.68	9.07	89.41	350.00	35707
29	0.02	332.72	9.41	90.30	350.00	37029
30	0.02	332.78	9.77	91.23	350.00	38351
31	0.02	332.75	10.12	92.08	350.00	39673
32	0.02	332.78	10.46	93.01	350.00	40996
33	0.02	332.68	10.82	93.63	350.00	42318
34	0.02	332.59	11.16	94.45	350.00	43640
35	0.02	332.65	11.50	95.41	350.00	44963
36	0.02	332.49	11.85	96.15	350.00	46285
37	0.02	332.46	12.20	96.85	350.00	47608
38	0.03	332.62	12.55	97.62	350.00	48930
39	0.02	332.59	12.90	98.17	350.00	50253
40	0.02	332.42	13.25	98.90	350.00	51576
41	0.03	332.29	13.60	99.45	350.00	52899
42	0.03	332.39	13.94	100.22	350.00	54221
43	0.03	332.65	14.29	100.80	350.00	55544
44	0.03	332.42	14.64	101.42	350.00	56867
45	0.03	332.23	14.99	102.04	350.00	58190
46	0.03	332.26	15.34	102.35	350.00	59512
47	0.03	332.49	15.69	102.78	350.00	60835
48	0.02	332.65	16.03	103.44	350.00	62158
49	0.03	332.62	16.38	104.10	350.00	63480
50	0.02	332.52	16.72	104.64	350.00	64803
51	0.03	332.62	17.07	105.06	350.00	66126
52	0.03	332.55	17.42	105.53	350.00	67449
53	0.03	332.49	17.76	106.07	350.00	68772
54	0.03	332.52	18.10	106.30	350.00	70095
55	0.03	332.42	18.45	106.96	350.00	71418
56	0.03	332.52	18.80	107.62	350.00	72740
57	0.03	332.46	19.14	107.86	350.00	74062
58	0.04	332.68	19.48	109.10	350.00	75384
59	0.04	332.10	19.83	109.79	350.00	76707



DERIVED PROPERTIES

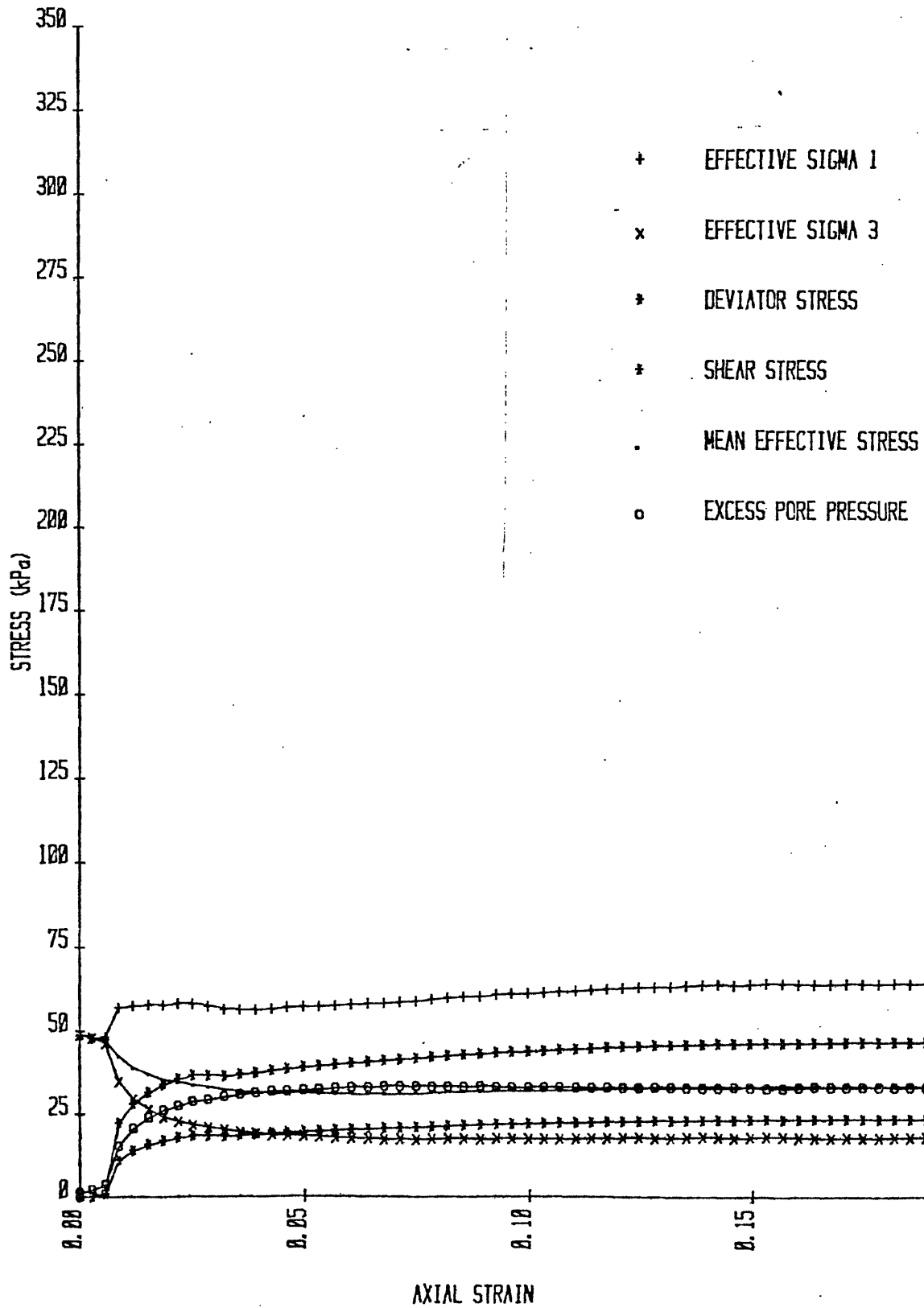
READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL	EFFECTIVE		
				STRESS RATIO	STRESS EFFSIG1 (kPa)	STRESS EFFSIG3 (kPa)	RATIO
1	0.0000	350.00	350.00	1.00	48.66	48.66	1.00
2	0.0027	350.00	350.00	1.00	47.75	47.75	1.00
3	0.0056	352.00	350.00	1.01	48.19	46.19	1.04
4	0.0086	372.21	350.00	1.06	56.99	34.78	1.64
5	0.0118	377.95	350.00	1.08	57.38	29.44	1.95
6	0.0152	381.45	350.00	1.09	57.70	26.25	2.20
7	0.0185	383.79	350.00	1.10	57.65	23.87	2.42
8	0.0218	385.56	350.00	1.10	58.16	22.60	2.57
9	0.0251	386.51	350.00	1.10	57.86	21.36	2.71
10	0.0285	386.48	350.00	1.10	57.21	20.74	2.76
11	0.0321	386.24	350.00	1.10	56.20	19.96	2.82
12	0.0356	386.71	350.00	1.10	55.98	19.27	2.90
13	0.0391	387.21	350.00	1.11	56.05	18.85	2.97
14	0.0426	387.87	350.00	1.11	56.23	18.36	3.06
15	0.0461	388.39	350.00	1.11	56.68	18.29	3.10
16	0.0497	388.90	350.00	1.11	56.94	18.03	3.16
17	0.0532	389.19	350.00	1.11	56.99	17.81	3.20
18	0.0568	389.66	350.00	1.11	57.14	17.48	3.27
19	0.0603	390.01	350.00	1.11	57.33	17.32	3.31
20	0.0640	390.36	350.00	1.12	57.68	17.32	3.33
21	0.0675	390.72	350.00	1.12	57.78	17.06	3.39
22	0.0711	391.01	350.00	1.12	58.10	17.09	3.40
23	0.0747	391.34	350.00	1.12	58.37	17.02	3.43
24	0.0782	391.77	350.00	1.12	58.96	17.19	3.43
25	0.0817	392.08	350.00	1.12	59.34	17.25	3.44
26	0.0853	392.46	350.00	1.12	59.68	17.22	3.47
27	0.0890	392.74	350.00	1.12	59.80	17.06	3.51
28	0.0926	393.02	350.00	1.12	60.34	17.32	3.48
29	0.0960	393.29	350.00	1.12	60.57	17.28	3.50
30	0.0997	393.56	350.00	1.12	60.77	17.22	3.53
31	0.1032	393.79	350.00	1.13	61.04	17.25	3.54
32	0.1068	394.06	350.00	1.13	61.28	17.22	3.56
33	0.1104	394.17	350.00	1.13	61.49	17.32	3.55
34	0.1139	394.38	350.00	1.13	61.80	17.41	3.55
35	0.1174	394.66	350.00	1.13	62.01	17.35	3.57
36	0.1209	394.83	350.00	1.13	62.34	17.51	3.56
37	0.1245	394.96	350.00	1.13	62.51	17.55	3.56
38	0.1281	395.14	350.00	1.13	62.52	17.38	3.60
39	0.1317	395.20	350.00	1.13	62.62	17.41	3.60
40	0.1352	395.36	350.00	1.13	62.93	17.58	3.58
41	0.1388	395.42	350.00	1.13	63.12	17.71	3.56
42	0.1423	395.58	350.00	1.13	63.19	17.61	3.59
43	0.1458	395.66	350.00	1.13	63.01	17.35	3.63
44	0.1494	395.75	350.00	1.13	63.33	17.58	3.60

45	0.1530	395.84	350.00	1.13	63.61	17.77	3.58
46	0.1565	395.78	350.00	1.13	63.52	17.74	3.58
47	0.1601	395.78	350.00	1.13	63.29	17.51	3.61
48	0.1635	395.88	350.00	1.13	63.23	17.35	3.64
49	0.1671	395.98	350.00	1.13	63.36	17.38	3.65
50	0.1706	396.02	350.00	1.13	63.50	17.48	3.63
51	0.1742	396.01	350.00	1.13	63.39	17.38	3.65
52	0.1778	396.01	350.00	1.13	63.46	17.45	3.64
53	0.1812	396.06	350.00	1.13	63.57	17.51	3.63
54	0.1847	395.96	350.00	1.13	63.44	17.48	3.63
55	0.1883	396.04	350.00	1.13	63.62	17.58	3.62
56	0.1918	396.13	350.00	1.13	63.61	17.48	3.64
57	0.1953	396.02	350.00	1.13	63.57	17.55	3.62
58	0.1987	396.36	350.00	1.13	63.67	17.32	3.68
59	0.2024	396.44	350.00	1.13	64.34	17.90	3.59

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.00	0.00	48.66	0.00	0.00	48.66
2	0.00	0.00	47.75	0.00	0.00	47.75
3	0.78	1.00	47.19	0.02	2.00	46.85
4	0.56	11.10	45.89	0.24	22.21	42.18
5	0.93	13.97	43.41	0.32	27.95	38.75
6	0.91	15.73	41.97	0.37	31.45	36.73
7	1.02	16.89	40.76	0.41	33.79	35.13
8	0.71	17.78	40.38	0.44	35.56	34.45
9	1.31	18.25	39.61	0.46	36.51	33.53
10	-20.55	18.24	38.98	0.47	36.48	32.90
11	-3.35	18.12	38.08	0.48	36.24	32.04
12	1.48	18.35	37.63	0.49	36.71	31.51
13	0.85	18.60	37.45	0.50	37.21	31.25
14	0.73	18.94	37.30	0.51	37.87	30.98
15	0.13	19.19	37.49	0.51	38.39	31.09
16	0.50	19.45	37.49	0.52	38.90	31.00
17	0.80	19.59	37.40	0.52	39.19	30.87
18	0.69	19.83	37.31	0.53	39.66	30.70
19	0.46	20.01	37.32	0.54	40.01	30.66
20	0.00	20.18	37.50	0.54	40.36	30.77
21	0.72	20.36	37.42	0.54	40.72	30.63
22	-0.12	20.50	37.59	0.55	41.01	30.76
23	0.20	20.67	37.69	0.55	41.34	30.80
24	-0.38	20.89	38.07	0.55	41.77	31.11
25	-0.21	21.04	38.29	0.55	42.08	31.28
26	0.09	21.23	38.45	0.55	42.46	31.37
27	0.58	21.37	38.43	0.56	42.74	31.30
28	-0.93	21.51	38.83	0.55	43.02	31.66
29	0.13	21.64	38.93	0.56	43.29	31.71
30	0.24	21.78	39.00	0.56	43.56	31.74

31	-0.14	21.90	39.15	0.56	43.79	31.85
32	0.12	22.03	39.25	0.56	44.06	31.90
33	-0.85	22.09	39.40	0.56	44.17	32.04
34	-0.46	22.19	39.60	0.56	44.38	32.21
35	0.23	22.33	39.68	0.56	44.66	32.24
36	-0.98	22.41	39.92	0.56	44.83	32.45
37	-0.24	22.48	40.03	0.56	44.96	32.53
38	0.93	22.57	39.95	0.56	45.14	32.43
39	-0.51	22.60	40.02	0.56	45.20	32.48
40	-1.05	22.68	40.26	0.56	45.36	32.70
41	-2.21	22.71	40.42	0.56	45.42	32.85
42	0.58	22.79	40.40	0.56	45.58	32.80
43	3.42	22.83	40.18	0.57	45.66	32.57
44	-2.58	22.87	40.45	0.57	45.75	32.83
45	-2.27	22.92	40.69	0.56	45.84	33.05
46	-0.59	22.89	40.63	0.56	45.78	33.00
47	-195.35	22.89	40.40	0.57	45.78	32.77
48	1.59	22.94	40.29	0.57	45.88	32.64
49	-0.35	22.99	40.37	0.57	45.98	32.71
50	-2.17	23.01	40.49	0.57	46.02	32.82
51	-8.82	23.01	40.39	0.57	46.01	32.72
52	-22.87	23.01	40.45	0.57	46.01	32.78
53	-1.54	23.03	40.54	0.57	46.06	32.86
54	-0.33	22.98	40.46	0.57	45.96	32.80
55	-1.15	23.02	40.60	0.57	46.04	32.92
56	1.19	23.06	40.54	0.57	46.13	32.86
57	0.64	23.01	40.56	0.57	46.02	32.99
58	0.69	23.18	40.49	0.57	46.36	32.77
59	-6.91	23.22	41.12	0.56	46.44	33.38



## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-7, PC-52; 300/400  
INTERVAL (meters): 6.31-6.43  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/22/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.51  
BULK DENSITY (g/cc): 1.75  
VOID RATIO: 1.36  
POROSITY: 0.58  
GRAIN SPEC GRAVITY (g/cc): 2.73  
LIQUID LIMIT (%): 48.00  
PLASTIC LIMIT (%): 25.00

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 340.10

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		50.00		
2	100.00	50.00	98.00	48.00	0.96
3	200.00	100.00	199.00	101.00	1.01
4	300.00	100.00	298.00	99.00	0.99
5	400.00	100.00	398.00	100.00	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 400.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 100.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 45.13

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	97.00
AREA (sq. mm):	1963.50	1847.45
VOLUME (cc):	196.35	179.20
WATER CONTENT:	0.51	0.51
POROSITY:	0.58	0.51
VOID RATIO:	1.36	1.04
BULK DENSITY (g/cc):	1.75	1.75
BOUYANT BULK DENSITY (g/cc):	0.72	0.72
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DV9L (cc)
1	0	-4.00	0.00	0.00
2	1323	3.12	36.37	-0.03
3	2645	3.42	51.43	-0.03
4	3968	3.60	62.99	-0.03
5	5291	3.72	72.74	-0.02
6	6613	3.82	81.32	-0.02
7	7936	3.90	89.08	-0.02
8	9259	3.97	96.22	-0.02
9	10581	4.02	102.86	-0.02
10	11904	4.08	109.11	-0.02
11	13227	4.12	115.01	-0.02
12	14550	4.16	120.62	-0.02
13	15872	4.20	125.98	-0.02
14	17195	4.24	131.13	-0.02
15	18517	4.27	136.08	-0.02
16	19839	4.30	140.85	-0.02
17	21161	4.33	145.47	-0.02
18	22484	4.35	149.95	-0.01
19	23806	4.38	154.29	-0.02
20	25129	4.40	158.52	-0.02
21	26451	4.42	162.64	-0.02
22	27774	4.44	166.66	-0.02
23	29096	4.46	170.58	-0.02
24	30419	4.48	174.41	-0.03
25	31741	4.50	178.16	-0.02
26	33064	4.52	181.84	-0.02
27	34386	4.54	185.43	-0.02
28	35708	4.55	188.97	-0.02
29	37030	4.57	192.43	-0.02
30	38352	4.58	195.84	-0.02
31	39675	4.60	199.19	-0.02
32	40997	4.61	202.48	-0.02
33	42319	4.63	205.72	-0.02
34	43642	4.64	208.91	-0.02

35	44964	4.65	212.05	-0.02
36	46286	4.67	215.14	-0.02
37	47609	4.68	218.19	-0.01
38	48932	4.69	221.21	-0.01
39	50254	4.70	224.17	-0.01
40	51577	4.71	227.11	-0.01
41	52900	4.72	230.00	-0.01
42	54223	4.73	232.86	-0.01
43	55545	4.74	235.68	-0.01
44	56868	4.75	238.47	-0.01
45	58191	4.76	241.23	-0.01
46	59513	4.77	243.95	-0.01
47	60836	4.78	246.65	-0.01
48	62159	4.79	249.32	-0.00
49	63482	4.80	251.96	-0.01
50	64804	4.81	254.57	-0.01
51	66127	4.82	257.15	-0.00
52	67450	4.83	259.71	-0.00
53	68773	4.84	262.25	-0.00
54	70096	4.85	264.76	-0.00
55	71419	4.85	267.24	-0.00
56	72741	4.86	269.71	-0.00
57	74063	4.87	272.15	-0.01
58	75386	4.88	274.57	0.01
59	76708	4.88	276.96	0.01

ALPHA: 0.97  
 Ao (sq. mm): 1847.46  
 Lo (mm): 97.00

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 400.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFD (N)	CELP (kPa)	TIME (sec)
1	0.00	317.49	0.00	0.00	400.00	0
2	-0.03	332.40	0.27	58.54	400.00	1323
3	-0.03	340.50	0.58	74.64	400.00	2645
4	-0.03	346.16	0.89	84.66	400.00	3968
5	-0.02	350.29	1.21	92.31	400.00	5291
6	-0.02	353.44	1.54	98.26	400.00	6613
7	-0.02	356.11	1.88	103.30	400.00	7936
8	-0.02	357.89	2.21	106.27	400.00	9259

9	-0.02	359.51	2.46	107.54	400.00	10581
10	-0.02	360.59	2.80	110.16	400.00	11904
11	-0.02	361.55	3.15	111.52	400.00	13227
12	-0.02	362.47	3.50	112.79	400.00	14550
13	-0.02	363.23	3.85	114.32	400.00	15872
14	-0.02	364.00	4.20	115.76	400.00	17195
15	-0.02	364.60	4.55	117.51	400.00	18517
16	-0.02	364.98	4.90	118.78	400.00	19839
17	-0.02	365.30	5.25	120.14	400.00	21161
18	-0.01	365.78	5.60	121.67	400.00	22484
19	-0.02	366.13	5.95	122.94	400.00	23806
20	-0.02	366.32	6.30	124.60	400.00	25129
21	-0.02	366.60	6.65	125.96	400.00	26451
22	-0.02	366.76	7.00	127.45	400.00	27774
23	-0.02	366.95	7.35	128.76	400.00	29096
24	-0.03	367.08	7.70	130.42	400.00	30419
25	-0.02	367.05	8.04	131.78	400.00	31741
26	-0.02	367.14	8.39	133.31	400.00	33064
27	-0.02	367.37	8.74	134.66	400.00	34386
28	-0.02	367.30	9.08	136.33	400.00	35708
29	-0.02	367.43	9.43	137.46	400.00	37030
30	-0.02	367.40	9.77	138.78	400.00	38352
31	-0.02	367.40	10.12	139.87	400.00	39675
32	-0.02	367.30	10.46	141.40	400.00	40997
33	-0.02	367.24	10.80	142.32	400.00	42319
34	-0.02	367.24	11.15	143.72	400.00	43642
35	-0.02	367.30	11.49	144.68	400.00	44964
36	-0.02	367.30	11.83	146.04	400.00	46286
37	-0.01	367.24	12.18	147.00	400.00	47609
38	-0.01	367.24	12.52	148.05	400.00	48932
39	-0.01	367.21	12.87	149.19	400.00	50254
40	-0.01	367.27	13.22	150.15	400.00	51577
41	-0.01	367.21	13.56	150.98	400.00	52900
42	-0.01	367.18	13.91	151.95	400.00	54223
43	-0.01	367.30	14.26	152.95	400.00	55545
44	-0.01	367.24	14.61	153.57	400.00	56868
45	-0.01	367.18	14.96	154.40	400.00	58191
46	-0.01	367.18	15.31	154.92	400.00	59513
47	-0.01	367.27	15.66	155.53	400.00	60836
48	-0.00	367.37	16.01	156.15	400.00	62159
49	-0.01	367.37	16.37	157.15	400.00	63482
50	-0.01	367.40	16.72	157.72	400.00	64804
51	-0.00	367.27	17.08	158.60	400.00	66127
52	-0.00	367.43	17.44	159.12	400.00	67450
53	-0.00	367.46	17.79	160.00	400.00	68773
54	-0.00	367.46	18.15	160.52	400.00	70096
55	-0.00	367.40	18.50	161.27	400.00	71419
56	-0.00	367.30	18.85	161.92	400.00	72741
57	-0.01	367.46	19.22	162.53	400.00	74063
58	0.01	367.78	19.55	163.98	400.00	75386
59	0.01	367.72	19.92	165.07	400.00	76708



DERIVED PROPERTIES

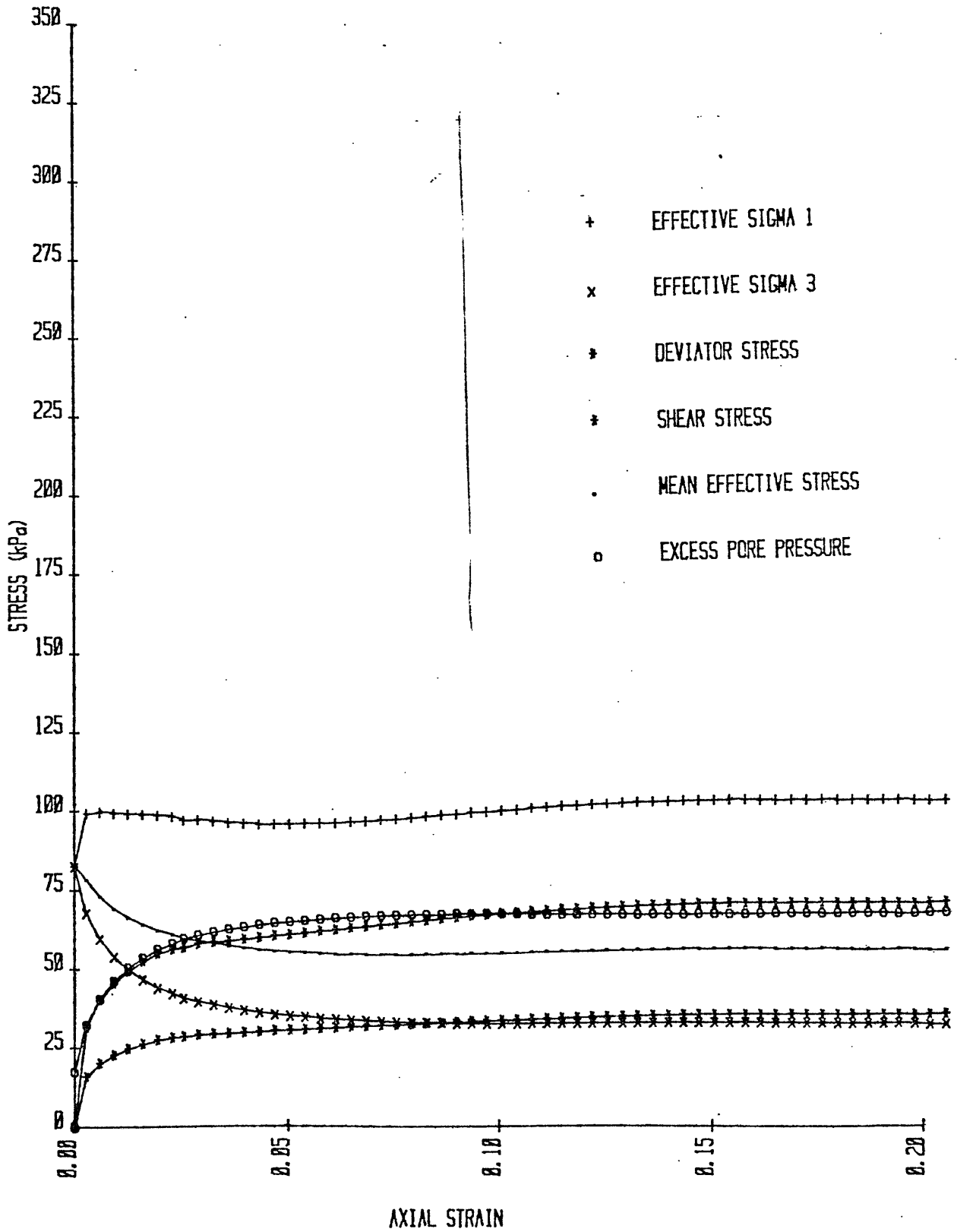
READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL	EFFECTIVE		RATIO
				STRESS RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	
1	0.0000	400.00	400.00	1.00	82.51	82.51	1.00
2	0.0028	431.60	400.00	1.08	99.20	67.60	1.47
3	0.0059	440.16	400.00	1.10	99.66	59.50	1.68
4	0.0092	445.40	400.00	1.11	99.24	53.84	1.84
5	0.0125	449.34	400.00	1.12	99.05	49.71	1.99
6	0.0159	452.34	400.00	1.13	98.90	46.56	2.12
7	0.0193	454.83	400.00	1.14	98.72	43.89	2.25
8	0.0228	456.21	400.00	1.14	98.32	42.11	2.33
9	0.0254	456.73	400.00	1.14	97.22	40.49	2.40
10	0.0289	457.91	400.00	1.14	97.31	39.41	2.47
11	0.0325	458.40	400.00	1.15	96.85	38.45	2.52
12	0.0361	458.85	400.00	1.15	96.38	37.53	2.57
13	0.0397	459.42	400.00	1.15	96.19	36.77	2.62
14	0.0433	459.95	400.00	1.15	95.95	36.00	2.67
15	0.0469	460.63	400.00	1.15	96.03	35.40	2.71
16	0.0505	461.05	400.00	1.15	96.07	35.02	2.74
17	0.0541	461.51	400.00	1.15	96.21	34.70	2.77
18	0.0578	462.05	400.00	1.16	96.28	34.22	2.81
19	0.0614	462.46	400.00	1.16	96.34	33.87	2.84
20	0.0650	463.06	400.00	1.16	96.75	33.68	2.87
21	0.0686	463.50	400.00	1.16	96.90	33.40	2.90
22	0.0722	464.01	400.00	1.16	97.24	33.24	2.93
23	0.0758	464.41	400.00	1.16	97.46	33.05	2.95
24	0.0794	464.99	400.00	1.16	97.91	32.92	2.97
25	0.0829	465.41	400.00	1.16	98.37	32.95	2.99
26	0.0865	465.92	400.00	1.16	98.77	32.86	3.01
27	0.0901	466.33	400.00	1.17	98.96	32.64	3.03
28	0.0936	466.88	400.00	1.17	99.58	32.70	3.05
29	0.0972	467.18	400.00	1.17	99.75	32.57	3.06
30	0.1007	467.55	400.00	1.17	100.15	32.60	3.07
31	0.1043	467.81	400.00	1.17	100.42	32.60	3.08
32	0.1078	468.28	400.00	1.17	100.98	32.70	3.09
33	0.1114	468.46	400.00	1.17	101.22	32.76	3.09
34	0.1149	468.86	400.00	1.17	101.62	32.76	3.10
35	0.1185	469.04	400.00	1.17	101.73	32.70	3.11
36	0.1220	469.41	400.00	1.17	102.10	32.70	3.12
37	0.1255	469.58	400.00	1.17	102.34	32.76	3.12
38	0.1291	469.79	400.00	1.17	102.55	32.76	3.13
39	0.1327	470.04	400.00	1.18	102.84	32.79	3.14
40	0.1362	470.20	400.00	1.18	102.93	32.73	3.14
41	0.1398	470.30	400.00	1.18	103.09	32.79	3.14
42	0.1434	470.45	400.00	1.18	103.28	32.83	3.15
43	0.1470	470.62	400.00	1.18	103.32	32.70	3.16
44	0.1506	470.60	400.00	1.18	103.37	32.76	3.16

45	0.1542	470.69	400.00	1.18	103.51	32.83	3.15
46	0.1578	470.62	400.00	1.18	103.45	32.83	3.15
47	0.1614	470.60	400.00	1.18	103.33	32.73	3.16
48	0.1651	470.57	400.00	1.18	103.20	32.64	3.16
49	0.1687	470.71	400.00	1.18	103.34	32.64	3.17
50	0.1724	470.65	400.00	1.18	103.26	32.60	3.17
51	0.1761	470.73	400.00	1.18	103.46	32.73	3.16
52	0.1797	470.65	400.00	1.18	103.22	32.57	3.17
53	0.1834	470.72	400.00	1.18	103.26	32.54	3.17
54	0.1871	470.63	400.00	1.18	103.17	32.54	3.17
55	0.1907	470.64	400.00	1.18	103.24	32.60	3.17
56	0.1943	470.61	400.00	1.18	103.31	32.70	3.16
57	0.1981	470.55	400.00	1.18	103.09	32.54	3.17
58	0.2016	470.87	400.00	1.18	103.09	32.22	3.20
59	0.2053	471.00	400.00	1.18	103.29	32.29	3.20

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.00	0.00	82.51	0.00	0.00	82.51
2	0.00	15.80	83.40	0.19	31.60	78.14
3	0.95	20.08	79.58	0.25	40.16	72.88
4	1.08	22.70	76.54	0.30	45.40	68.97
5	1.05	24.67	74.38	0.33	49.34	66.15
6	1.05	26.17	72.73	0.36	52.34	64.01
7	1.07	27.42	71.30	0.38	54.83	62.17
8	1.29	28.11	70.21	0.40	56.21	60.85
9	3.12	28.37	68.85	0.41	56.73	59.40
10	0.92	28.95	68.36	0.42	57.91	58.71
11	1.92	29.20	67.65	0.43	58.40	57.92
12	2.07	29.42	66.95	0.44	58.85	57.15
13	1.32	29.71	66.48	0.45	59.42	56.58
14	1.45	29.97	65.98	0.45	59.95	55.99
15	0.89	30.31	65.71	0.46	60.63	55.61
16	0.90	30.52	65.54	0.47	61.05	55.37
17	0.69	30.76	65.46	0.47	61.51	55.20
18	0.88	31.03	65.25	0.48	62.05	54.91
19	0.86	31.23	65.10	0.48	62.46	54.69
20	0.31	31.53	65.22	0.48	63.06	54.71
21	0.65	31.75	65.15	0.49	63.50	54.57
22	0.32	32.00	65.24	0.49	64.01	54.57
23	0.47	32.21	65.25	0.49	64.41	54.52
24	0.22	32.50	65.42	0.50	64.99	54.58
25	-0.08	32.71	65.66	0.50	65.41	54.76
26	0.19	32.96	65.82	0.50	65.92	54.83
27	0.54	33.16	65.80	0.50	66.33	54.74
28	-0.11	33.44	66.14	0.51	66.88	54.99
29	0.43	33.59	66.16	0.51	67.18	54.96
30	-0.09	33.78	66.38	0.51	67.55	55.12

31	0.00	33.91	66.51	0.51	67.81	55.21
32	-0.20	34.14	66.84	0.51	68.28	55.46
33	-0.37	34.23	66.99	0.51	68.46	55.58
34	0.00	34.43	67.19	0.51	68.86	55.71
35	0.35	34.52	67.22	0.51	69.04	55.71
36	0.00	34.70	67.40	0.51	69.41	55.83
37	-0.36	34.79	67.55	0.52	69.58	55.96
38	0.00	34.90	67.66	0.52	69.79	56.03
39	-0.13	35.02	67.81	0.52	70.04	56.14
40	0.40	35.10	67.83	0.52	70.20	56.13
41	-0.68	35.15	67.94	0.52	70.30	56.23
42	-0.20	35.23	68.05	0.52	70.45	56.31
43	0.75	35.31	68.01	0.52	70.62	56.24
44	3.61	35.30	68.06	0.52	70.60	56.30
45	-0.76	35.34	68.17	0.52	70.69	56.39
46	0.00	35.31	68.14	0.52	70.62	56.37
47	-4.14	35.30	68.03	0.52	70.60	56.26
48	-3.32	35.28	67.92	0.52	70.57	56.16
49	0.00	35.35	67.99	0.52	70.71	56.20
50	-0.58	35.33	67.93	0.52	70.65	56.15
51	-1.70	35.36	68.09	0.52	70.73	56.31
52	-1.97	35.32	67.90	0.52	70.65	56.12
53	0.42	35.36	67.90	0.52	70.72	56.11
54	0.00	35.32	67.86	0.52	70.63	56.08
55	-8.73	35.32	67.92	0.52	70.64	56.15
56	3.43	35.31	68.00	0.52	70.61	56.24
57	-2.53	35.27	67.81	0.52	70.55	56.06
58	1.00	35.43	67.65	0.52	70.87	55.84
59	-0.47	35.50	67.79	0.52	71.00	55.95



## TRIAxIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-7, PC-52; 300/500  
INTERVAL (meters): 6.43-6.55  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/22/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.51  
BULK DENSITY (g/cc): 1.75  
VOID RATIO: 1.36  
POROSITY: 0.58  
GRAIN SPEC GRAVITY (g/cc): 2.73

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 335.10

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		47.00		
2	100.00	50.00	97.00	50.00	1.00
3	200.00	100.00	194.00	97.00	0.97
4	300.00	100.00	292.00	98.00	0.98
5	500.00	200.00	492.00	200.00	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 500.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 200.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 45.98

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	96.00
AREA (sq. mm):	1963.50	1809.56
VOLUME (cc):	196.35	173.72
WATER CONTENT:	0.51	0.51
POROSITY:	0.58	0.51
VOID RATIO:	1.36	1.04
BULK DENSITY (g/cc):	1.75	1.75
BOUYANT BULK DENSITY (g/cc):	0.72	0.72
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	1322	3.12	36.36	-0.00
3	2645	3.42	51.43	-0.00
4	3967	3.60	62.98	-0.01
5	5290	3.72	72.73	0.00
6	6613	3.82	81.32	-0.01
7	7935	3.90	89.08	-0.00
8	9258	3.97	96.22	-0.00
9	10581	4.02	102.86	-0.00
10	11903	4.08	109.10	-0.00
11	13225	4.12	115.00	-0.01
12	14548	4.16	120.62	-0.00
13	15870	4.20	125.98	0.00
14	17193	4.24	131.12	-0.01
15	18515	4.27	136.07	-0.00
16	19837	4.30	140.84	-0.00
17	21160	4.33	145.46	-0.01
18	22482	4.35	149.94	-0.01
19	23805	4.38	154.29	-0.00
20	25128	4.40	158.52	0.00
21	26450	4.42	162.63	-0.00
22	27772	4.44	166.65	0.00
23	29095	4.46	170.57	0.00
24	30417	4.48	174.40	0.00
25	31739	4.50	178.15	0.00
26	33061	4.52	181.83	-0.00
27	34383	4.54	185.43	0.01
28	35705	4.55	188.96	-0.00
29	37027	4.57	192.42	0.00
30	38350	4.58	195.83	0.00
31	39672	4.60	199.18	0.00
32	40994	4.61	202.47	-0.00
33	42317	4.63	205.71	0.00
34	43639	4.64	208.90	0.00

35	44961	4.65	212.04	-0.00
36	46284	4.67	215.14	0.00
37	47606	4.68	218.19	0.01
38	48929	4.69	221.20	0.01
39	50260	4.70	224.19	0.01
40	51583	4.71	227.12	0.01
41	52906	4.72	230.01	0.01
42	54228	4.73	232.87	0.01
43	55551	4.74	235.69	0.01
44	56874	4.75	238.48	0.01
45	58196	4.76	241.24	0.01
46	59519	4.77	243.97	-0.00
47	60842	4.78	246.66	0.00
48	62164	4.79	249.33	0.01
49	63487	4.80	251.97	0.01
50	64810	4.81	254.58	0.01
51	66133	4.82	257.16	0.01
52	67456	4.83	259.72	0.01
53	68779	4.84	262.26	0.01
54	70102	4.85	264.77	0.00
55	71425	4.85	267.25	0.01
56	72747	4.86	269.72	0.01
57	74069	4.87	272.16	0.01
58	75391	4.88	274.57	0.02
59	76714	4.88	276.97	0.02

ALPHA: 0.96  
 Ao (sq. mm): 1809.56  
 Lo (mm): 96.00

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 500.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	294.46	0.00	0.00	500.00	0
2	-0.00	295.79	0.23	-0.08	500.00	1322
3	-0.00	296.47	0.47	-0.04	500.00	2645
4	-0.01	304.45	0.72	27.26	500.00	3967
5	0.00	343.93	0.99	141.81	500.00	5290
6	-0.01	364.64	1.26	172.72	500.00	6613
7	-0.00	378.26	1.55	190.89	500.00	7935
8	-0.00	388.17	1.85	203.79	500.00	9258

9	-0.00	395.73	2.15	213.81	500.00	10581
10	-0.00	401.69	2.47	221.80	500.00	11903
11	-0.01	406.39	2.78	228.87	500.00	13225
12	-0.00	410.22	3.11	234.47	500.00	14548
13	0.00	413.36	3.44	239.81	500.00	15870
14	-0.01	416.02	3.77	244.03	500.00	17193
15	-0.00	418.29	4.11	248.26	500.00	19515
16	-0.00	419.94	4.45	251.52	500.00	19837
17	-0.01	421.46	4.80	254.63	500.00	21160
18	-0.01	422.73	5.14	256.71	500.00	22482
19	-0.00	423.86	5.49	258.70	500.00	23805
20	0.00	424.58	5.84	260.43	500.00	25128
21	-0.00	425.22	6.19	262.24	500.00	26450
22	0.00	425.90	6.54	263.73	500.00	27772
23	0.00	426.36	6.89	265.42	500.00	29095
24	0.00	426.88	7.25	267.11	500.00	30417
25	0.00	427.30	7.60	268.88	500.00	31739
26	-0.00	427.27	7.96	270.61	500.00	33061
27	0.01	427.59	8.31	272.07	500.00	34383
28	-0.00	427.85	8.66	273.83	500.00	35705
29	0.00	427.75	9.01	275.18	500.00	37027
30	0.00	427.91	9.36	277.10	500.00	38350
31	0.00	427.72	9.71	278.52	500.00	39672
32	-0.00	428.08	10.06	280.44	500.00	40994
33	0.00	428.27	10.41	281.74	500.00	42317
34	0.00	428.24	10.75	283.39	500.00	43639
35	-0.00	428.27	11.10	284.66	500.00	44961
36	0.00	428.27	11.44	286.01	500.00	46284
37	0.01	428.21	11.79	287.23	500.00	47606
38	0.01	428.30	12.13	288.42	500.00	48929
39	0.01	428.11	12.47	289.65	500.00	50260
40	0.01	428.01	12.81	290.84	500.00	51583
41	0.01	427.98	13.16	292.11	500.00	52906
42	0.01	428.11	13.50	293.26	500.00	54228
43	0.01	428.17	13.84	294.42	500.00	55551
44	0.01	428.08	14.18	295.26	500.00	56874
45	0.01	428.21	14.52	296.18	500.00	58196
46	-0.00	428.59	14.85	296.60	500.00	59519
47	0.00	428.76	15.19	297.53	500.00	60842
48	0.01	428.76	15.53	298.14	500.00	62164
49	0.01	428.85	15.87	299.37	500.00	63487
50	0.01	428.85	16.21	300.02	500.00	64810
51	0.01	428.82	16.55	301.02	500.00	66133
52	0.01	428.85	16.90	301.63	500.00	67456
53	0.01	428.69	17.24	302.59	500.00	68779
54	0.00	428.56	17.59	303.29	500.00	70102
55	0.01	428.82	17.93	304.05	500.00	71425
56	0.01	428.82	18.28	304.82	500.00	72747
57	0.01	428.89	18.62	305.51	500.00	74069
58	0.02	429.02	18.96	306.93	500.00	75391
59	0.02	429.05	19.32	308.05	500.00	76714



DERIVED PROPERTIES

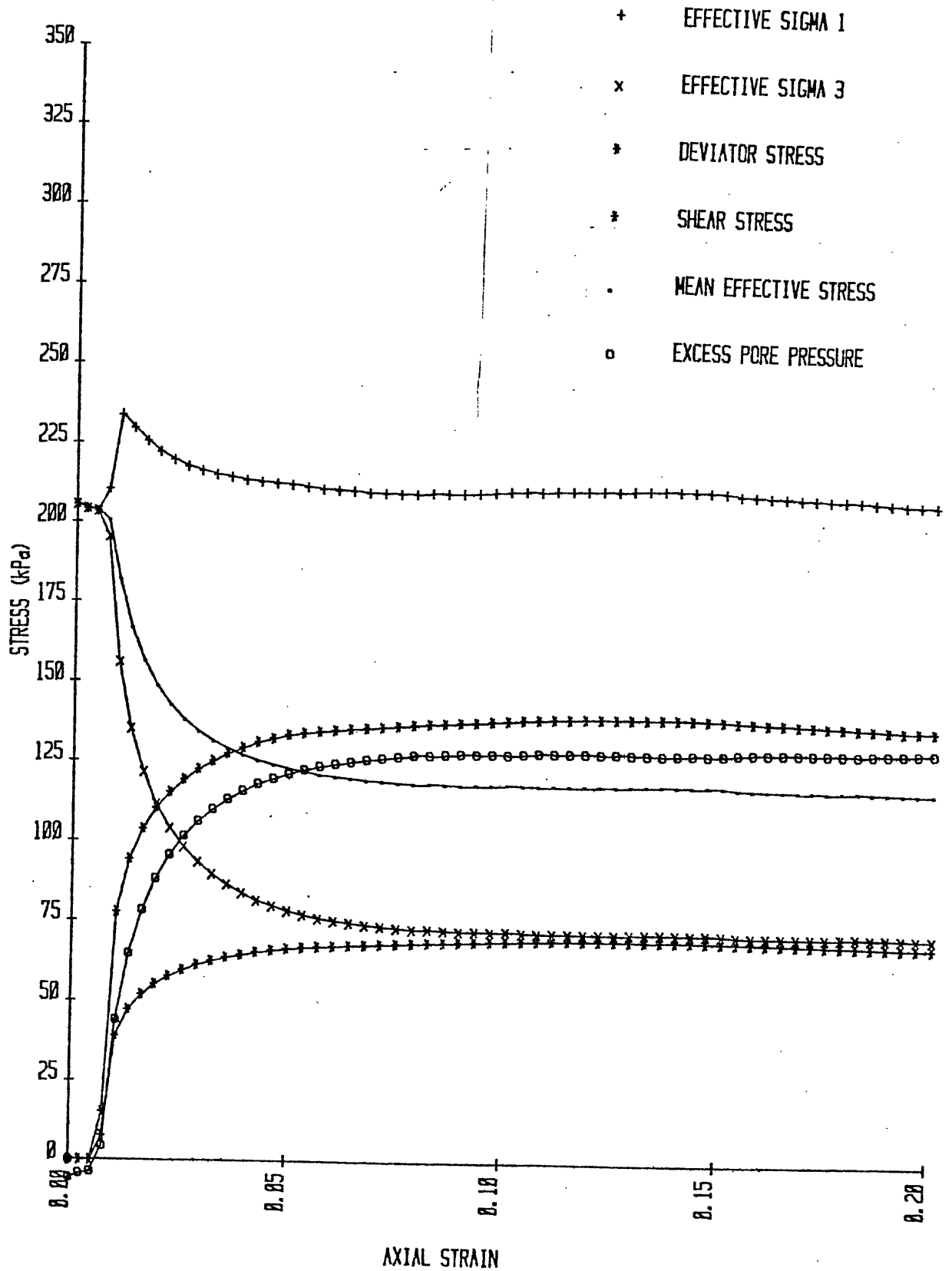
READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL	EFFECTIVE		RATIO
				STRESS RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	
1	0.0000	500.00	500.00	1.00	205.54	205.54	1.00
2	0.0024	499.96	500.00	1.00	204.16	204.21	1.00
3	0.0049	499.98	500.00	1.00	203.50	203.53	1.00
4	0.0075	514.95	500.00	1.03	210.51	195.55	1.08
5	0.0103	577.56	500.00	1.16	233.63	156.07	1.50
6	0.0132	594.19	500.00	1.19	229.55	135.36	1.70
7	0.0162	603.78	500.00	1.21	225.53	121.75	1.85
8	0.0192	610.45	500.00	1.22	222.28	111.83	1.99
9	0.0224	615.51	500.00	1.23	219.78	104.27	2.11
10	0.0257	619.42	500.00	1.24	217.73	98.31	2.21
11	0.0290	622.81	500.00	1.25	216.42	93.61	2.31
12	0.0324	625.38	500.00	1.25	215.16	89.78	2.40
13	0.0358	627.77	500.00	1.26	214.41	86.64	2.47
14	0.0393	629.56	500.00	1.26	213.54	83.98	2.54
15	0.0428	631.33	500.00	1.26	213.04	81.71	2.61
16	0.0464	632.55	500.00	1.27	212.61	80.06	2.66
17	0.0500	633.68	500.00	1.27	212.22	78.54	2.70
18	0.0536	634.26	500.00	1.27	211.53	77.27	2.74
19	0.0572	634.79	500.00	1.27	210.93	76.14	2.77
20	0.0608	635.16	500.00	1.27	210.59	75.43	2.79
21	0.0645	635.58	500.00	1.27	210.35	74.78	2.81
22	0.0681	635.82	500.00	1.27	209.91	74.10	2.83
23	0.0718	636.15	500.00	1.27	209.79	73.64	2.85
24	0.0755	636.47	500.00	1.27	209.59	73.12	2.87
25	0.0792	636.82	500.00	1.27	209.53	72.70	2.88
26	0.0829	637.15	500.00	1.27	209.88	72.74	2.89
27	0.0866	637.34	500.00	1.27	209.75	72.41	2.90
28	0.0902	637.67	500.00	1.28	209.82	72.15	2.91
29	0.0939	637.80	500.00	1.28	210.04	72.25	2.91
30	0.0975	638.20	500.00	1.28	210.28	72.09	2.92
31	0.1012	638.35	500.00	1.28	210.63	72.28	2.91
32	0.1048	638.74	500.00	1.28	210.66	71.92	2.93
33	0.1084	638.82	500.00	1.28	210.55	71.73	2.94
34	0.1120	639.07	500.00	1.28	210.83	71.76	2.94
35	0.1156	639.12	500.00	1.28	210.85	71.73	2.94
36	0.1192	639.21	500.00	1.28	210.94	71.73	2.94
37	0.1228	639.24	500.00	1.28	211.04	71.80	2.94
38	0.1264	639.25	500.00	1.28	210.94	71.70	2.94
39	0.1299	639.28	500.00	1.28	211.17	71.89	2.94
40	0.1335	639.27	500.00	1.28	211.26	71.99	2.93
41	0.1370	639.31	500.00	1.28	211.33	72.02	2.93
42	0.1406	639.28	500.00	1.28	211.17	71.89	2.94
43	0.1442	639.25	500.00	1.28	211.07	71.83	2.94
44	0.1477	639.07	500.00	1.28	211.00	71.92	2.93

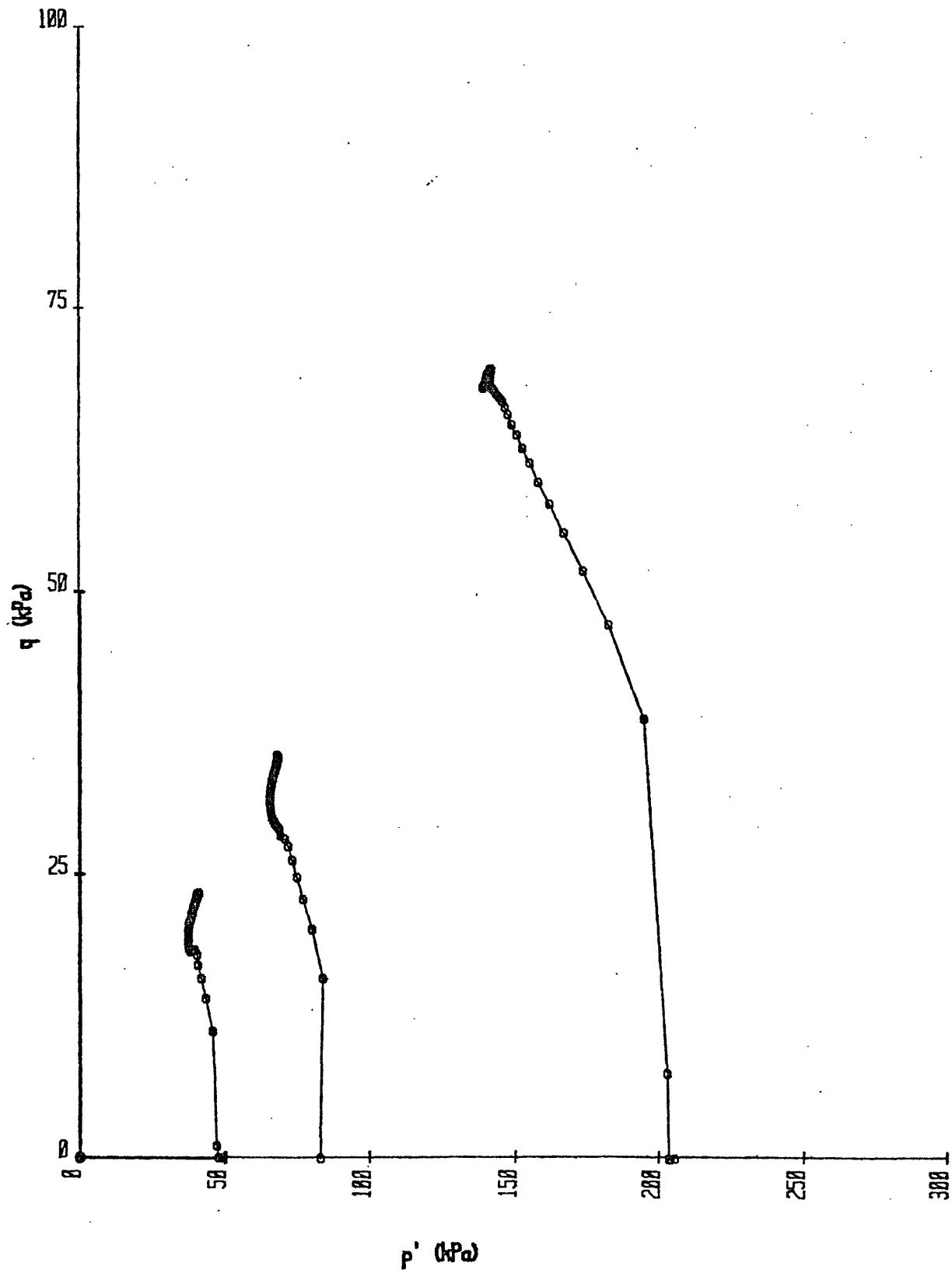
45	0.1513	638.92	500.00	1.28	210.71	71.80	2.93
46	0.1547	638.56	500.00	1.28	209.96	71.41	2.94
47	0.1582	638.41	500.00	1.28	209.65	71.24	2.94
48	0.1617	638.11	500.00	1.28	209.36	71.24	2.94
49	0.1653	638.09	500.00	1.28	209.23	71.15	2.94
50	0.1689	637.80	500.00	1.28	208.95	71.15	2.94
51	0.1724	637.66	500.00	1.28	208.84	71.18	2.93
52	0.1760	637.35	500.00	1.27	208.50	71.15	2.93
53	0.1796	637.18	500.00	1.27	208.49	71.31	2.92
54	0.1832	636.90	500.00	1.27	208.33	71.44	2.92
55	0.1868	636.64	500.00	1.27	207.82	71.18	2.92
56	0.1904	636.38	500.00	1.27	207.56	71.18	2.92
57	0.1940	636.08	500.00	1.27	207.20	71.11	2.91
58	0.1975	636.11	500.00	1.27	207.10	70.98	2.92
59	0.2012	635.98	500.00	1.27	206.93	70.95	2.92

DERIVED PROPERTIES (cont.)

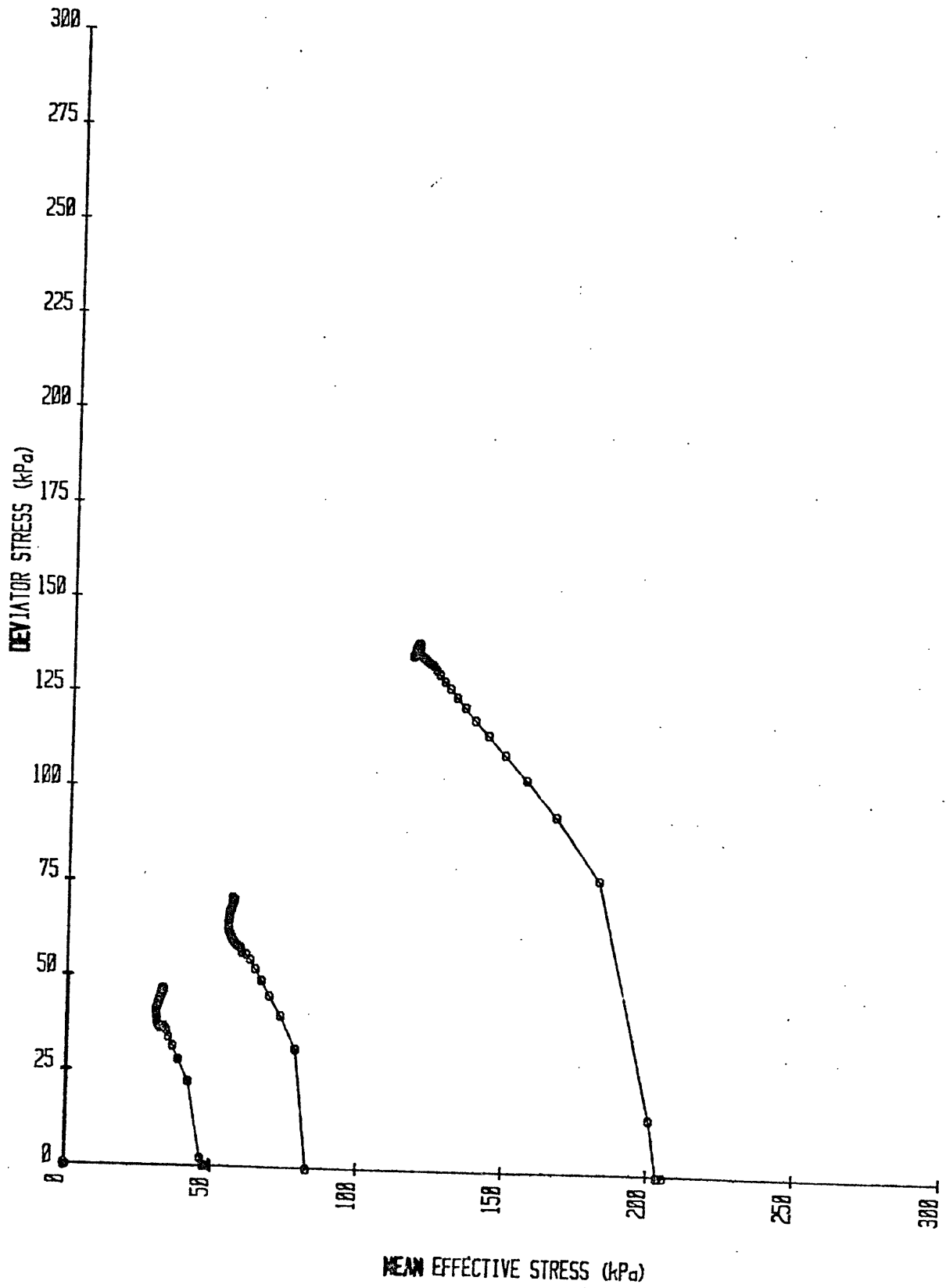
READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.00	0.00	205.54	0.00	0.00	205.54
2	0.00	-0.02	204.19	-0.00	-0.04	204.19
3	32.09	-0.01	203.52	-0.00	-0.02	203.52
4	0.53	7.48	203.03	0.04	14.95	200.54
5	0.63	38.78	194.85	0.20	77.56	181.93
6	1.25	47.10	182.46	0.26	84.19	166.76
7	1.42	51.89	173.64	0.30	103.78	156.34
8	1.49	55.23	167.05	0.33	110.45	148.64
9	1.49	57.75	162.03	0.36	115.51	142.78
10	1.52	59.71	158.02	0.38	119.42	138.12
11	1.39	61.40	155.01	0.40	122.81	134.54
12	1.49	62.69	152.47	0.41	125.38	131.58
13	1.31	63.89	150.53	0.42	127.77	129.23
14	1.49	64.78	148.76	0.44	129.56	127.17
15	1.29	65.66	147.38	0.45	131.33	125.49
16	1.35	66.28	146.34	0.45	132.55	124.24
17	1.34	66.84	145.38	0.46	133.68	123.10
18	2.20	67.13	144.40	0.46	134.26	122.03
19	2.14	67.39	143.53	0.47	134.79	121.07
20	1.90	67.58	143.01	0.47	135.16	120.48
21	1.57	67.79	142.56	0.48	135.58	119.97
22	2.83	67.91	142.00	0.48	135.82	119.37
23	1.37	68.07	141.72	0.48	136.15	119.02
24	1.62	68.23	141.36	0.48	136.47	118.61
25	1.18	68.41	141.11	0.48	136.82	118.31
26	-0.10	68.57	141.31	0.49	137.15	118.45
27	1.73	68.67	141.08	0.49	137.34	118.19
28	0.77	68.84	140.99	0.49	137.67	118.04
29	-0.79	68.90	141.15	0.49	137.80	118.18
30	0.40	69.10	141.18	0.49	138.20	118.15

31	-1.31	69.17	141.45	0.49	138.35	118.40
32	0.91	69.37	141.29	0.49	138.74	118.17
33	2.39	69.41	141.14	0.49	138.82	118.00
34	-0.13	69.53	141.30	0.49	139.07	118.12
35	0.58	69.56	141.29	0.49	139.12	118.10
36	0.00	69.61	141.34	0.49	139.21	118.13
37	-2.21	69.62	141.42	0.49	139.24	118.21
38	19.14	69.62	141.32	0.49	139.25	118.11
39	-7.06	69.64	141.53	0.49	139.28	118.32
40	25.12	69.64	141.62	0.49	139.27	118.41
41	-0.95	69.65	141.67	0.49	139.31	118.46
42	-5.06	69.64	141.53	0.49	139.28	118.32
43	-1.93	69.62	141.45	0.49	139.25	118.24
44	0.56	69.54	141.46	0.49	139.07	118.28
45	-0.83	69.46	141.25	0.49	138.92	118.10
46	-1.08	69.28	140.68	0.49	138.56	117.59
47	-1.11	69.20	140.45	0.49	138.41	117.38
48	0.00	69.06	140.30	0.49	138.11	117.28
49	-3.65	69.04	140.19	0.49	138.09	117.17
50	0.00	68.90	140.05	0.49	137.80	117.08
51	0.24	68.83	140.01	0.49	137.66	117.07
52	-0.10	68.67	139.82	0.49	137.35	116.93
53	0.98	68.59	139.90	0.49	137.18	117.04
54	0.45	68.45	139.89	0.49	136.90	117.07
55	-1.01	68.32	139.50	0.49	136.64	116.73
56	0.00	68.19	139.37	0.49	136.38	116.64
57	-0.22	68.04	139.15	0.49	136.08	116.47
58	4.25	68.06	139.04	0.49	136.11	116.35
59	-0.24	67.99	138.94	0.49	135.98	116.28





GD-7, PC-52: 300/350, 400, 500



GD-7, PC-52: 300/350, 400, 500

TRIAxIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-9, PC-53; 300/370  
INTERVAL (meters): 9.48-9.60  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/25/80

INDEX PROPERTIES

MOISTURE CONTENT: 0.48  
BULK DENSITY (g/cc): 1.77  
VOID RATIO: 1.27  
POROSITY: 0.56  
GRAIN SPEC GRAVITY (g/cc): 2.72

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 344.90

TEST RESULTS

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		49.55		
2	100.00	50.00	98.56	49.01	0.98
3	150.00	50.00	147.80	49.24	0.98
4	200.00	50.00	197.16	49.36	0.99
5	300.00	100.00	297.95	100.79	1.01

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 370.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 70.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 69.69

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	95.18
AREA (sq. mm):	1963.50	1778.84
VOLUME (cc):	196.35	169.31
WATER CONTENT:	0.48	0.36
POROSITY:	0.56	0.40
VOID RATIO:	1.27	0.66
BULK DENSITY (g/cc):	1.77	1.89
BOUYANT BULK DENSITY (g/cc):	0.75	0.86
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	5	0.70	2.24	0.21
3	11	1.04	3.32	0.40
4	22	1.34	4.69	0.65
5	40	1.60	6.32	0.99
6	75	1.88	8.66	1.52
7	206	2.31	14.35	2.97
8	336	2.53	18.33	4.06
9	595	2.77	24.39	5.82
10	1109	3.04	33.30	8.50
11	2136	3.33	46.22	12.28
12	3339	3.52	57.78	15.32
13	4542	3.66	67.39	17.47
14	5744	3.76	75.79	19.02
15	6946	3.84	83.34	20.19
16	8148	3.91	90.27	21.08
17	9351	3.97	96.70	21.79
18	10553	4.02	102.73	22.37
19	11756	4.07	108.43	22.84
20	12958	4.11	113.83	23.24
21	14161	4.15	119.00	23.57
22	15364	4.19	123.95	23.87
23	16566	4.22	128.71	24.12
24	17769	4.25	133.30	24.35
25	18971	4.28	137.74	24.55
26	20173	4.30	142.03	24.74
27	21376	4.33	146.21	24.90
28	22579	4.35	150.26	25.06
29	23782	4.38	154.21	25.20
30	24984	4.40	158.06	25.34
31	26187	4.42	161.82	25.46
32	27390	4.44	165.50	25.57
33	28592	4.46	169.09	25.68
34	29794	4.47	172.61	25.79



35	30997	4.49	176.06	25.88
36	32199	4.51	179.44	25.97
37	33401	4.52	182.76	26.06
38	34604	4.54	186.02	26.13
39	35806	4.55	189.22	26.21
40	37008	4.57	192.37	26.28
41	38211	4.58	195.48	26.34
42	39413	4.60	198.53	26.40
43	40616	4.61	201.53	26.46
44	41819	4.62	204.50	26.51
45	43021	4.63	207.42	26.56
46	44224	4.65	210.30	26.61
47	45427	4.66	213.14	26.65
48	46629	4.67	215.94	26.69
49	47831	4.68	218.70	26.73
50	49033	4.69	221.43	26.77
51	50236	4.70	224.13	26.80
52	51438	4.71	226.80	26.83
53	52641	4.72	229.44	26.85
54	53843	4.73	232.04	26.88
55	55045	4.74	234.62	26.89
56	56248	4.75	237.17	26.88
57	57450	4.76	239.69	26.88

ALPHA: 0.95  
 Ao (sq. mm): 1778.34  
 Lo (mm): 95.18

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 370.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFG (N)	CELP (kPa)	TIME (sec)
1	0.00	329.26	0.00	0.00	370.00	0
2	0.00	334.31	0.27	18.25	370.00	1323
3	-0.00	337.93	0.53	25.27	370.00	2645
4	-0.00	340.41	0.81	28.90	370.00	3968
5	-0.00	341.87	1.10	30.35	370.00	5291
6	0.01	343.47	1.42	32.36	370.00	6613
7	0.00	344.35	1.74	33.41	370.00	7936
8	0.00	345.07	2.05	34.41	370.00	9259
9	0.00	345.55	2.37	35.11	370.00	10581
10	0.01	346.34	2.69	36.43	370.00	11903

11	0.01	346.73	3.03	37.55	370.00	13226
12	0.01	347.02	3.36	38.99	370.00	14548
13	0.02	347.44	3.70	40.15	370.00	15871
14	0.01	347.80	4.05	41.51	370.00	17193
15	0.02	347.87	4.39	42.82	370.00	18516
16	0.02	348.32	4.74	44.10	370.00	19839
17	0.02	348.26	5.10	45.23	370.00	21161
18	0.02	348.65	5.45	46.20	370.00	22484
19	0.02	348.78	5.80	47.40	370.00	23807
20	0.02	349.04	6.15	48.41	370.00	25130
21	0.02	348.91	6.50	49.41	370.00	26453
22	0.02	348.88	6.85	50.23	370.00	27775
23	0.02	348.94	7.21	51.27	370.00	29098
24	0.02	348.68	7.56	52.20	370.00	30421
25	0.02	349.04	7.92	52.86	370.00	31744
26	0.02	348.65	8.27	54.06	370.00	33067
27	0.02	348.72	8.63	54.84	370.00	34389
28	0.02	349.04	8.98	55.85	370.00	35712
29	0.02	348.88	9.33	56.39	370.00	37034
30	0.02	348.68	9.68	57.09	370.00	38356
31	0.02	348.62	10.03	57.86	370.00	39678
32	0.02	348.31	10.38	58.64	370.00	41000
33	0.02	348.59	10.73	59.10	370.00	42323
34	0.02	348.63	11.08	60.03	370.00	43645
35	0.02	348.42	11.43	60.42	370.00	44967
36	0.02	348.72	11.78	61.12	370.00	46290
37	0.02	348.49	12.13	61.70	370.00	47612
38	0.03	348.72	12.48	62.28	370.00	48935
39	0.03	348.45	12.83	62.98	370.00	50258
40	0.02	348.49	13.17	63.52	370.00	51581
41	0.02	348.59	13.52	64.22	370.00	52904
42	0.03	348.49	13.87	64.76	370.00	54226
43	0.03	348.59	14.22	65.15	370.00	55549
44	0.02	348.45	14.57	65.53	370.00	56871
45	0.02	348.36	14.92	65.88	370.00	58194
46	0.02	348.23	15.27	66.04	370.00	59516
47	0.01	348.23	15.62	66.19	370.00	60838
48	0.01	348.29	15.97	66.08	370.00	62160
49	0.01	347.90	16.32	66.19	370.00	63433
50	-0.00	348.03	16.67	65.38	370.00	64805
51	-0.00	348.45	17.01	64.95	370.00	66128
52	-0.01	348.59	17.37	65.07	370.00	67450
53	-0.01	348.45	17.72	64.95	370.00	68772
54	-0.02	348.19	18.07	65.03	370.00	70095
55	-0.02	348.32	18.42	65.11	370.00	71417
56	-0.02	347.97	18.76	65.15	370.00	72740
57	-0.02	347.87	19.11	65.03	370.00	74062

DERIVED PROPERTIES

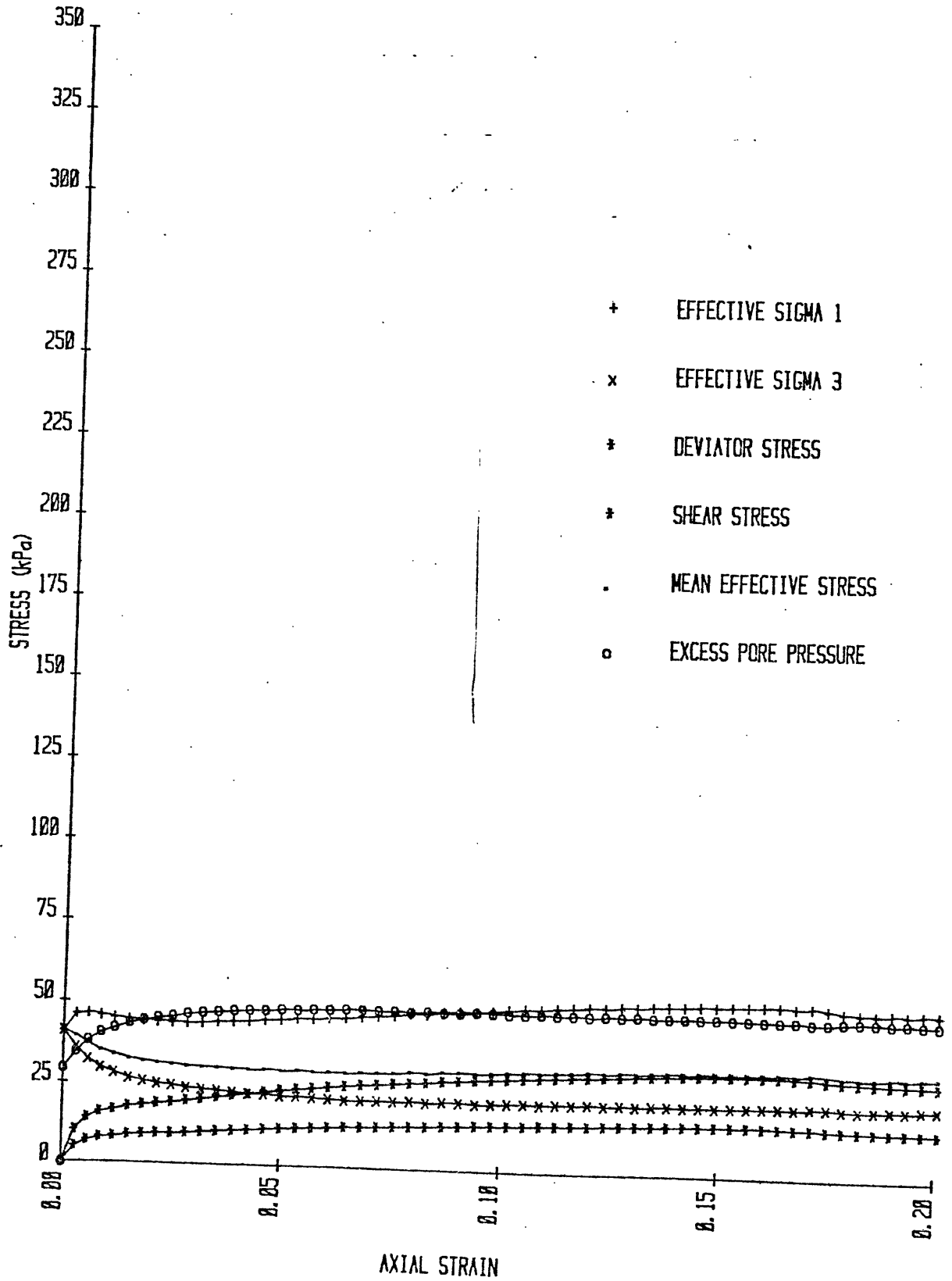
READING	STRAIN <sub>A</sub>	TOTAL STRESS			EFFECTIVE STRESS		
		SIG1 (kPa)	SIG3 (kPa)	RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	370.00	370.00	1.00	40.74	40.74	1.00
2	0.0028	380.23	370.00	1.03	45.92	35.69	1.29
3	0.0056	384.13	370.00	1.04	46.20	32.07	1.44
4	0.0085	386.05	370.00	1.04	45.64	29.59	1.54
5	0.0116	386.85	370.00	1.05	44.99	28.13	1.60
6	0.0150	387.92	370.00	1.05	44.45	26.53	1.68
7	0.0183	388.44	370.00	1.05	44.09	25.65	1.72
8	0.0215	388.93	370.00	1.05	43.86	24.93	1.76
9	0.0249	389.25	370.00	1.05	43.69	24.45	1.79
10	0.0283	389.90	370.00	1.05	43.56	23.66	1.84
11	0.0318	390.44	370.00	1.06	43.71	23.27	1.88
12	0.0353	391.14	370.00	1.06	44.12	22.98	1.92
13	0.0389	391.69	370.00	1.06	44.25	22.56	1.96
14	0.0425	392.34	370.00	1.06	44.54	22.20	2.01
15	0.0462	392.96	370.00	1.06	45.09	22.13	2.04
16	0.0499	393.56	370.00	1.06	45.23	21.68	2.09
17	0.0535	394.06	370.00	1.07	45.80	21.74	2.11
18	0.0572	394.48	370.00	1.07	45.83	21.35	2.15
19	0.0609	395.02	370.00	1.07	46.24	21.22	2.18
20	0.0646	395.45	370.00	1.07	46.41	20.96	2.21
21	0.0683	395.88	370.00	1.07	46.97	21.09	2.23
22	0.0720	396.20	370.00	1.07	47.32	21.12	2.24
23	0.0757	396.64	370.00	1.07	47.70	21.06	2.27
24	0.0795	397.01	370.00	1.07	48.33	21.32	2.27
25	0.0832	397.25	370.00	1.07	48.20	20.96	2.30
26	0.0869	397.75	370.00	1.08	49.10	21.35	2.30
27	0.0906	398.03	370.00	1.08	49.32	21.29	2.32
28	0.0943	398.43	370.00	1.08	49.39	20.96	2.36
29	0.0980	398.59	370.00	1.08	49.71	21.12	2.35
30	0.1017	398.83	370.00	1.08	50.15	21.32	2.35
31	0.1054	399.10	370.00	1.08	50.48	21.38	2.36
32	0.1091	399.37	370.00	1.08	50.56	21.19	2.39
33	0.1127	399.48	370.00	1.08	50.89	21.42	2.38
34	0.1164	399.82	370.00	1.08	51.14	21.32	2.40
35	0.1201	399.89	370.00	1.08	51.46	21.58	2.39
36	0.1238	400.10	370.00	1.08	51.39	21.29	2.41
37	0.1275	400.26	370.00	1.08	51.78	21.51	2.41
38	0.1311	400.42	370.00	1.08	51.71	21.29	2.43
39	0.1348	400.63	370.00	1.08	52.18	21.55	2.42
40	0.1384	400.77	370.00	1.08	52.28	21.51	2.43
41	0.1421	400.97	370.00	1.08	52.39	21.42	2.45
42	0.1457	401.10	370.00	1.08	52.61	21.51	2.45
43	0.1494	401.15	370.00	1.08	52.57	21.42	2.45
44	0.1531	401.20	370.00	1.08	52.75	21.55	2.45
45	0.1568	401.23	370.00	1.08	52.87	21.64	2.44
46	0.1604	401.17	370.00	1.08	52.94	21.77	2.43

47	0.1641	401.11	370.00	1.08	52.88	21.77	2.43
48	0.1677	400.91	370.00	1.08	52.62	21.71	2.42
49	0.1715	400.83	370.00	1.08	52.93	22.10	2.40
50	0.1752	400.32	370.00	1.08	52.29	21.97	2.38
51	0.1787	399.99	370.00	1.08	51.53	21.55	2.39
52	0.1825	399.90	370.00	1.08	51.32	21.42	2.40
53	0.1862	399.72	370.00	1.08	51.26	21.55	2.38
54	0.1899	399.62	370.00	1.08	51.42	21.81	2.36
55	0.1935	399.52	370.00	1.08	51.20	21.68	2.36
56	0.1971	399.40	370.00	1.08	51.44	22.03	2.33
57	0.2007	399.22	370.00	1.08	51.35	22.13	2.32

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.49	0.00	40.74	0.00	0.00	40.74
2	0.49	5.12	40.80	0.13	10.23	39.10
3	0.93	7.06	39.13	0.19	14.13	36.78
4	1.29	8.03	37.62	0.21	16.05	34.94
5	1.81	8.43	36.56	0.23	16.86	33.75
6	1.51	8.96	35.49	0.25	17.92	32.50
7	1.70	9.22	34.87	0.26	18.44	31.80
8	1.45	9.46	34.40	0.28	18.93	31.24
9	1.53	9.62	34.07	0.28	19.25	30.86
10	1.20	9.95	33.61	0.30	19.90	30.30
11	0.72	10.22	33.49	0.31	20.44	30.09
12	0.42	10.57	33.55	0.32	21.14	30.03
13	0.77	10.85	33.40	0.32	21.69	29.79
14	0.55	11.17	33.37	0.33	22.34	29.64
15	0.10	11.48	33.61	0.34	22.96	29.79
16	0.77	11.78	33.45	0.35	23.56	29.53
17	-0.13	12.03	33.77	0.36	24.06	29.76
18	0.93	12.24	33.59	0.36	24.48	29.51
19	0.24	12.51	33.73	0.37	25.02	29.56
20	0.60	12.73	33.69	0.38	25.45	29.44
21	-0.30	12.94	34.03	0.38	25.88	29.72
22	-0.10	13.10	34.22	0.38	26.20	29.86
23	0.15	13.32	34.38	0.39	26.64	29.94
24	-0.70	13.51	34.82	0.39	27.01	30.32
25	1.55	13.62	34.58	0.39	27.25	30.04
26	-0.77	13.88	35.23	0.39	27.75	30.60
27	0.23	14.02	35.30	0.40	28.03	30.63
28	0.82	14.22	35.18	0.40	28.43	30.44
29	-1.02	14.30	35.42	0.40	28.59	30.65
30	-0.83	14.41	35.73	0.40	28.83	30.93
31	-0.24	14.55	35.93	0.40	29.10	31.08
32	0.73	14.68	35.87	0.41	29.37	30.98
33	-2.06	14.74	36.15	0.41	29.48	31.24
34	0.29	14.91	36.23	0.41	29.82	31.26

35	-3.86	14.94	36.52	0.41	29.89	31.54
36	1.34	15.05	36.34	0.41	30.10	31.32
37	-1.43	15.13	36.64	0.41	30.26	31.60
38	1.44	15.21	36.50	0.42	30.42	31.43
39	-1.24	15.32	36.86	0.42	30.63	31.76
40	0.24	15.38	36.90	0.42	30.77	31.77
41	0.48	15.49	36.90	0.42	30.97	31.74
42	-0.76	15.55	37.06	0.42	31.10	31.88
43	1.92	15.58	36.99	0.42	31.15	31.80
44	-2.63	15.60	37.15	0.42	31.20	31.95
45	-3.30	15.62	37.26	0.42	31.23	32.05
46	2.14	15.58	37.36	0.42	31.17	32.16
47	0.00	15.55	37.33	0.42	31.11	32.14
48	-0.35	15.46	37.17	0.42	30.91	32.01
49	4.65	15.42	37.52	0.41	30.83	32.38
50	-0.25	15.16	37.13	0.41	30.32	32.07
51	-1.29	14.99	36.54	0.41	29.99	31.54
52	-1.56	14.95	36.37	0.41	29.90	31.38
53	0.70	14.86	36.40	0.41	29.72	31.45
54	2.63	14.81	36.61	0.40	29.62	31.68
55	-1.33	14.76	36.44	0.41	29.52	31.52
56	3.10	14.70	36.74	0.40	29.40	31.84
57	0.53	14.61	36.74	0.40	29.22	31.87



GO-9, PC-53: 300/370

## TRIAXIAL TEST RESULTS

### GENERAL TEST INFORMATION

#### SAMPLE INFORMATION

SAMPLE ID: GD-9, PC-53; 300/440  
INTERVAL (meters): 9.60-9.72  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/25/80

#### INDEX PROPERTIES

MOISTURE CONTENT: 0.50  
BULK DENSITY (g/cc): 1.75  
VOID RATIO: 1.33  
POROSITY: 0.57  
GRAIN SPEC GRAVITY (g/cc): 2.72  
LIQUID LIMIT (%): 44.00  
PLASTIC LIMIT (%): 20.00

#### SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 347.50

### TEST RESULTS

#### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		49.25		
2	100.00	50.00	99.35	50.10	1.00
3	150.00	50.00	148.59	49.24	0.98
4	200.00	50.00	198.59	50.00	1.00
5	300.00	100.00	298.54	99.95	1.00

#### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 440.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 140.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 68.96

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	94.03
AREA (sq. mm):	1963.50	1736.15
VOLUME (cc):	196.35	163.26
WATER CONTENT:	0.50	0.35
POROSITY:	0.57	0.40
VOID RATIO:	1.33	0.66
BULK DENSITY (g/cc):	1.75	1.90
BOUYANT BULK DENSITY (g/cc):	0.73	0.88
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	5	0.70	2.24	0.22
3	11	1.04	3.32	0.46
4	22	1.34	4.69	0.77
5	40	1.60	6.32	1.24
6	74	1.87	8.60	1.97
7	141	2.15	11.87	3.11
8	271	2.43	16.46	4.90
9	530	2.72	23.02	7.66
10	1044	3.02	32.31	11.75
11	2071	3.32	45.51	17.43
12	3274	3.52	57.22	21.81
13	4476	3.65	66.90	24.70
14	5679	3.75	75.36	26.65
15	6881	3.84	82.95	27.99
16	8083	3.91	89.91	28.93
17	9286	3.97	96.36	29.60
18	10488	4.02	102.41	30.10
19	11691	4.07	108.12	30.47
20	12893	4.11	113.55	30.77
21	14096	4.15	118.73	31.00
22	15299	4.18	123.69	31.19
23	16501	4.22	128.46	31.35
24	17704	4.25	133.06	31.49
25	18906	4.28	137.50	31.61
26	20108	4.30	141.80	31.71
27	21311	4.33	145.98	31.80
28	22514	4.35	150.05	31.88
29	23716	4.38	154.00	31.96
30	24919	4.40	157.86	32.03
31	26122	4.42	161.62	32.09
32	27325	4.44	165.30	32.15
33	28527	4.46	168.90	32.21
34	29729	4.47	172.42	32.26



35	30932	4.49	175.87	32.31
36	32134	4.51	179.26	32.36
37	33336	4.52	182.58	32.40
38	34538	4.54	185.84	32.44
39	35741	4.55	189.05	32.48
40	36943	4.57	192.21	32.52
41	38146	4.58	195.31	32.56
42	39348	4.59	198.36	32.60
43	40551	4.61	201.37	32.63
44	41754	4.62	204.34	32.66
45	42956	4.63	207.26	32.69
46	44159	4.65	210.14	32.72
47	45362	4.66	212.98	32.75
48	46564	4.67	215.79	32.78
49	47766	4.68	218.55	32.81
50	48968	4.69	221.29	32.84
51	50171	4.70	223.99	32.87
52	51373	4.71	226.66	32.89
53	52576	4.72	229.29	32.91
54	53778	4.73	231.90	32.94
55	54980	4.74	234.48	32.96
56	56183	4.75	237.03	32.96
57	57385	4.76	239.55	32.97

ALPHA: 0.94  
 Ao (sq. mm): 1736.16  
 Lo (mm): 94.03

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 440.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	349.44	0.00	0.00	440.00	0
2	0.00	363.81	0.29	24.11	440.00	1323
3	0.00	372.99	0.58	37.49	440.00	2645
4	-0.00	379.48	0.89	46.55	440.00	3968
5	0.00	384.18	1.20	53.20	440.00	5291
6	0.01	387.65	1.52	58.32	440.00	6613
7	0.01	390.45	1.85	62.30	440.00	7936
8	0.01	392.48	2.18	65.10	440.00	9258
9	0.01	394.10	2.51	66.37	440.00	10581
10	0.01	395.56	2.85	67.90	440.00	11903

11	0.02	396.55	3.20	69.21	440.00	13226
12	0.02	397.60	3.54	70.57	440.00	14548
13	0.02	398.23	3.89	71.88	440.00	15871
14	0.02	399.09	4.24	73.41	440.00	17193
15	0.02	399.57	4.58	74.90	440.00	18516
16	0.02	399.98	4.94	76.61	440.00	19839
17	0.02	400.46	5.28	78.05	440.00	21161
18	0.02	400.81	5.64	79.45	440.00	22484
19	0.02	401.09	5.99	80.94	440.00	23807
20	0.02	401.44	6.34	82.30	440.00	25130
21	0.02	401.64	6.70	83.65	440.00	26452
22	0.02	401.83	7.04	84.70	440.00	27775
23	0.02	401.92	7.39	86.06	440.00	29098
24	0.02	402.11	7.74	87.33	440.00	30421
25	0.02	402.14	8.09	88.42	440.00	31744
26	0.02	402.18	8.44	89.56	440.00	33067
27	0.02	402.21	8.79	90.61	440.00	34389
28	0.02	402.33	9.14	91.75	440.00	35712
29	0.02	402.49	9.48	92.62	440.00	37034
30	0.02	402.46	9.83	93.67	440.00	38356
31	0.02	402.43	10.17	94.54	440.00	39678
32	0.03	402.46	10.52	95.51	440.00	41000
33	0.03	402.33	10.86	96.30	440.00	42323
34	0.02	402.43	11.20	97.17	440.00	43645
35	0.03	402.62	11.55	98.26	440.00	44967
36	0.03	402.46	11.90	98.83	440.00	46290
37	0.03	402.49	12.24	99.58	440.00	47612
38	0.03	402.49	12.59	100.32	440.00	48935
39	0.03	402.62	12.93	101.02	440.00	50257
40	0.03	402.65	13.27	101.59	440.00	51580
41	0.03	402.62	13.62	102.29	440.00	52903
42	0.03	402.72	13.97	102.73	440.00	54225
43	0.03	402.84	14.32	103.34	440.00	55548
44	0.03	402.78	14.66	103.60	440.00	56870
45	0.03	402.87	15.01	103.91	440.00	58193
46	0.03	402.94	15.37	103.69	440.00	59515
47	0.02	403.10	15.72	104.00	440.00	60837
48	0.02	403.03	16.08	103.65	440.00	62159
49	0.02	402.91	16.44	103.47	440.00	63482
50	0.02	402.72	16.80	102.03	440.00	64804
51	0.01	403.07	17.15	101.41	440.00	66126
52	0.01	403.07	17.50	101.02	440.00	67449
53	0.01	403.26	17.86	101.02	440.00	68771
54	0.01	403.29	18.21	100.93	440.00	70094
55	0.01	403.19	18.57	100.98	440.00	71416
56	0.01	403.26	18.94	100.93	440.00	72739
57	0.00	403.16	19.29	100.71	440.00	74061

DERIVED PROPERTIES

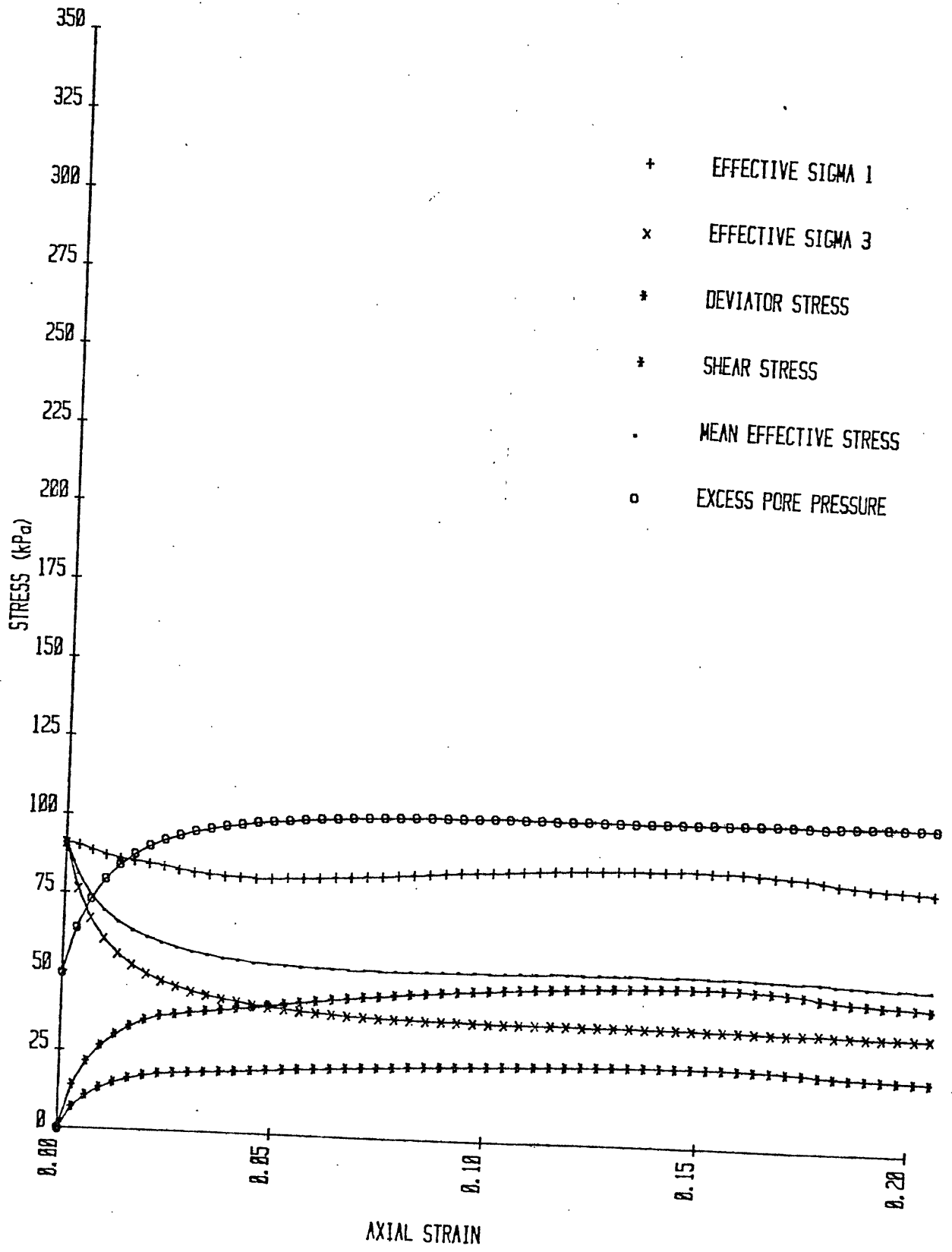
READING	STRAIN A	TOTAL STRESS			EFFECTIVE STRESS		
		SIG1 (kPa)	SIG3 (kPa)	RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	440.00	440.00	1.00	90.56	90.56	1.00
2	0.0031	453.84	440.00	1.03	90.04	76.20	1.18
3	0.0062	461.46	440.00	1.05	88.47	67.01	1.32
4	0.0094	466.56	440.00	1.06	87.08	60.52	1.44
5	0.0128	470.25	440.00	1.07	86.07	55.32	1.54
6	0.0161	473.05	440.00	1.08	85.40	52.35	1.63
7	0.0196	475.18	440.00	1.08	84.73	49.56	1.71
8	0.0232	476.63	440.00	1.08	84.15	47.52	1.77
9	0.0267	477.21	440.00	1.08	83.11	45.90	1.81
10	0.0303	477.92	440.00	1.09	82.36	44.44	1.85
11	0.0340	478.51	440.00	1.09	81.86	43.45	1.89
12	0.0377	479.12	440.00	1.09	81.52	42.40	1.92
13	0.0413	479.69	440.00	1.09	81.46	41.77	1.95
14	0.0450	480.38	440.00	1.09	81.29	40.91	1.99
15	0.0487	481.04	440.00	1.09	81.47	40.43	2.02
16	0.0525	481.81	440.00	1.10	81.83	40.02	2.04
17	0.0562	482.43	440.00	1.10	81.97	39.54	2.07
18	0.0600	483.02	440.00	1.10	82.21	39.19	2.10
19	0.0637	483.65	440.00	1.10	82.55	38.91	2.12
20	0.0674	484.21	440.00	1.10	82.76	38.56	2.15
21	0.0712	484.75	440.00	1.10	83.12	38.37	2.17
22	0.0749	485.13	440.00	1.10	83.31	38.18	2.18
23	0.0786	485.67	440.00	1.10	83.75	38.08	2.20
24	0.0823	486.16	440.00	1.10	84.05	37.89	2.22
25	0.0861	486.55	440.00	1.11	84.40	37.86	2.23
26	0.0898	486.95	440.00	1.11	84.73	37.83	2.24
27	0.0935	487.31	440.00	1.11	85.10	37.79	2.25
28	0.0972	487.71	440.00	1.11	85.38	37.67	2.27
29	0.1009	487.97	440.00	1.11	85.47	37.51	2.28
30	0.1045	488.31	440.00	1.11	85.85	37.54	2.29
31	0.1082	488.57	440.00	1.11	86.14	37.57	2.29
32	0.1118	488.86	440.00	1.11	86.40	37.54	2.30
33	0.1155	489.06	440.00	1.11	86.73	37.67	2.30
34	0.1191	489.30	440.00	1.11	86.87	37.57	2.31
35	0.1228	489.65	440.00	1.11	87.03	37.38	2.33
36	0.1265	489.73	440.00	1.11	87.26	37.54	2.32
37	0.1302	489.89	440.00	1.11	87.40	37.51	2.33
38	0.1339	490.05	440.00	1.11	87.56	37.51	2.33
39	0.1375	490.18	440.00	1.11	87.56	37.38	2.34
40	0.1412	490.25	440.00	1.11	87.60	37.35	2.35
41	0.1449	490.38	440.00	1.11	87.76	37.38	2.35
42	0.1485	490.38	440.00	1.11	87.67	37.29	2.35
43	0.1523	490.46	440.00	1.11	87.62	37.16	2.36
44	0.1560	490.37	440.00	1.11	87.59	37.22	2.35
45	0.1597	490.29	440.00	1.11	87.42	37.13	2.35
46	0.1634	489.96	440.00	1.11	87.02	37.06	2.35

47	0.1672	489.88	440.00	1.11	86.79	36.90	2.35
48	0.1710	489.49	440.00	1.11	86.46	36.97	2.34
49	0.1748	489.18	440.00	1.11	86.27	37.09	2.33
50	0.1786	488.27	440.00	1.11	85.55	37.29	2.29
51	0.1823	487.76	440.00	1.11	84.70	36.94	2.29
52	0.1862	487.35	440.00	1.11	84.29	36.94	2.28
53	0.1899	487.14	440.00	1.11	83.88	36.74	2.28
54	0.1937	486.87	440.00	1.11	83.59	36.71	2.28
55	0.1975	486.67	440.00	1.11	83.48	36.81	2.27
56	0.2014	486.43	440.00	1.11	83.17	36.74	2.26
57	0.2051	486.11	440.00	1.10	82.95	36.84	2.25

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	1.04	0.00	90.56	0.00	0.00	90.56
2	1.04	6.92	83.12	0.08	13.84	80.81
3	1.21	10.73	77.74	0.14	21.46	74.16
4	1.27	13.28	73.80	0.18	26.56	69.38
5	1.27	15.13	70.94	0.21	30.25	65.90
6	1.24	16.52	68.88	0.24	33.05	63.37
7	1.31	17.59	67.14	0.26	35.18	61.28
8	1.40	18.31	65.84	0.28	36.63	59.73
9	2.81	18.60	64.50	0.29	37.21	58.30
10	2.04	18.96	63.40	0.30	37.92	57.08
11	1.68	19.26	62.71	0.31	38.51	56.29
12	1.73	19.56	61.96	0.32	39.12	55.44
13	1.10	19.85	61.61	0.32	39.69	55.00
14	1.25	20.19	61.10	0.33	40.38	54.37
15	0.72	20.52	60.95	0.34	41.04	54.11
16	0.54	20.90	60.92	0.34	41.81	53.96
17	0.77	21.22	60.76	0.35	42.43	53.69
18	0.59	21.51	60.70	0.35	43.02	53.53
19	0.45	21.82	60.73	0.36	43.65	53.46
20	0.63	22.10	60.66	0.36	44.21	53.29
21	0.35	22.38	60.74	0.37	44.75	53.28
22	0.50	22.57	60.74	0.37	45.13	53.22
23	0.18	22.84	60.91	0.37	45.67	53.30
24	0.39	23.08	60.97	0.38	46.16	53.27
25	0.08	23.27	61.13	0.38	46.55	53.37
26	0.08	23.48	61.30	0.38	46.95	53.48
27	0.09	23.66	61.45	0.38	47.31	53.56
28	0.32	23.85	61.52	0.39	47.71	53.57
29	0.62	23.98	61.49	0.39	47.97	53.50
30	-0.09	24.16	61.70	0.39	48.31	53.64
31	-0.13	24.28	61.85	0.39	48.57	53.76
32	0.11	24.43	61.97	0.39	48.86	53.83
33	-0.63	24.53	62.20	0.39	49.06	54.02
34	0.40	24.65	62.22	0.40	49.30	54.00

35	0.55	24.82	62.20	0.40	49.65	53.93
36	-2.02	24.86	62.40	0.40	49.73	54.11
37	0.20	24.94	62.45	0.40	49.89	54.14
38	0.00	25.02	62.53	0.40	50.05	54.19
39	0.94	25.09	62.47	0.40	50.18	54.11
40	0.46	25.13	62.48	0.40	50.25	54.10
41	-0.25	25.19	62.57	0.40	50.38	54.17
42	-81.05	25.19	62.48	0.40	50.38	54.08
43	1.65	25.23	62.39	0.40	50.46	53.98
44	0.70	25.18	62.40	0.40	50.37	54.01
45	-1.30	25.15	62.27	0.40	50.29	53.89
46	-0.19	24.98	62.04	0.40	49.96	53.72
47	-2.01	24.94	61.84	0.40	49.88	53.53
48	0.16	24.75	61.71	0.40	49.49	53.46
49	0.40	24.59	61.68	0.40	49.19	53.49
50	0.21	24.13	61.42	0.39	48.27	53.37
51	-0.69	23.88	60.82	0.39	47.76	52.86
52	0.00	23.68	60.61	0.39	47.35	52.72
53	-0.87	23.57	60.31	0.39	47.14	52.46
54	-0.12	23.44	60.15	0.39	46.87	52.34
55	0.48	23.34	60.14	0.39	46.67	52.37
56	-0.26	23.21	59.96	0.39	46.43	52.22
57	0.30	23.05	59.89	0.38	46.11	52.21



GD-9, PC-53: 300/440

TRIAXIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-9, PC-53; 300/580  
INTERVAL (meters): 9.72-9.84  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 1/25/80

INDEX PROPERTIES

MOISTURE CONTENT: 0.51  
BULK DENSITY (g/cc): 1.75  
VOID RATIO: 1.35  
POROSITY: 0.58  
GRAIN SPEC GRAVITY (g/cc): 2.72

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 340.00

TEST RESULTS

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	50.00		47.64		
2	100.00	50.00	96.68	49.04	0.98
3	150.00	50.00	145.27	48.59	0.97
4	200.00	50.00	194.57	49.30	0.99
5	300.00	100.00	292.98	98.41	0.98

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 580.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 280.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 69.03

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	92.32
AREA (sq. mm):	1963.50	1673.34
VOLUME (cc):	196.35	154.48
WATER CONTENT:	0.51	0.32
POROSITY:	0.58	0.38
VOID RATIO:	1.35	0.61
BULK DENSITY (g/cc):	1.75	1.94
BOUYANT BULK DENSITY (g/cc):	0.72	0.91
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	5	0.70	2.24	0.28
3	12	1.08	3.46	0.58
4	22	1.34	4.69	0.97
5	41	1.61	6.40	1.53
6	75	1.88	8.66	2.39
7	142	2.15	11.92	3.73
8	272	2.43	16.49	5.83
9	531	2.73	23.04	9.06
10	1045	3.02	32.33	13.96
11	2072	3.32	45.52	20.99
12	3275	3.52	57.23	26.64
13	4477	3.65	66.91	30.43
14	5680	3.75	75.37	33.01
15	6882	3.84	82.96	34.79
16	8084	3.91	89.91	36.04
17	9287	3.97	96.37	36.95
18	10489	4.02	102.42	37.63
19	11692	4.07	108.13	38.15
20	12894	4.11	113.55	38.54
21	14097	4.15	118.73	38.87
22	15300	4.18	123.69	39.12
23	16502	4.22	128.46	39.35
24	17705	4.25	133.06	39.54
25	18907	4.28	137.50	39.70
26	20110	4.30	141.81	39.84
27	21313	4.33	145.99	39.97
28	22516	4.35	150.05	40.09
29	23718	4.38	154.01	40.20
30	24921	4.40	157.86	40.30
31	26124	4.42	161.63	40.40
32	27327	4.44	165.31	40.48
33	28529	4.46	168.91	40.56
34	29731	4.47	172.43	40.64



35	30934	4.49	175.88	40.71
36	32136	4.51	179.27	40.78
37	33338	4.52	182.59	40.84
38	34540	4.54	185.85	40.90
39	35743	4.55	189.06	40.96
40	36945	4.57	192.21	41.02
41	38148	4.58	195.32	41.08
42	39350	4.59	198.37	41.13
43	40553	4.61	201.38	41.18
44	41756	4.62	204.34	41.23
45	42958	4.63	207.26	41.27
46	44161	4.65	210.15	41.33
47	45364	4.66	212.99	41.37
48	46566	4.67	215.79	41.41
49	47768	4.68	218.56	41.45
50	48970	4.69	221.29	41.49
51	50173	4.70	223.99	41.53
52	51375	4.71	226.66	41.57
53	52578	4.72	229.30	41.61
54	53780	4.73	231.91	41.64
55	54982	4.74	234.48	41.68
56	56185	4.75	237.03	41.69
57	57387	4.76	239.56	41.71

ALPHA: 0.92  
 Ao (sq. mm): 1673.34  
 Lo (mm): 92.32

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 580.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	366.98	0.00	0.00	580.00	1
2	0.00	405.00	0.25	66.82	580.00	1323
3	0.01	428.72	0.51	96.08	580.00	2645
4	0.01	444.77	0.78	112.36	580.00	3968
5	0.01	456.08	1.07	124.11	580.00	5291
6	0.01	464.93	1.36	132.17	580.00	6613
7	0.01	471.67	1.67	139.05	580.00	7936
8	0.01	476.89	1.98	144.19	580.00	9259
9	0.01	481.50	2.30	148.72	580.00	10581
10	0.01	485.16	2.62	152.18	580.00	11903

11	0.01	488.04	2.95	155.41	580.00	13226
12	0.01	490.47	3.28	157.52	580.00	14548
13	0.02	492.48	3.62	159.25	580.00	15871
14	0.01	494.14	3.96	160.67	580.00	17193
15	0.01	495.63	4.31	161.86	580.00	18516
16	0.02	496.99	4.66	163.05	580.00	19839
17	0.02	498.06	5.01	164.24	580.00	21161
18	0.02	499.19	5.36	165.70	580.00	22484
19	0.02	499.81	5.71	166.43	580.00	23807
20	0.02	500.65	6.06	167.81	580.00	25130
21	0.02	501.46	6.42	168.77	580.00	26453
22	0.02	501.85	6.77	170.08	580.00	27775
23	0.02	502.34	7.12	170.96	580.00	29098
24	0.02	502.89	7.48	172.30	580.00	30421
25	0.02	503.25	7.83	173.07	580.00	31744
26	0.02	503.73	8.18	174.22	580.00	33066
27	0.02	504.06	8.54	175.14	580.00	34388
28	0.02	504.22	8.89	176.07	580.00	35711
29	0.02	504.61	9.24	176.87	580.00	37033
30	0.02	504.83	9.59	177.64	580.00	38355
31	0.02	505.09	9.94	178.64	580.00	39677
32	0.02	505.22	10.29	179.18	580.00	40999
33	0.02	505.35	10.64	180.14	580.00	42322
34	0.03	505.68	10.98	180.56	580.00	43644
35	0.03	505.74	11.32	181.33	580.00	44966
36	0.02	505.77	11.66	181.63	580.00	46289
37	0.02	506.19	12.01	182.59	580.00	47611
38	0.02	506.13	12.35	182.82	580.00	48934
39	0.02	506.36	12.70	183.52	580.00	50257
40	0.02	506.68	13.03	183.90	580.00	51579
41	0.02	506.71	13.38	184.44	580.00	52902
42	0.02	506.91	13.71	184.74	580.00	54224
43	0.02	507.30	14.06	185.20	580.00	55547
44	0.03	507.36	14.40	185.24	580.00	56869
45	0.02	507.72	14.74	185.24	530.00	58192
46	0.03	507.91	15.08	185.13	580.00	59514
47	0.02	508.33	15.43	184.67	580.00	60836
48	0.02	508.59	15.77	184.32	580.00	62159
49	0.02	508.66	16.11	183.63	580.00	63481
50	0.01	509.01	16.47	182.32	580.00	64804
51	0.02	509.53	16.81	181.10	580.00	66126
52	0.01	509.83	17.15	180.71	580.00	67448
53	0.01	509.89	17.50	180.02	580.00	68770
54	0.01	510.25	17.85	180.14	580.00	70093
55	0.01	510.47	18.19	179.52	580.00	71415
56	0.01	510.51	18.54	179.41	580.00	72738
57	0.01	510.89	18.89	179.02	580.00	74061

DERIVED PROPERTIES

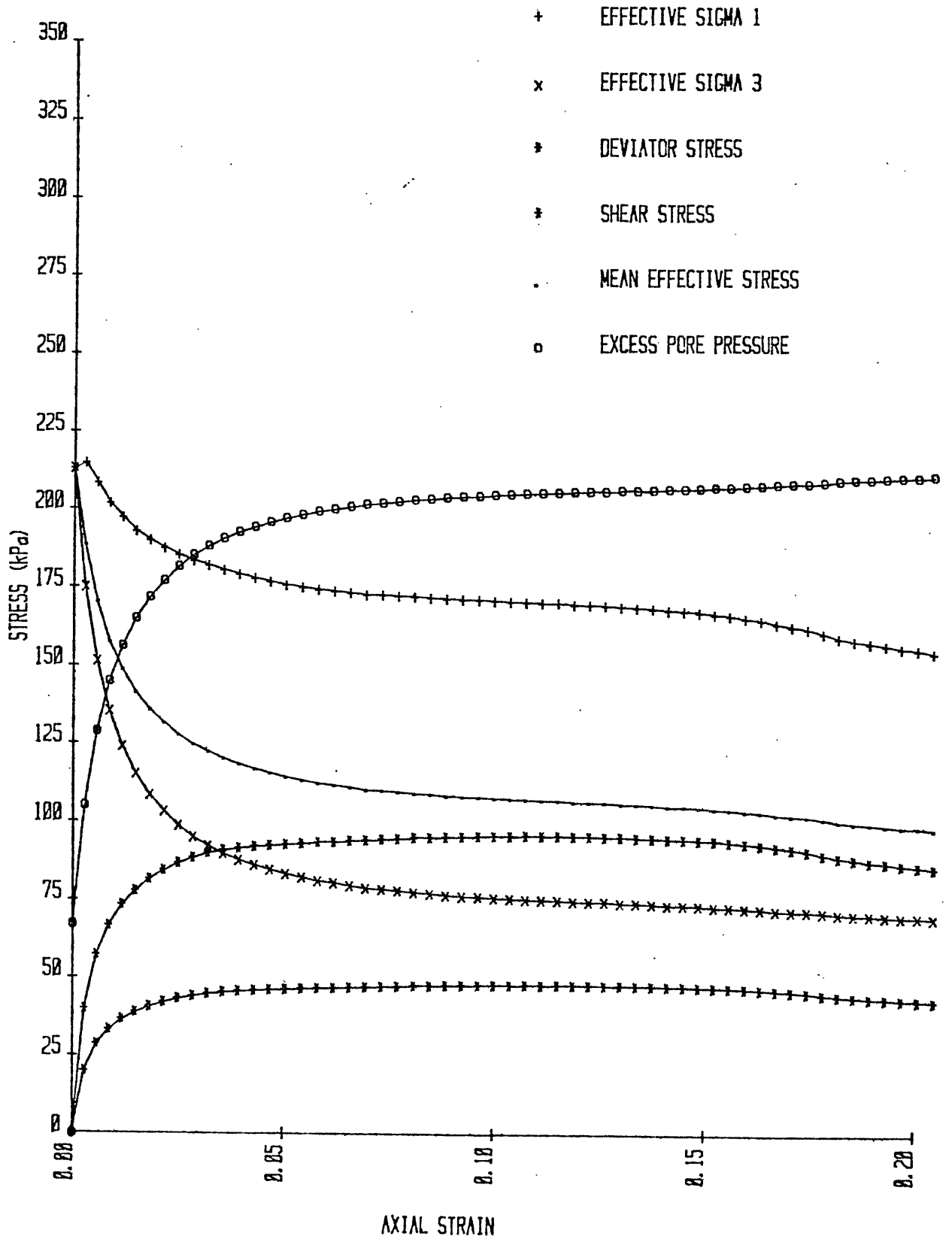
READING	STRAIN $\epsilon$	TOTAL STRESS			EFFECTIVE STRESS		
		SIG1 (kPa)	SIG3 (kPa)	RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	580.00	580.00	1.00	213.03	213.03	1.00
2	0.0027	619.82	580.00	1.07	214.82	175.00	1.23
3	0.0055	637.10	580.00	1.10	208.37	151.28	1.38
4	0.0085	646.58	580.00	1.11	201.81	135.23	1.49
5	0.0116	653.31	580.00	1.13	197.23	123.92	1.59
6	0.0148	657.82	580.00	1.13	192.89	115.07	1.68
7	0.0181	661.59	580.00	1.14	189.92	108.33	1.75
8	0.0214	664.32	580.00	1.15	187.43	103.11	1.82
9	0.0249	666.67	580.00	1.15	185.17	98.51	1.88
10	0.0284	668.36	580.00	1.15	183.21	94.84	1.93
11	0.0320	669.90	580.00	1.16	181.86	91.96	1.98
12	0.0356	670.79	580.00	1.16	180.31	89.53	2.01
13	0.0392	671.43	580.00	1.16	178.95	87.52	2.04
14	0.0429	671.89	580.00	1.16	177.76	85.86	2.07
15	0.0467	672.21	580.00	1.16	176.58	84.37	2.09
16	0.0504	672.52	580.00	1.16	175.54	83.01	2.11
17	0.0542	672.83	580.00	1.16	174.77	81.94	2.13
18	0.0580	673.27	580.00	1.16	174.08	80.81	2.15
19	0.0618	673.31	580.00	1.16	173.50	80.19	2.16
20	0.0657	673.70	580.00	1.16	173.05	79.35	2.18
21	0.0695	673.85	580.00	1.16	172.39	78.54	2.19
22	0.0733	674.19	580.00	1.16	172.33	78.15	2.21
23	0.0771	674.28	580.00	1.16	171.95	77.66	2.21
24	0.0810	674.63	580.00	1.16	171.74	77.11	2.23
25	0.0848	674.66	580.00	1.16	171.41	76.76	2.23
26	0.0886	674.89	580.00	1.16	171.16	76.27	2.24
27	0.0925	674.99	580.00	1.16	170.93	75.95	2.25
28	0.0963	675.08	580.00	1.16	170.87	75.78	2.25
29	0.1001	675.12	580.00	1.16	170.52	75.39	2.26
30	0.1039	675.13	580.00	1.16	170.29	75.17	2.27
31	0.1077	675.26	580.00	1.16	170.17	74.91	2.27
32	0.1114	675.15	580.00	1.16	169.92	74.78	2.27
33	0.1152	675.25	580.00	1.16	169.90	74.65	2.28
34	0.1189	675.07	580.00	1.16	169.39	74.32	2.28
35	0.1226	675.07	580.00	1.16	169.33	74.26	2.28
36	0.1263	674.83	580.00	1.16	169.06	74.23	2.28
37	0.1301	674.93	580.00	1.16	168.73	73.81	2.29
38	0.1338	674.64	580.00	1.16	168.51	73.87	2.28
39	0.1375	674.59	580.00	1.16	168.23	73.64	2.28
40	0.1412	674.38	580.00	1.16	167.70	73.32	2.29
41	0.1449	674.25	580.00	1.16	167.54	73.29	2.29
42	0.1486	674.00	580.00	1.16	167.10	73.09	2.29
43	0.1523	673.83	580.00	1.16	166.53	72.70	2.29
44	0.1560	673.44	580.00	1.16	166.08	72.64	2.29
45	0.1597	673.03	580.00	1.16	165.31	72.28	2.29
46	0.1634	672.56	580.00	1.16	164.65	72.09	2.28

47	0.1671	671.92	580.00	1.16	163.58	71.67	2.28
48	0.1708	671.34	580.00	1.16	162.74	71.41	2.28
49	0.1746	670.58	580.00	1.16	161.93	71.34	2.27
50	0.1784	669.53	580.00	1.15	160.51	70.99	2.26
51	0.1821	668.52	580.00	1.15	158.99	70.47	2.26
52	0.1858	667.93	580.00	1.15	158.10	70.18	2.25
53	0.1895	667.19	580.00	1.15	157.30	70.11	2.24
54	0.1933	666.84	580.00	1.15	156.59	69.75	2.24
55	0.1971	666.14	580.00	1.15	155.67	69.53	2.24
56	0.2009	665.68	580.00	1.15	155.17	69.50	2.23
57	0.2046	665.10	580.00	1.15	154.20	69.11	2.23

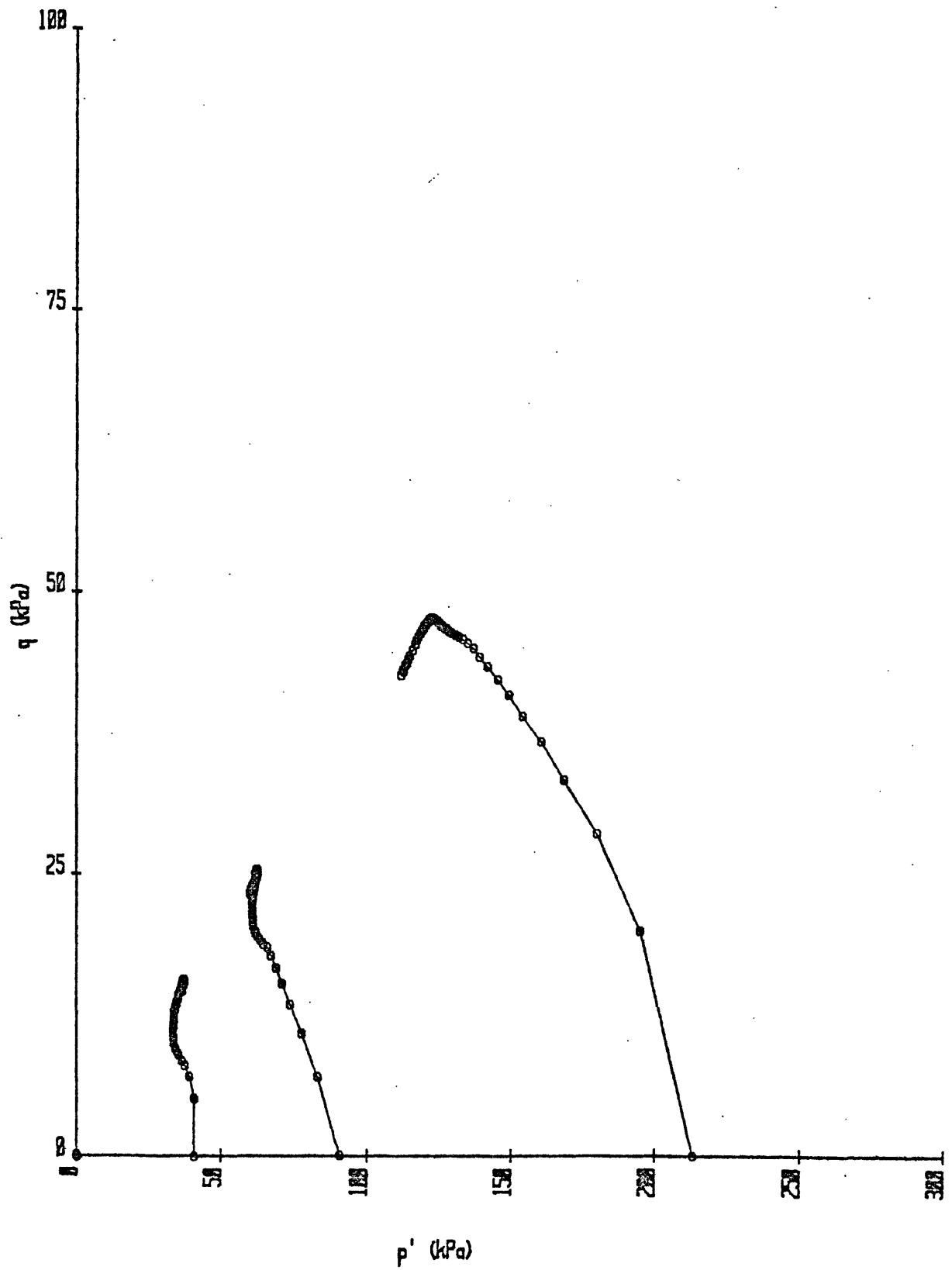
DERIVED PROPERTIES (cont.)

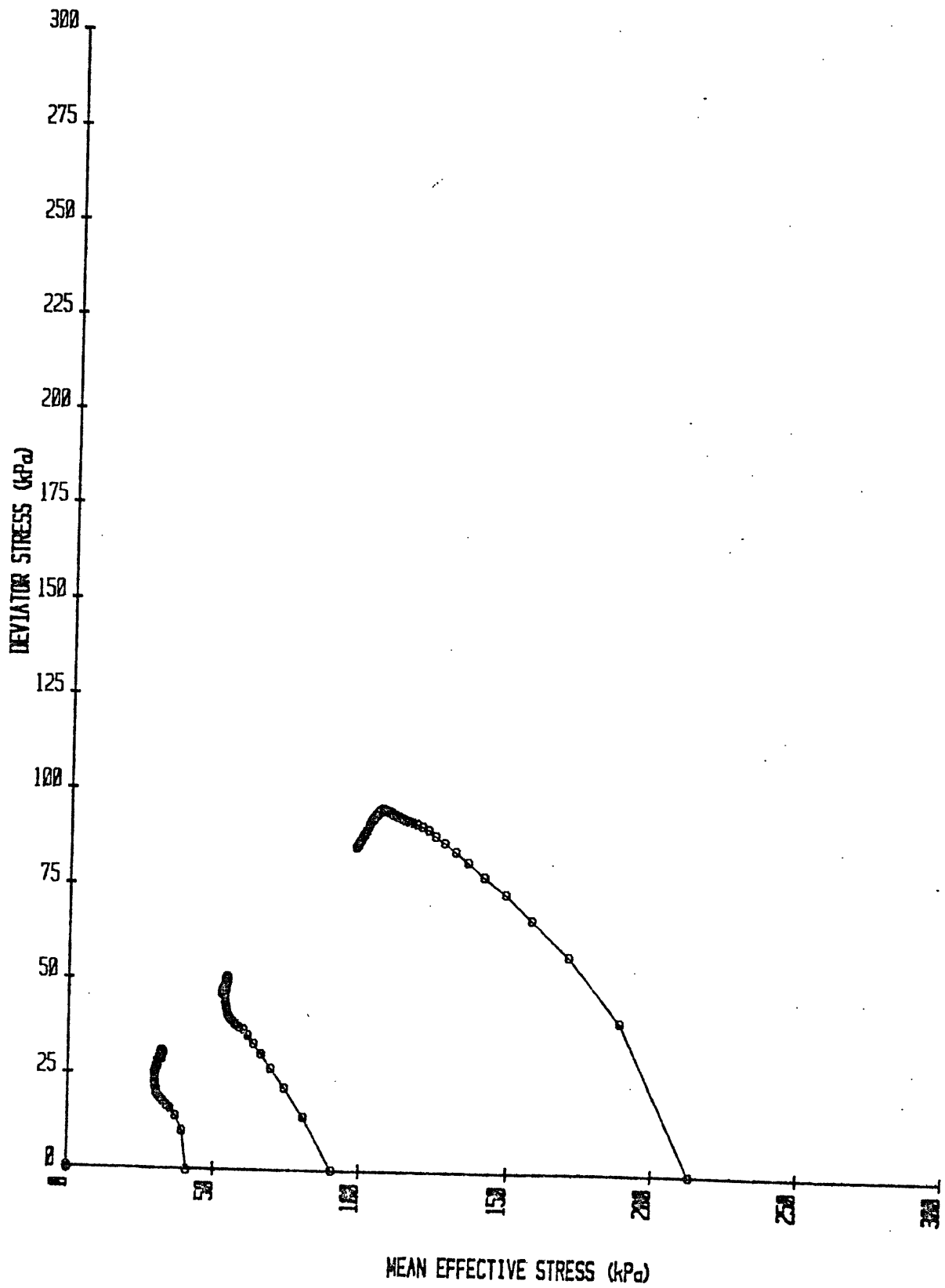
READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.95	0.00	213.03	0.00	0.00	213.03
2	0.95	19.91	194.91	0.10	39.82	188.28
3	1.37	28.55	179.83	0.16	57.10	170.31
4	1.69	33.29	168.52	0.20	66.58	157.42
5	1.68	36.65	160.57	0.23	73.31	148.35
6	1.96	38.91	153.98	0.25	77.82	141.01
7	1.79	40.80	149.12	0.27	81.59	135.53
8	1.91	42.16	145.27	0.29	84.32	131.22
9	1.96	43.33	141.84	0.31	86.67	127.39
10	2.16	44.18	139.02	0.32	88.36	124.30
11	1.87	44.95	136.91	0.33	89.90	121.93
12	2.76	45.39	134.92	0.34	90.79	119.79
13	3.11	45.72	133.23	0.34	91.43	117.99
14	3.59	45.95	131.81	0.35	91.89	116.49
15	4.67	46.11	130.48	0.35	92.21	115.11
16	4.35	46.26	129.27	0.36	92.52	113.85
17	3.51	46.41	128.36	0.36	92.83	112.88
18	2.54	46.64	127.44	0.37	93.27	111.90
19	18.22	46.65	126.85	0.37	93.31	111.29
20	2.16	46.85	126.20	0.37	93.70	110.58
21	5.37	46.92	125.46	0.37	93.85	109.82
22	1.16	47.09	125.24	0.38	94.19	109.54
23	4.93	47.14	124.81	0.38	94.28	109.09
24	1.61	47.31	124.43	0.38	94.63	108.65
25	12.62	47.33	124.08	0.38	94.66	108.31
26	2.10	47.44	123.71	0.38	94.89	107.90
27	3.15	47.49	123.44	0.38	94.99	107.61
28	1.70	47.54	123.33	0.39	95.08	107.48
29	10.75	47.56	122.95	0.39	95.12	107.10
30	33.81	47.56	122.73	0.39	95.13	106.88
31	1.95	47.63	122.54	0.39	95.26	106.66
32	-1.13	47.57	122.35	0.39	95.15	106.49
33	1.26	47.62	122.27	0.39	95.25	106.40
34	-1.82	47.54	121.86	0.39	95.07	106.01

35	19.00	47.54	121.80	0.39	95.07	105.95
36	-0.13	47.42	121.64	0.39	94.83	105.84
37	4.48	47.46	121.27	0.39	94.93	105.45
38	0.22	47.32	121.19	0.39	94.64	105.42
39	-4.28	47.29	120.94	0.39	94.59	105.17
40	-1.59	47.19	120.51	0.39	94.38	104.78
41	-0.24	47.12	120.41	0.39	94.25	104.70
42	-0.79	47.00	120.09	0.39	94.00	104.43
43	-2.22	46.91	119.62	0.39	93.83	103.98
44	-0.17	46.72	119.36	0.39	93.44	103.78
45	-0.87	46.51	118.79	0.39	93.03	103.29
46	-0.42	46.28	118.37	0.39	92.56	102.94
47	-0.66	45.96	117.62	0.39	91.92	102.31
48	-0.45	45.67	117.08	0.39	91.34	101.85
49	-0.09	45.29	116.63	0.39	90.58	101.54
50	-0.34	44.76	115.75	0.39	89.53	100.83
51	-0.52	44.26	114.73	0.39	88.52	99.97
52	-0.49	43.96	114.14	0.39	87.93	99.48
53	-0.09	43.60	113.71	0.38	87.19	99.17
54	-1.01	43.42	113.17	0.38	86.84	98.70
55	-0.32	43.07	112.60	0.38	86.14	98.24
56	-0.07	42.84	112.33	0.38	85.68	98.05
57	-0.67	42.55	111.65	0.38	85.10	97.47



GD-9, PC-53: 300/580





GD-9, PC-53: 300/370, 440, 580



TRIAxIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-1R, PC-54; 300/360  
INTERVAL (meters): 8.08-8.21  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/17/80.

INDEX PROPERTIES

MOISTURE CONTENT: 0.63  
BULK DENSITY (g/cc): 1.66  
VOID RATIO: 1.67  
POROSITY: 0.62  
GRAIN SPEC GRAVITY (g/cc): 2.71

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 374.10

TEST RESULTS

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	60.00		55.09		
2	120.00	60.00	114.54	59.45	0.99
3	180.00	60.00	172.79	58.25	0.97
4	300.00	120.00	291.72	118.93	0.99
5	360.00	60.00	351.52	59.80	1.00

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 360.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 60.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 50.42

### CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	97.31
AREA (sq. mm):	1963.50	1859.15
VOLUME (cc):	196.35	180.91
WATER CONTENT:	0.63	0.55
POROSITY:	0.62	0.60
VOID RATIO:	1.67	1.49
BULK DENSITY (g/cc):	1.66	1.71
BOUYANT BULK DENSITY (g/cc):	0.63	0.69
% SATURATION:	100.00	100.00

### MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	5	0.70	2.24	0.38
3	11	1.04	3.32	0.71
4	22	1.34	4.69	1.06
5	40	1.60	6.32	1.53
6	75	1.88	8.66	2.15
7	141	2.15	11.87	3.01
8	272	2.43	16.49	4.24
9	531	2.73	23.04	5.90
10	1045	3.02	32.33	7.81
11	2072	3.32	45.52	9.43
12	4122	3.62	64.20	10.54
13	6404	3.81	80.02	11.08
14	8687	3.94	93.20	11.43
15	10970	4.04	104.74	11.71
16	13252	4.12	115.12	11.93
17	15535	4.19	124.64	12.12
18	17817	4.25	133.48	12.29
19	20100	4.30	141.77	12.44
20	22382	4.35	149.61	12.65
21	24665	4.39	157.05	12.78
22	26947	4.43	164.16	12.89
23	29230	4.47	170.97	13.03
24	31512	4.50	177.52	14.15
25	33794	4.53	183.83	15.42
26	36077	4.56	189.94	14.34
27	39359	4.58	195.85	13.95
28	40642	4.61	201.60	13.83
29	42924	4.63	207.18	13.60
30	45207	4.66	212.62	14.54
31	47489	4.68	217.92	14.77
32	49772	4.70	223.10	14.58
33	52054	4.72	228.15	14.59
34	54336	4.74	233.10	15.71

35	56619	4.75	237.95	13.78
36	58901	4.77	242.70	13.79
37	61184	4.79	247.35	13.85
38	63466	4.80	251.92	13.91
39	65749	4.82	256.42	13.99
40	68031	4.83	260.83	14.10
41	70314	4.85	265.17	14.14
42	72596	4.86	269.44	14.16
43	74879	4.87	273.64	14.32
44	77161	4.89	277.78	14.47
45	79444	4.90	281.86	14.49
46	81726	4.91	285.88	14.51
47	84009	4.92	289.84	14.59
48	86291	4.94	293.75	14.63
49	88573	4.95	297.61	14.65
50	90856	4.96	301.42	14.74
51	93139	4.97	305.19	14.84
52	95421	4.98	308.90	14.88
53	97703	4.99	312.57	14.97
54	99985	5.00	316.20	15.04
55	102268	5.01	319.79	15.25
56	104551	5.02	323.34	15.21
57	106833	5.03	326.85	15.35
58	109115	5.04	330.33	15.35
59	111398	5.05	333.76	15.39
60	113681	5.06	337.17	15.44

ALPHA: 0.97  
 Ao (sq. mm): 1859.16  
 Lo (mm): 97.31

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 360.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	330.67	0.00	0.00	360.00	1
2	-1.40	334.76	0.25	34.94	360.00	1443
3	-0.78	335.08	0.52	52.26	360.00	2886
4	-0.99	334.95	0.81	64.74	360.00	4329
5	-0.75	334.43	1.12	73.00	360.00	5771
6	-1.49	334.27	1.43	78.53	360.00	7213
7	-0.93	334.14	1.76	82.71	360.00	8656

8	-1.53	333.91	2.09	85.67	360.00	10098
9	0.21	334.27	2.43	87.59	360.00	11541
10	0.18	333.98	2.78	88.24	360.00	12983
11	0.17	333.95	3.15	88.90	360.00	14425
12	0.13	333.95	3.51	89.20	360.00	15868
13	0.10	334.14	3.88	89.24	360.00	17311
14	0.11	334.59	4.25	89.28	360.00	18753
15	0.08	334.56	4.62	89.20	360.00	20196
16	0.08	334.72	5.00	89.05	360.00	21638
17	-0.04	334.82	5.38	88.82	360.00	23081
18	-0.12	334.82	5.77	88.59	360.00	24523
19	-0.17	334.72	6.15	88.32	360.00	25966
20	-0.21	334.95	6.53	88.01	360.00	27408
21	-0.26	335.11	6.92	87.67	360.00	28851
22	-0.20	335.01	7.31	87.48	360.00	30293
23	-0.70	335.44	7.69	87.28	360.00	31736
24	-1.67	335.21	8.08	87.05	360.00	33179
25	-1.59	335.66	8.46	86.82	360.00	34621
26	-1.46	335.70	8.85	86.75	360.00	36064
27	-1.38	335.73	9.23	86.63	360.00	37506
28	-0.33	335.70	9.61	86.67	360.00	38948
29	-0.66	336.28	9.99	86.71	360.00	40391
30	0.49	335.99	10.37	86.71	360.00	41834
31	0.45	336.34	10.75	86.71	360.00	43277
32	-1.51	336.38	11.13	86.59	360.00	44719
33	-1.39	336.34	11.50	86.44	360.00	46162
34	-1.52	336.54	11.88	86.44	360.00	47604
35	0.40	336.86	12.25	86.40	360.00	49047
36	-1.60	336.93	12.62	86.29	360.00	50489
37	-1.49	336.99	13.00	86.44	360.00	51932
38	-1.51	337.06	13.37	86.32	360.00	53374
39	0.49	337.19	13.74	86.36	360.00	54817
40	-1.38	337.48	14.11	86.32	360.00	56260
41	1.29	337.45	14.49	86.09	360.00	57702
42	1.20	337.51	14.86	86.09	360.00	59145
43	-1.55	337.51	15.23	85.86	360.00	60588
44	1.19	337.74	15.60	85.79	360.00	62030
45	1.25	337.96	15.98	85.63	360.00	63473
46	1.38	338.26	16.35	85.52	360.00	64915
47	1.31	338.16	16.73	85.36	360.00	66357
48	1.31	338.22	17.11	85.13	360.00	67800
49	1.49	338.19	17.49	84.71	360.00	69242
50	1.52	338.71	17.86	84.37	360.00	70685
51	1.52	338.55	18.24	83.90	360.00	72127
52	1.52	338.74	18.62	83.60	360.00	73570
53	1.47	338.61	19.00	83.37	360.00	75013
54	1.47	338.74	19.37	83.14	360.00	76456
55	1.50	338.90	19.75	83.14	360.00	77898
56	1.52	338.71	20.13	82.94	360.00	79340
57	1.52	338.77	20.51	82.75	360.00	80783
58	1.51	338.84	20.89	82.68	360.00	82226

59	1.51	338.84	21.27	82.64	360.00	83669
60	1.52	338.90	21.65	82.52	360.00	85112

DERIVED PROPERTIES

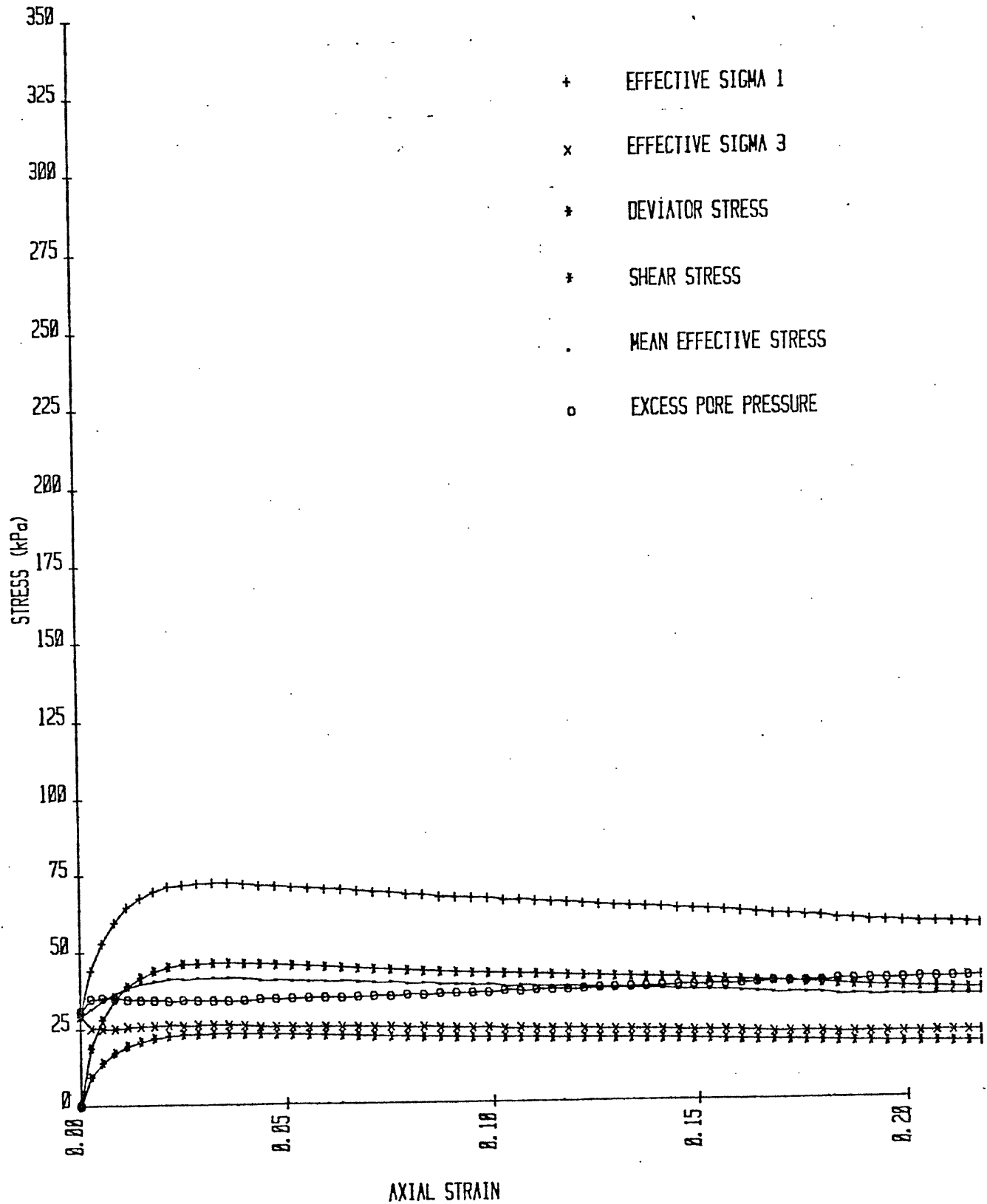
READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL	EFFECTIVE		
				STRESS RATIO	STRESS RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)
1	0.0000	360.00	360.00	1.00	29.33	29.33	1.00
2	0.0026	378.75	360.00	1.05	43.99	25.25	1.74
3	0.0054	387.96	360.00	1.08	52.88	24.92	2.12
4	0.0084	394.53	360.00	1.10	59.58	25.05	2.38
5	0.0115	398.81	360.00	1.11	64.38	25.57	2.52
6	0.0147	401.62	360.00	1.12	67.35	25.73	2.62
7	0.0180	403.69	360.00	1.12	69.55	25.86	2.69
8	0.0215	405.09	360.00	1.13	71.18	26.09	2.73
9	0.0250	405.94	360.00	1.13	71.67	25.73	2.79
10	0.0286	406.11	360.00	1.13	72.15	26.02	2.77
11	0.0323	406.27	360.00	1.13	72.32	26.06	2.78
12	0.0361	406.25	360.00	1.13	72.30	26.06	2.78
13	0.0399	406.09	360.00	1.13	71.95	25.86	2.78
14	0.0437	405.92	360.00	1.13	71.33	25.41	2.81
15	0.0475	405.70	360.00	1.13	71.14	25.44	2.80
16	0.0514	405.43	360.00	1.13	70.71	25.28	2.80
17	0.0553	405.13	360.00	1.13	70.31	25.18	2.79
18	0.0593	404.83	360.00	1.12	70.01	25.18	2.78
19	0.0632	404.50	360.00	1.12	69.78	25.28	2.76
20	0.0672	404.16	360.00	1.12	69.21	25.05	2.76
21	0.0711	403.80	360.00	1.12	68.69	24.89	2.76
22	0.0751	403.52	360.00	1.12	68.50	24.99	2.74
23	0.0791	403.24	360.00	1.12	67.80	24.56	2.76
24	0.0830	402.94	360.00	1.12	67.73	24.79	2.73
25	0.0870	402.64	360.00	1.12	66.98	24.34	2.75
26	0.0909	402.42	360.00	1.12	66.72	24.31	2.75
27	0.0949	402.18	360.00	1.12	66.45	24.27	2.74
28	0.0988	402.01	360.00	1.12	66.32	24.31	2.73
29	0.1027	401.85	360.00	1.12	65.57	23.72	2.76
30	0.1066	401.67	360.00	1.12	65.68	24.01	2.74
31	0.1105	401.48	360.00	1.12	65.14	23.66	2.75
32	0.1144	401.25	360.00	1.11	64.87	23.62	2.75
33	0.1182	401.00	360.00	1.11	64.65	23.66	2.73
34	0.1221	400.82	360.00	1.11	64.28	23.46	2.74
35	0.1259	400.62	360.00	1.11	63.76	23.14	2.76
36	0.1297	400.39	360.00	1.11	63.46	23.07	2.75
37	0.1336	400.28	360.00	1.11	63.29	23.01	2.75
38	0.1374	400.05	360.00	1.11	63.00	22.94	2.75
39	0.1412	399.89	360.00	1.11	62.71	22.81	2.75
40	0.1450	399.70	360.00	1.11	62.22	22.52	2.76
41	0.1489	399.41	360.00	1.11	61.97	22.56	2.75
42	0.1527	399.24	360.00	1.11	61.73	22.49	2.74

43	0.1565	398.95	360.00	1.11	61.44	22.49	2.73
44	0.1604	398.74	360.00	1.11	61.01	22.26	2.74
45	0.1642	398.50	360.00	1.11	60.53	22.04	2.75
46	0.1681	398.27	360.00	1.11	60.01	21.74	2.76
47	0.1720	398.02	360.00	1.11	59.86	21.84	2.74
48	0.1758	397.74	360.00	1.10	59.52	21.78	2.73
49	0.1797	397.38	360.00	1.10	59.18	21.81	2.71
50	0.1836	397.05	360.00	1.10	58.34	21.29	2.74
51	0.1874	396.67	360.00	1.10	58.13	21.45	2.71
52	0.1913	396.36	360.00	1.10	57.62	21.26	2.71
53	0.1952	396.09	360.00	1.10	57.48	21.39	2.69
54	0.1991	395.82	360.00	1.10	57.07	21.26	2.68
55	0.2030	395.64	360.00	1.10	56.74	21.10	2.69
56	0.2068	395.39	360.00	1.10	56.68	21.29	2.66
57	0.2108	395.13	360.00	1.10	56.36	21.23	2.66
58	0.2146	394.92	360.00	1.10	56.09	21.16	2.65
59	0.2185	394.73	360.00	1.10	55.90	21.16	2.64
60	0.2225	394.51	360.00	1.10	55.61	21.10	2.64

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR STRESS (kPa)	MEAN EFFECTIVE STRESS (kPa)
1	0.22	0.00	29.33	0.00	0.00	29.33
2	0.22	9.37	34.62	0.27	18.75	31.49
3	0.04	13.98	38.90	0.36	27.96	34.24
4	-0.02	17.27	42.32	0.41	34.53	36.56
5	-0.12	19.41	44.98	0.43	38.81	38.51
6	-0.06	20.81	46.54	0.45	41.62	39.60
7	-0.06	21.84	47.70	0.46	43.69	40.42
8	-0.16	22.55	48.63	0.46	45.09	41.12
9	0.42	22.97	48.70	0.47	45.94	41.04
10	-1.71	23.05	49.08	0.47	46.11	41.39
11	-0.20	23.13	49.19	0.47	46.27	41.48
12	0.00	23.12	49.18	0.47	46.25	41.47
13	-1.20	23.04	48.90	0.47	46.09	41.22
14	-2.78	22.96	48.37	0.47	45.92	40.72
15	0.14	22.85	48.29	0.47	45.70	40.67
16	-0.61	22.72	47.99	0.47	45.43	40.42
17	-0.32	22.57	47.75	0.47	45.13	40.22
18	0.00	22.41	47.59	0.47	44.83	40.12
19	0.30	22.25	47.53	0.47	44.59	40.11
20	-0.67	22.08	47.13	0.47	44.16	39.77
21	-0.45	21.90	46.79	0.47	43.80	39.49
22	0.35	21.76	46.74	0.47	43.52	39.49
23	-1.51	21.62	46.18	0.47	43.24	38.98
24	0.76	21.47	46.26	0.46	42.94	39.10
25	-1.52	21.32	45.66	0.47	42.64	38.55
26	-0.14	21.21	45.51	0.47	42.42	38.44
27	-0.13	21.09	45.36	0.46	42.18	38.33

28	0.19	21.01	45.31	0.46	42.01	38.31
29	-3.55	20.92	44.64	0.47	41.85	37.67
30	1.61	20.83	44.85	0.46	41.67	37.90
31	-1.96	20.74	44.40	0.47	41.48	37.49
32	-0.14	20.62	44.25	0.47	41.25	37.37
33	0.13	20.50	44.16	0.46	41.00	37.32
34	-1.09	20.41	43.87	0.47	40.82	37.07
35	-1.64	20.31	43.45	0.47	40.62	36.68
36	-0.28	20.20	43.27	0.47	40.39	36.54
37	-0.61	20.14	43.15	0.47	40.28	36.44
38	-0.28	20.03	42.97	0.47	40.05	36.30
39	-0.81	19.95	42.76	0.47	39.89	36.11
40	-1.49	19.85	42.37	0.47	39.70	35.75
41	0.12	19.71	42.26	0.47	39.41	35.69
42	-0.37	19.62	42.11	0.47	39.24	35.57
43	0.00	19.48	41.97	0.46	38.95	35.47
44	-1.08	19.37	41.63	0.47	38.74	35.18
45	-0.92	19.25	41.28	0.47	38.50	34.87
46	-1.27	19.13	40.88	0.47	38.27	34.50
47	0.39	19.01	40.85	0.47	38.02	34.51
48	-0.23	18.87	40.65	0.46	37.74	34.36
49	0.09	18.69	40.50	0.46	37.38	34.27
50	-1.59	18.52	39.81	0.47	37.05	33.64
51	0.43	18.34	39.79	0.46	36.67	33.68
52	-0.63	18.18	39.44	0.46	36.36	33.38
53	0.47	18.04	39.43	0.46	36.09	33.42
54	-0.48	17.91	39.17	0.46	35.82	33.20
55	-0.93	17.82	38.92	0.46	35.64	32.98
56	0.76	17.69	38.98	0.45	35.39	33.09
57	-0.25	17.56	38.79	0.45	35.13	32.94
58	-0.32	17.46	38.62	0.45	34.92	32.80
59	0.00	17.37	38.53	0.45	34.73	32.74
60	-0.29	17.26	38.35	0.45	34.51	32.60





# TRIAxIAL TEST RESULTS

## GENERAL TEST INFORMATION

### SAMPLE INFORMATION

SAMPLE ID: GD-1R, PC-54, 300/420  
INTERVAL (meters): 8.21-8.34  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/17/80

### INDEX PROPERTIES

MOISTURE CONTENT: 0.60  
BULK DENSITY (g/cc): 1.68  
VOID RATIO: 1.59  
POROSITY: 0.61  
GRAIN SPEC GRAVITY (g/cc): 2.71  
LIQUID LIMIT (%): 62.00  
PLASTIC LIMIT (%): 30.00

### SAMFLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 156.35  
WEIGHT (gm): 320.40

## TEST RESULTS

### \*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	60.00		58.12		
2	120.00	60.00	117.34	59.22	0.99
3	240.00	120.00	237.31	119.97	1.00
4	300.00	60.00	296.47	59.16	0.99
5	420.00	120.00	417.05	120.58	1.00

### \*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 420.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 120.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 52.80

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	95.14
AREA (sq. mm):	1963.50	1777.28
VOLUME (cc):	196.35	169.09
WATER CONTENT:	0.60	0.46
POROSITY:	0.61	0.54
VOID RATIO:	1.59	1.15
BULK DENSITY (g/cc):	1.68	1.78
BOUYANT BULK DENSITY (g/cc):	0.65	0.76
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	5	0.70	2.24	0.44
3	12	1.08	3.46	0.76
4	22	1.34	4.69	1.13
5	41	1.61	6.40	1.64
6	75	1.88	8.66	2.36
7	142	2.15	11.92	3.43
8	272	2.43	16.49	5.00
9	530	2.72	23.02	7.23
10	1044	3.02	32.31	10.11
11	2071	3.32	45.51	13.39
12	4121	3.62	64.20	16.69
13	6404	3.81	80.02	18.59
14	8686	3.94	93.20	19.74
15	10969	4.04	104.73	20.53
16	13251	4.12	115.11	21.11
17	15534	4.19	124.64	21.57
18	17816	4.25	133.48	21.95
19	20099	4.30	141.77	22.27
20	22381	4.35	149.60	22.55
21	24663	4.39	157.04	22.81
22	26946	4.43	164.15	23.04
23	29229	4.47	170.96	23.25
24	31511	4.50	177.51	23.45
25	33794	4.53	183.83	23.64
26	36076	4.56	189.94	23.81
27	38359	4.58	195.85	23.98
28	40641	4.61	201.60	24.13
29	42923	4.63	207.18	24.28
30	45206	4.66	212.62	24.42
31	47488	4.68	217.92	24.56
32	49771	4.70	223.09	24.69
33	52053	4.72	228.15	24.82
34	54336	4.74	233.10	24.93

35	56618	4.75	237.95	25.05
36	58900	4.77	242.69	25.16
37	61183	4.79	247.35	25.27
38	63465	4.80	251.92	25.37
39	65748	4.82	256.41	25.48
40	68030	4.83	260.83	25.58
41	70313	4.85	265.17	25.69
42	72596	4.86	269.44	25.79
43	74878	4.87	273.64	25.89
44	77161	4.89	277.78	25.99
45	79444	4.90	281.86	26.08
46	81726	4.91	285.88	26.18
47	84009	4.92	289.94	26.27
48	86291	4.94	293.75	26.36
49	88573	4.95	297.61	26.45
50	90856	4.96	301.42	26.53
51	93139	4.97	305.19	26.61
52	95421	4.98	308.90	26.69
53	97704	4.99	312.58	26.77
54	99986	5.00	316.21	26.85
55	102268	5.01	319.79	26.92
56	104551	5.02	323.34	26.99
57	106834	5.03	326.85	27.06
58	109116	5.04	330.33	27.13
59	111399	5.05	333.76	27.19
60	113682	5.06	337.17	27.26

ALPHA: 0.95  
 A<sub>0</sub> (sq. mm): 1777.28  
 L<sub>0</sub> (mm): 95.14

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 420.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	366.83	0.00	0.00	420.00	1
2	-0.00	368.89	0.01	8.66	420.00	1443
3	-0.00	369.34	0.34	22.44	420.00	2886
4	0.00	370.39	0.68	32.77	420.00	4329
5	-0.00	377.67	1.03	89.95	420.00	5771
6	0.00	379.22	1.38	116.77	420.00	7213
7	0.00	380.30	1.74	132.78	420.00	8656

8	0.00	381.29	2.11	143.15	420.00	10098
9	0.00	382.05	2.48	149.36	420.00	11541
10	0.01	383.04	2.86	153.52	420.00	12983
11	0.01	383.80	3.24	154.53	420.00	14425
12	0.01	384.60	3.61	153.65	420.00	15868
13	0.01	385.36	3.99	153.43	420.00	17310
14	0.01	386.28	4.37	152.51	420.00	18753
15	0.01	386.98	4.76	151.47	420.00	20196
16	0.01	387.62	5.14	149.80	420.00	21638
17	0.01	388.22	5.53	148.18	420.00	23081
18	0.01	388.89	5.91	146.61	420.00	24523
19	0.01	389.52	6.29	145.60	420.00	25966
20	0.01	390.16	6.67	144.86	420.00	27408
21	0.00	390.64	7.06	144.20	420.00	28851
22	0.01	390.92	7.44	143.06	420.00	30293
23	0.00	391.49	7.82	142.50	420.00	31736
24	0.01	391.72	8.19	141.62	420.00	33179
25	0.01	392.45	8.57	140.88	420.00	34621
26	0.01	392.64	8.95	139.96	420.00	36064
27	0.01	392.83	9.33	138.95	420.00	37506
28	0.01	393.12	9.70	137.95	420.00	38948
29	0.01	393.47	10.08	137.16	420.00	40391
30	0.01	393.62	10.46	136.37	420.00	41834
31	0.01	393.91	10.83	135.28	420.00	43276
32	0.01	394.26	11.21	134.18	420.00	44719
33	0.01	394.58	11.58	133.57	420.00	46162
34	0.01	394.80	11.96	132.61	420.00	47604
35	0.01	394.93	12.33	131.43	420.00	49047
36	0.01	395.15	12.71	130.46	420.00	50489
37	0.01	395.47	13.09	129.37	420.00	51932
38	0.01	395.66	13.47	128.41	420.00	53383
39	0.01	395.79	13.85	127.40	420.00	54826
40	0.01	395.98	14.23	126.44	420.00	56269
41	0.01	396.26	14.61	125.30	420.00	57711
42	0.01	396.39	15.00	124.25	420.00	59154
43	0.02	396.68	15.39	123.33	420.00	60597
44	0.02	396.87	15.77	122.46	420.00	62039
45	0.02	397.03	16.16	121.67	420.00	63482
46	0.02	397.41	16.54	120.93	420.00	64924
47	0.02	397.60	16.93	120.05	420.00	66366
48	0.02	397.63	17.32	119.26	420.00	67809
49	0.02	397.69	17.71	118.43	420.00	69251
50	0.01	398.01	18.09	117.82	420.00	70694
51	0.02	398.20	18.48	117.16	420.00	72136
52	0.02	398.33	18.87	116.73	420.00	73579
53	0.01	398.33	19.26	116.11	420.00	75022
54	0.02	398.30	19.64	115.90	420.00	76465
55	0.02	398.36	20.03	115.63	420.00	77907
56	0.02	398.39	20.41	115.50	420.00	79350
57	0.02	398.52	20.80	115.24	420.00	80792
58	0.02	398.74	21.18	115.24	420.00	82235

59	0.02	398.93	21.56	115.28	420.00	83678
60	0.01	398.84	21.95	115.06	420.00	85121

DERIVED PROPERTIES

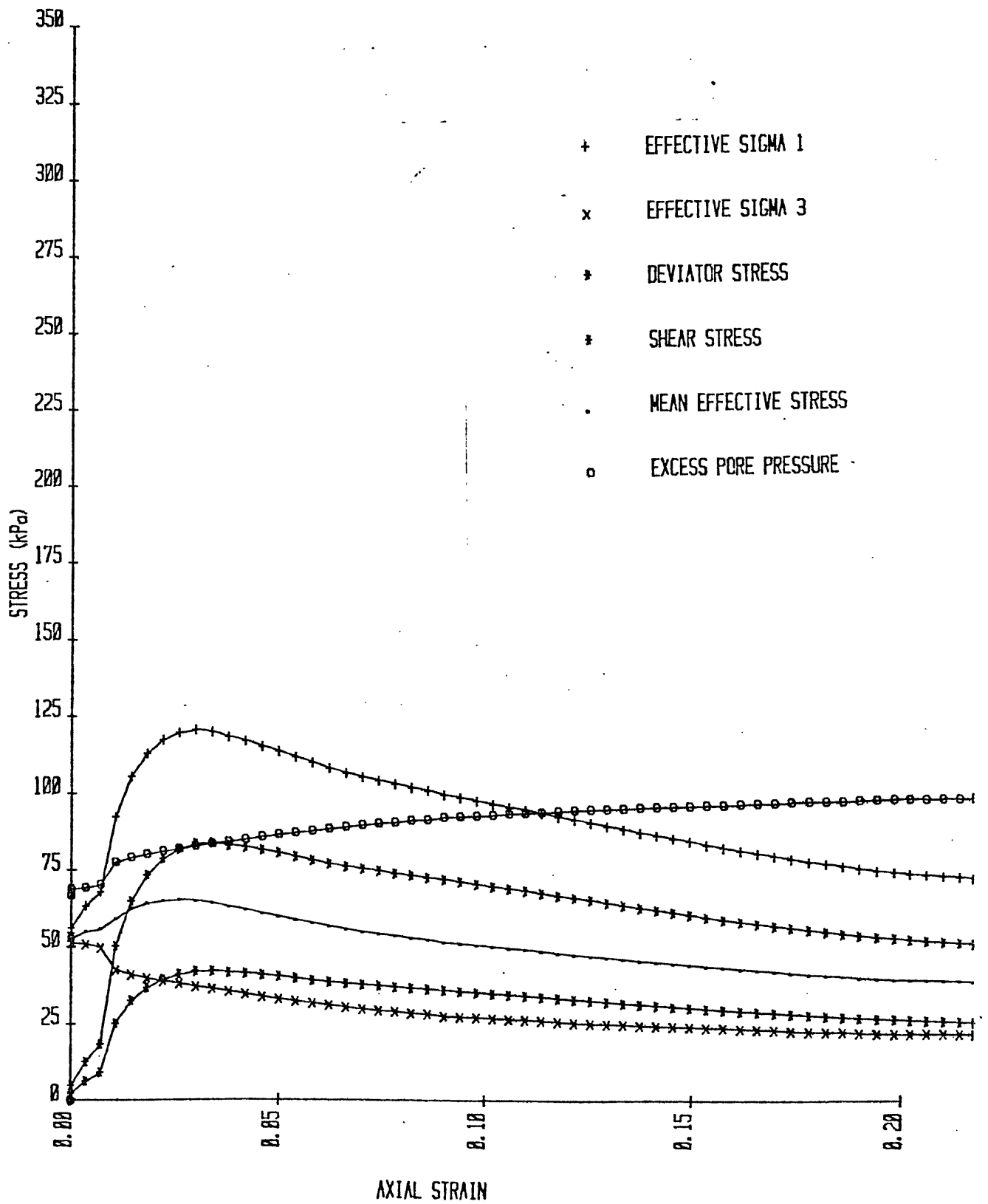
READING	STRAIN A	SIG1 (kPa)	SIG3 (kPa)	TOTAL STRESS		EFFECTIVE STRESS	
				RATIO	EFFSIG1 (kPa)	EFFSIG3 (kPa)	RATIO
1	0.0000	420.00	420.00	1.00	53.18	53.18	1.00
2	0.0001	424.87	420.00	1.01	55.98	51.11	1.10
3	0.0035	432.58	420.00	1.03	63.25	50.66	1.25
4	0.0071	438.31	420.00	1.04	67.92	49.62	1.37
5	0.0108	470.07	420.00	1.12	92.40	42.34	2.18
6	0.0145	484.75	420.00	1.15	105.52	40.78	2.59
7	0.0183	493.34	420.00	1.17	113.04	39.70	2.85
8	0.0222	498.76	420.00	1.19	117.47	38.71	3.03
9	0.0261	501.85	420.00	1.19	119.80	37.95	3.16
10	0.0300	503.79	420.00	1.20	120.75	36.96	3.27
11	0.0340	503.99	420.00	1.20	120.19	36.20	3.32
12	0.0379	503.17	420.00	1.20	118.58	35.41	3.35
13	0.0419	502.71	420.00	1.20	117.35	34.64	3.39
14	0.0460	501.87	420.00	1.19	115.59	33.72	3.43
15	0.0500	500.96	420.00	1.19	113.98	33.02	3.45
16	0.0540	499.73	420.00	1.19	112.12	32.39	3.46
17	0.0581	498.53	420.00	1.19	110.32	31.78	3.47
18	0.0621	497.37	420.00	1.18	108.48	31.11	3.49
19	0.0661	496.51	420.00	1.18	106.98	30.48	3.51
20	0.0702	495.79	420.00	1.18	105.63	29.84	3.54
21	0.0742	495.12	420.00	1.18	104.48	29.37	3.56
22	0.0782	494.20	420.00	1.18	103.28	29.08	3.55
23	0.0821	493.59	420.00	1.18	102.10	28.51	3.58
24	0.0861	492.82	420.00	1.17	101.11	28.28	3.57
25	0.0901	492.12	420.00	1.17	99.68	27.55	3.62
26	0.0941	491.34	420.00	1.17	98.70	27.36	3.61
27	0.0981	490.52	420.00	1.17	97.69	27.17	3.60
28	0.1020	489.70	420.00	1.17	96.59	26.89	3.59
29	0.1060	488.99	420.00	1.16	95.53	26.54	3.60
30	0.1099	488.30	420.00	1.16	94.67	26.38	3.59
31	0.1138	487.45	420.00	1.16	93.54	26.09	3.59
32	0.1178	486.61	420.00	1.16	92.35	25.74	3.59
33	0.1217	486.01	420.00	1.16	91.43	25.42	3.60
34	0.1257	485.23	420.00	1.16	90.43	25.20	3.59
35	0.1297	484.36	420.00	1.15	89.43	25.07	3.57
36	0.1336	483.60	420.00	1.15	88.45	24.85	3.56
37	0.1376	482.77	420.00	1.15	87.31	24.53	3.56
38	0.1416	482.02	420.00	1.15	86.36	24.34	3.55
39	0.1456	481.25	420.00	1.15	85.46	24.22	3.53
40	0.1496	480.50	420.00	1.14	84.52	24.02	3.52
41	0.1536	479.67	420.00	1.14	83.41	23.74	3.51
42	0.1577	478.89	420.00	1.14	82.50	23.61	3.49

43	0.1617	478.17	420.00	1.14	81.50	23.33	3.49
44	0.1658	477.48	420.00	1.14	80.61	23.13	3.48
45	0.1699	476.83	420.00	1.14	79.81	22.98	3.47
46	0.1739	476.21	420.00	1.13	79.80	22.59	3.49
47	0.1779	475.53	420.00	1.13	77.93	22.40	3.48
48	0.1820	474.89	420.00	1.13	77.26	22.37	3.45
49	0.1862	474.23	420.00	1.13	76.54	22.31	3.43
50	0.1902	473.69	420.00	1.13	75.68	21.99	3.44
51	0.1943	473.12	420.00	1.13	74.91	21.80	3.44
52	0.1984	472.65	420.00	1.13	74.32	21.67	3.43
53	0.2024	472.11	420.00	1.12	73.78	21.67	3.40
54	0.2064	471.75	420.00	1.12	73.45	21.70	3.38
55	0.2105	471.37	420.00	1.12	73.01	21.64	3.37
56	0.2145	471.05	420.00	1.12	72.65	21.61	3.36
57	0.2186	470.66	420.00	1.12	72.15	21.48	3.36
58	0.2227	470.40	420.00	1.12	71.66	21.26	3.37
59	0.2266	470.17	420.00	1.12	71.23	21.07	3.38
60	0.2307	469.80	420.00	1.12	70.97	21.16	3.35

DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	DEVIATOR	MEAN
					STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.42	0.00	53.18	0.00	0.00	53.18
2	0.42	2.44	53.55	0.05	4.87	52.73
3	0.06	6.29	56.96	0.11	12.58	54.86
4	0.18	9.15	58.77	0.16	18.31	55.72
5	0.23	25.03	67.37	0.37	50.07	59.02
6	0.11	32.37	73.15	0.44	64.75	62.36
7	0.13	36.67	76.37	0.48	73.34	64.14
8	0.18	39.38	78.09	0.50	78.76	64.96
9	0.25	40.92	78.87	0.52	81.85	65.23
10	0.51	41.89	78.86	0.53	83.79	64.89
11	3.76	41.99	78.19	0.54	83.99	64.20
12	-0.98	41.59	76.99	0.54	83.17	63.13
13	-1.64	41.35	76.00	0.54	82.71	62.21
14	-1.10	40.93	74.65	0.55	81.87	61.01
15	-0.77	40.48	73.50	0.55	80.96	60.01
16	-0.52	39.87	72.25	0.55	79.73	58.96
17	-0.50	39.27	71.05	0.55	78.53	57.96
18	-0.57	38.68	69.80	0.55	77.37	56.90
19	-0.74	38.25	68.73	0.56	76.51	55.98
20	-0.88	37.89	67.74	0.56	75.79	55.10
21	-0.71	37.56	66.92	0.56	75.12	54.40
22	-0.31	37.10	66.18	0.56	74.20	53.81
23	-0.94	36.80	65.30	0.56	73.59	53.04
24	-0.29	36.41	64.69	0.56	72.82	52.56
25	-1.05	36.06	63.62	0.57	72.12	51.59
26	-0.24	35.67	63.03	0.57	71.34	51.14
27	-0.23	35.26	62.43	0.56	70.52	50.68

28	-0.35	34.85	61.74	0.56	69.70	50.12
29	-0.50	34.50	61.03	0.57	68.99	49.53
30	-0.23	34.15	60.52	0.56	68.30	49.14
31	-0.34	33.73	59.82	0.56	67.45	48.57
32	-0.41	33.30	59.04	0.56	66.61	47.94
33	-0.53	33.00	58.43	0.56	66.01	47.43
34	-0.29	32.62	57.82	0.56	65.23	46.94
35	-0.15	32.18	57.25	0.56	64.36	46.53
36	-0.29	31.80	56.65	0.56	63.60	46.05
37	-0.39	31.39	55.92	0.56	62.77	45.46
38	-0.25	31.01	55.35	0.56	62.02	45.01
39	-0.16	30.62	54.84	0.56	61.25	44.63
40	-0.26	30.25	54.27	0.56	60.50	44.19
41	-0.35	29.84	53.57	0.56	59.67	43.63
42	-0.16	29.44	53.06	0.55	58.89	43.24
43	-0.40	29.09	52.41	0.55	58.17	42.72
44	-0.28	28.74	51.87	0.55	57.48	42.29
45	-0.24	28.42	51.39	0.55	56.83	41.92
46	-0.62	28.11	50.70	0.55	56.21	41.33
47	-0.28	27.76	50.17	0.55	55.53	40.91
48	-0.05	27.44	49.82	0.55	54.89	40.67
49	-0.10	27.12	49.42	0.55	54.23	40.38
50	-0.58	26.84	48.83	0.55	53.69	39.88
51	-0.33	26.56	48.36	0.55	53.12	39.50
52	-0.27	26.32	48.00	0.55	52.65	39.22
53	0.00	26.05	47.73	0.55	52.11	39.04
54	0.09	25.87	47.58	0.54	51.75	38.95
55	-0.16	25.68	47.32	0.54	51.37	38.76
56	-0.10	25.52	47.13	0.54	51.05	38.62
57	-0.33	25.33	46.81	0.54	50.66	38.37
58	-0.85	25.20	46.46	0.54	50.40	38.06
59	-0.80	25.08	46.15	0.54	50.17	37.79
60	0.26	24.90	46.07	0.54	49.80	37.76





TRIAxIAL TEST RESULTS

GENERAL TEST INFORMATION

SAMPLE INFORMATION

SAMPLE ID: GD-1R, PC-54; 300/540  
INTERVAL (meters): 8.34-8.48  
GENERAL LOCATION: BALTIMORE-HUDSON CANYON AREA  
DESCRIPTION: OLIVE-GRAY CLAY  
DATE FINISHED: 2/17/80

INDEX PROPERTIES

MOISTURE CONTENT: 0.58  
BULK DENSITY (g/cc): 1.69  
VOID RATIO: 1.53  
POROSITY: 0.61  
GRAIN SPEC GRAVITY (g/cc): 2.71

SAMPLE PARAMETERS

HEIGHT (mm): 100.00  
DIAMETER (mm): 50.00  
AREA (sq. mm): 1963.50  
VOLUME (cc): 196.35  
WEIGHT (gm): 324.00

TEST RESULTS

\*SATURATION PHASE\*

READING	CELL PRESSURE kPa	DELTA C kPa	PORE PRESSURE kPa	DELTA P kPa	B
1	60.00		57.57		
2	120.00	60.00	117.26	59.69	0.99
3	240.00	120.00	236.82	119.56	1.00
4	360.00	120.00	356.47	119.65	1.00
5	540.00	180.00	537.12	180.65	1.00

\*CONSOLIDATION PHASE\*

CELL PRESSURE (kPa): 540.00  
BACK PRESSURE (kPa): 300.00  
CONSOLIDATION PRESSURE (kPa): 240.00  
ASSUMED EFFECTIVE  
OVERBURDEN PRESSURE (kPa): 54.75

CHANGES IN PROPERTIES DUE TO CONSOLIDATION

PROPERTY	INITIAL VALUE	CONSOLIDATED VALUE
HEIGHT (mm):	100.00	93.72
AREA (sq. mm):	1963.50	1724.73
VOLUME (cc):	196.35	161.65
WATER CONTENT:	0.58	0.41
POROSITY:	0.61	0.49
VOID RATIO:	1.53	0.96
BULK DENSITY (g/cc):	1.69	1.83
BOUYANT BULK DENSITY (g/cc):	0.67	0.81
% SATURATION:	100.00	100.00

MEASURED PROPERTIES

READING	TIME (sec)	Log TIME	Sqrt TIME	DVOL (cc)
1	0	-4.00	0.00	0.00
2	5	0.70	2.24	0.52
3	12	1.08	3.46	0.98
4	22	1.34	4.69	1.51
5	41	1.61	6.40	2.24
6	75	1.88	8.66	3.28
7	142	2.15	11.92	4.83
8	272	2.43	16.49	7.13
9	531	2.73	23.04	10.47
10	1045	3.02	32.33	15.05
11	2071	3.32	45.51	20.90
12	4122	3.62	64.20	27.65
13	6404	3.81	80.02	31.77
14	8687	3.94	93.20	34.19
15	10970	4.04	104.74	35.69
16	13253	4.12	115.12	36.68
17	15535	4.19	124.64	37.35
18	17817	4.25	133.48	37.83
19	20100	4.30	141.77	38.18
20	22382	4.35	149.61	38.44
21	24664	4.39	157.05	38.63
22	26946	4.43	164.15	38.76
23	29229	4.47	170.96	38.85
24	31511	4.50	177.51	38.91
25	33794	4.53	183.83	38.93
26	36076	4.56	189.94	38.92
27	38359	4.58	195.85	38.89
28	40641	4.61	201.60	38.82
29	42924	4.63	207.18	38.73
30	45206	4.66	212.62	38.61
31	47488	4.68	217.92	38.47
32	49771	4.70	223.09	38.31
33	52053	4.72	228.15	38.14
34	54336	4.74	233.10	37.96

35	56619	4.75	237.95	37.79
36	58901	4.77	242.70	37.62
37	61184	4.79	247.35	37.46
38	63466	4.80	251.92	37.31
39	65748	4.82	256.41	37.15
40	68030	4.83	260.83	37.01
41	70313	4.85	265.17	36.88
42	72595	4.86	269.43	36.76
43	74877	4.87	273.64	36.64
44	77160	4.89	277.78	36.53
45	79443	4.90	281.86	36.43
46	81725	4.91	285.88	36.32
47	84008	4.92	289.84	36.22
48	86290	4.94	293.75	36.11
49	88573	4.95	297.61	36.00
50	90855	4.96	301.42	35.88
51	93138	4.97	305.19	35.76
52	95420	4.98	308.90	35.65
53	97703	4.99	312.57	35.53
54	99985	5.00	316.20	35.41
55	102267	5.01	319.79	35.29
56	104550	5.02	323.34	35.17
57	106832	5.03	326.85	35.06
58	109114	5.04	330.32	34.94
59	111397	5.05	333.76	34.82
60	113680	5.06	337.16	34.70

ALPHA: 0.94  
 Ao (sq. mm): 1724.73  
 Lo (mm): 93.72

\*SHEAR PHASE\*

CELL PRESSURE (kPa): 540.00  
 STRAIN RATE: .015 mm/min

MEASURED PROPERTIES

READING	DVOL (cc)	PORP (kPa)	DLNG (mm)	AXFO (N)	CELP (kPa)	TIME (sec)
1	0.00	408.41	0.00	0.00	540.00	1
2	23.63	431.64	0.25	102.70	540.00	1443
3	151.83	439.86	0.57	131.19	540.00	2885
4	207.28	446.14	0.88	145.64	540.00	4327
5	329.81	451.33	1.21	154.90	540.00	5770
6	351.17	455.59	1.54	161.41	540.00	7212
7	317.46	459.57	1.88	166.10	540.00	8654

8	378.53	462.67	2.23	169.36	540.00	10096
9	339.57	465.40	2.59	171.84	540.00	11539
10	226.86	467.78	2.95	173.31	540.00	12981
11	360.19	469.74	3.32	174.05	540.00	14424
12	204.79	471.66	3.70	174.28	540.00	15866
13	177.68	473.03	4.08	174.32	540.00	17309
14	241.12	474.43	4.46	174.40	540.00	18751
15	169.79	475.73	4.83	174.32	540.00	20194
16	271.30	476.97	5.22	174.32	540.00	21636
17	331.48	477.98	5.60	174.51	540.00	23078
18	197.40	478.76	5.99	174.20	540.00	24521
19	212.34	480.00	6.38	174.78	540.00	25963
20	206.07	480.75	6.76	175.13	540.00	27406
21	197.02	481.47	7.15	175.68	540.00	28848
22	138.33	482.22	7.54	175.56	540.00	30290
23	108.60	482.87	7.93	175.79	540.00	31732
24	124.08	483.29	8.31	176.30	540.00	33175
25	213.33	483.85	8.70	176.53	540.00	34617
26	151.50	484.30	9.08	176.61	540.00	36059
27	160.75	484.79	9.46	176.96	540.00	37502
28	129.53	485.25	9.84	177.27	540.00	38944
29	155.31	485.77	10.23	177.42	540.00	40387
30	159.77	486.06	10.61	177.89	540.00	41829
31	152.17	486.62	10.99	178.00	540.00	43271
32	104.05	486.91	11.37	178.12	540.00	44713
33	111.68	487.30	11.74	178.54	540.00	46156
34	57.29	487.69	12.12	178.93	540.00	47598
35	217.68	487.89	12.51	179.16	540.00	49041
36	58.98	488.34	12.89	179.51	540.00	50483
37	118.56	488.54	13.27	179.71	540.00	51926
38	262.21	488.90	13.65	179.98	540.00	53368
39	173.09	488.96	14.03	180.06	540.00	54810
40	305.26	489.19	14.40	180.40	540.00	56253
41	162.22	489.55	14.78	180.71	540.00	57695
42	194.72	489.71	15.16	180.99	540.00	59137
43	203.49	489.91	15.53	181.30	540.00	60579
44	208.37	490.07	15.91	181.80	540.00	62022
45	177.17	490.62	16.29	182.38	540.00	63464
46	279.73	490.53	16.67	182.59	540.00	64907
47	159.32	490.49	17.05	182.85	540.00	66350
48	182.63	490.79	17.43	183.20	540.00	67792
49	313.58	490.95	17.81	183.31	540.00	69235
50	338.72	491.01	18.19	183.51	540.00	70677
51	393.04	491.11	18.57	183.58	540.00	72120
52	248.58	491.41	18.95	184.01	540.00	73562
53	266.86	491.70	19.32	184.28	540.00	75005
54	265.59	491.76	19.70	184.63	540.00	76447
55	337.11	491.76	20.08	184.86	540.00	77890
56	306.75	491.89	20.46	184.98	540.00	79333
57	391.48	492.12	20.84	185.17	540.00	80775
58	240.89	492.06	21.21	185.52	540.00	82218

59	414.58	492.68	21.59	185.68	540.00	83660
60	434.22	492.81	21.98	185.64	540.00	85103

DERIVED PROPERTIES

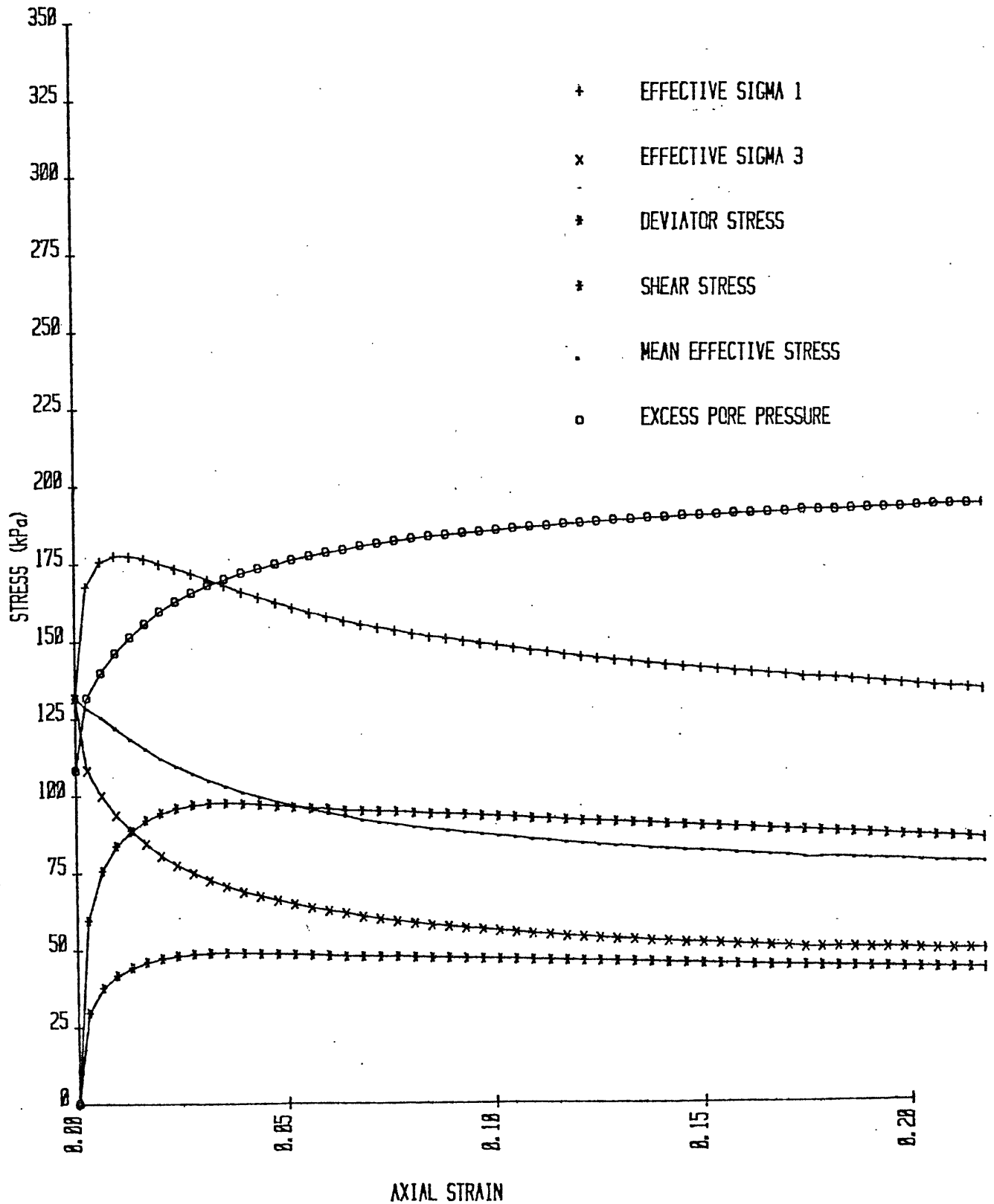
READING	STRAIN A	TOTAL STRESS		EFFECTIVE STRESS		RATIO
		SIG1 (kPa)	SIG3 (kPa)	EFFSIG1 (kPa)	EFFSIG3 (kPa)	
1	0.0000	540.00	540.00	131.59	131.59	1.00
2	0.0027	599.39	540.00	167.74	108.36	1.55
3	0.0060	615.60	540.00	175.75	100.15	1.75
4	0.0094	623.65	540.00	177.51	93.86	1.89
5	0.0129	628.65	540.00	177.33	88.68	2.00
6	0.0165	632.05	540.00	176.45	84.41	2.09
7	0.0200	634.38	540.00	174.81	80.43	2.17
8	0.0238	635.86	540.00	173.19	77.34	2.24
9	0.0276	636.88	540.00	171.48	74.60	2.30
10	0.0314	637.33	540.00	169.55	72.22	2.35
11	0.0354	637.34	540.00	167.60	70.26	2.39
12	0.0395	637.06	540.00	165.40	68.34	2.42
13	0.0435	636.67	540.00	163.65	66.97	2.44
14	0.0476	636.30	540.00	161.87	65.57	2.47
15	0.0516	635.86	540.00	160.13	64.27	2.49
16	0.0557	635.44	540.00	158.47	63.03	2.51
17	0.0598	635.13	540.00	157.15	62.02	2.53
18	0.0639	634.55	540.00	155.79	61.24	2.54
19	0.0680	634.45	540.00	154.45	60.00	2.57
20	0.0722	634.22	540.00	153.47	59.25	2.59
21	0.0763	634.08	540.00	152.62	58.53	2.61
22	0.0805	633.60	540.00	151.38	57.78	2.62
23	0.0846	633.30	540.00	150.44	57.13	2.63
24	0.0886	633.16	540.00	149.87	56.71	2.64
25	0.0928	632.86	540.00	149.01	56.16	2.65
26	0.0969	632.48	540.00	148.18	55.70	2.66
27	0.1009	632.25	540.00	147.46	55.21	2.67
28	0.1050	631.99	540.00	146.74	54.75	2.68
29	0.1091	631.64	540.00	145.87	54.23	2.69
30	0.1133	631.46	540.00	145.40	53.94	2.70
31	0.1173	631.10	540.00	144.48	53.39	2.71
32	0.1213	630.74	540.00	143.83	53.09	2.71
33	0.1253	630.55	540.00	143.25	52.70	2.72
34	0.1294	630.32	540.00	142.63	52.31	2.73
35	0.1335	630.01	540.00	142.13	52.11	2.73
36	0.1375	629.77	540.00	141.43	51.66	2.74
37	0.1415	629.45	540.00	140.91	51.46	2.74
38	0.1456	629.15	540.00	140.26	51.10	2.74
39	0.1497	628.77	540.00	139.81	51.04	2.74
40	0.1536	628.53	540.00	139.34	50.81	2.74
41	0.1577	628.26	540.00	138.71	50.45	2.75
42	0.1617	627.97	540.00	138.26	50.29	2.75

43	0.1657	627.69	540.00	1.16	137.79	50.09	2.75
44	0.1698	627.51	540.00	1.16	137.44	49.93	2.75
45	0.1738	627.37	540.00	1.16	136.74	49.38	2.77
46	0.1779	626.99	540.00	1.16	136.46	49.48	2.76
47	0.1820	626.72	540.00	1.16	136.23	49.51	2.75
48	0.1860	626.46	540.00	1.16	135.67	49.21	2.76
49	0.1900	626.09	540.00	1.16	135.14	49.05	2.76
50	0.1940	625.75	540.00	1.16	134.74	48.99	2.75
51	0.1981	625.35	540.00	1.16	134.24	48.89	2.75
52	0.2022	625.12	540.00	1.16	133.72	48.60	2.75
53	0.2062	624.82	540.00	1.16	133.12	48.30	2.76
54	0.2102	624.55	540.00	1.16	132.79	48.24	2.75
55	0.2143	624.22	540.00	1.16	132.46	48.24	2.75
56	0.2184	623.83	540.00	1.16	131.94	48.11	2.74
57	0.2223	623.49	540.00	1.15	131.37	47.88	2.74
58	0.2263	623.22	540.00	1.15	131.16	47.94	2.74
59	0.2303	622.86	540.00	1.15	130.18	47.32	2.75
60	0.2345	622.39	540.00	1.15	129.59	47.19	2.75

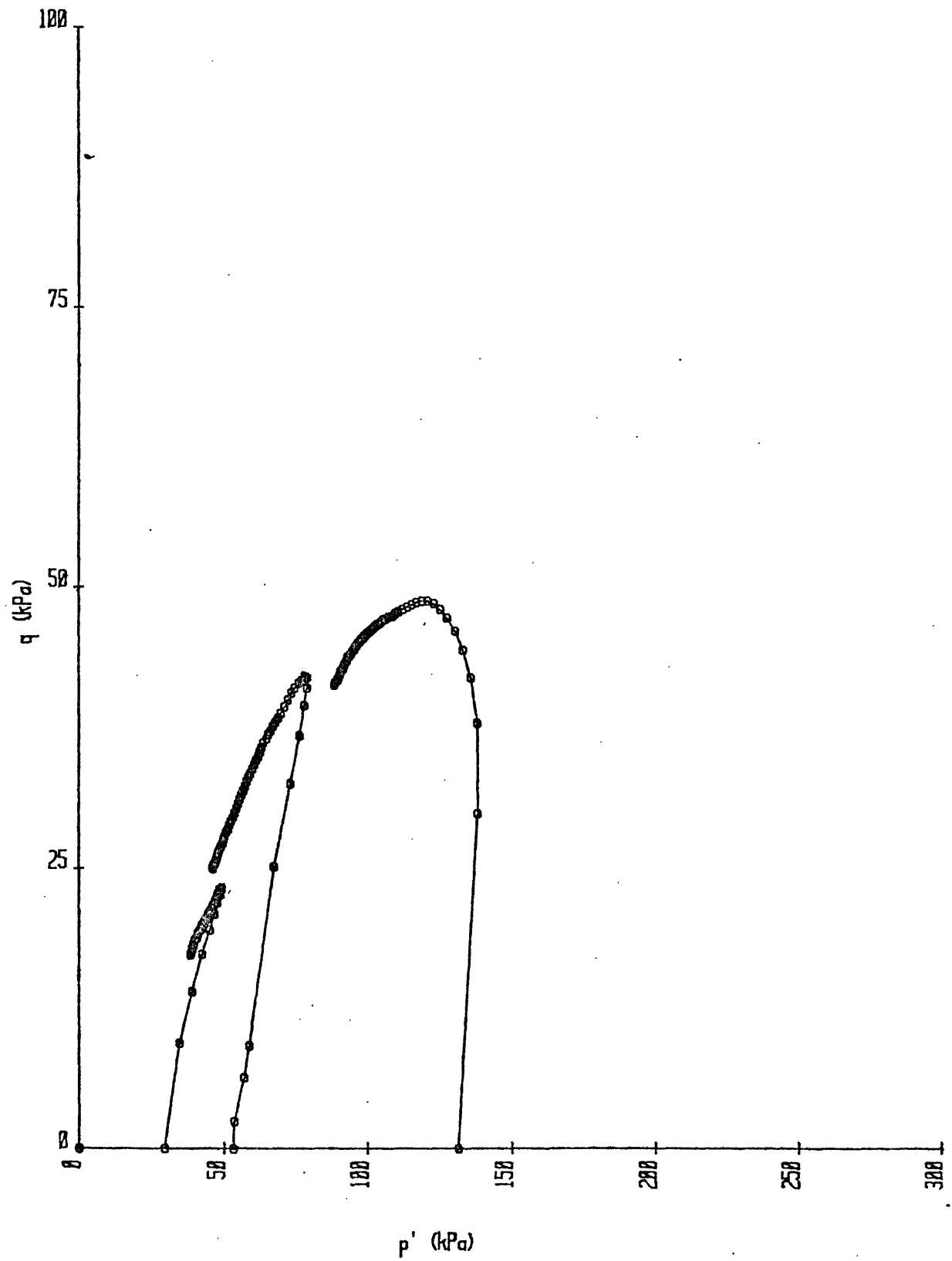
DERIVED PROPERTIES (cont.)

READING	A	q (kPa)	p' (kPa)	q/p'	MEAN	
					DEVIATOR STRESS (kPa)	EFFECTIVE STRESS (kPa)
1	0.39	0.00	131.59	0.00	0.00	131.59
2	0.39	29.69	138.05	0.22	59.39	128.15
3	0.51	37.80	137.95	0.27	75.60	125.35
4	0.78	41.83	135.68	0.31	83.65	121.74
5	1.04	44.33	133.00	0.33	88.65	118.23
6	1.26	46.02	130.43	0.35	92.05	115.09
7	1.71	47.19	127.62	0.37	94.38	111.89
8	2.09	47.93	125.26	0.38	95.86	109.29
9	2.67	48.44	123.04	0.39	96.88	106.89
10	5.37	48.66	120.88	0.40	97.33	104.66
11	168.96	48.67	118.93	0.41	97.34	102.71
12	-6.87	48.53	116.87	0.42	97.06	100.69
13	-3.57	48.34	115.31	0.42	96.67	99.20
14	-3.77	48.15	113.72	0.42	96.30	97.67
15	-2.92	47.93	112.20	0.43	95.86	96.22
16	-2.98	47.72	110.75	0.43	95.44	94.84
17	-3.27	47.57	109.59	0.43	95.13	93.73
18	-1.34	47.27	108.51	0.44	94.55	92.75
19	-11.94	47.22	107.22	0.44	94.45	91.48
20	-3.27	47.11	106.36	0.44	94.22	90.66
21	-5.38	47.04	105.58	0.45	94.08	89.89
22	-1.55	46.80	104.58	0.45	93.60	88.98
23	-2.21	46.65	103.79	0.45	93.30	88.23
24	-2.85	46.58	103.29	0.45	93.16	87.76
25	-1.85	46.43	102.58	0.45	92.86	87.11
26	-1.21	46.24	101.94	0.45	92.48	86.53
27	-2.10	46.12	101.33	0.46	92.25	85.96

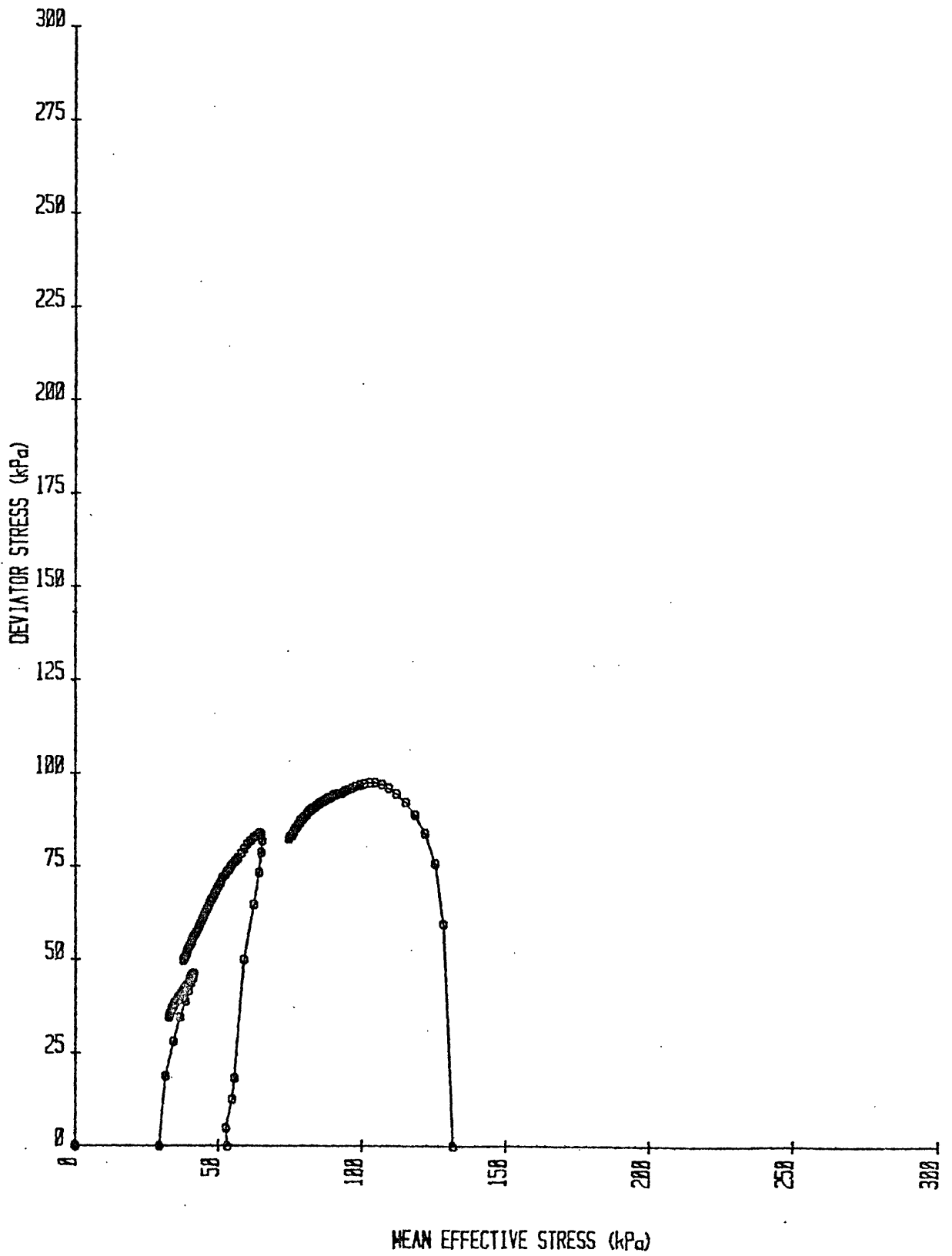
28	-1.75	45.99	100.75	0.46	91.99	85.42
29	-1.52	45.82	100.05	0.46	91.64	84.78
30	-1.59	45.73	99.67	0.46	91.46	84.42
31	-1.55	45.55	98.93	0.46	91.10	83.75
32	-0.82	45.37	98.46	0.46	90.74	83.34
33	-2.02	45.27	97.98	0.46	90.55	82.88
34	-1.74	45.16	97.47	0.46	90.32	82.42
35	-0.63	45.01	97.12	0.46	90.01	82.12
36	-1.88	44.88	96.54	0.46	89.77	81.58
37	-0.60	44.72	96.19	0.46	89.45	81.28
38	-1.23	44.58	95.68	0.47	89.15	80.82
39	-0.17	44.39	95.43	0.47	88.77	80.63
40	-0.94	44.27	95.08	0.47	88.53	80.32
41	-1.30	44.13	94.58	0.47	88.26	79.87
42	-0.56	43.98	94.27	0.47	87.97	79.61
43	-0.72	43.85	93.94	0.47	87.69	79.33
44	-0.88	43.75	93.69	0.47	87.51	79.10
45	-3.85	43.68	93.06	0.47	87.37	78.50
46	0.26	43.49	92.97	0.47	86.99	78.47
47	0.13	43.36	92.87	0.47	86.72	78.42
48	-1.12	43.23	92.44	0.47	86.46	78.03
49	-0.43	43.04	92.09	0.47	86.09	77.75
50	-0.20	42.88	91.86	0.47	85.75	77.57
51	-0.24	42.68	91.57	0.47	85.35	77.34
52	-1.27	42.56	91.16	0.47	85.12	76.97
53	-0.96	42.41	90.71	0.47	84.82	76.57
54	-0.24	42.27	90.51	0.47	84.55	76.42
55	0.00	42.11	90.35	0.47	84.22	76.31
56	-0.34	41.92	90.02	0.47	83.83	76.05
57	-0.67	41.75	89.62	0.47	83.49	75.71
58	0.24	41.61	89.55	0.46	83.22	75.68
59	-1.71	41.43	88.75	0.47	82.86	74.94
60	-0.28	41.20	88.39	0.47	82.39	74.66







GD-1R, PC-54: 300/360, 420, 540



GD-1R, PC-54: 300/360, 420, 540