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12. Data Report: Consolidation and Strength Characteristics of Sediments from ODP Site 1244, Hydrate Ridge, Cascadia Continental Margin[1]

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ABSTRACT

Eight whole-core samples from Ocean Drilling Program Site 1244, Hydrate Ridge, Cascadia continental margin, were provided to Massachusetts Institute of Technology (Cambridge, Massachusetts, USA) for geotechnical characterization. The samples were collected from depths ranging from 5 to 136 meters below seafloor (mbsf). Seven of the eight whole-core samples were located within the gas hydrate stability zone, whereas the eighth sample was located in the free gas zone. Atterberg limits testing showed that the average liquid limit of the soil is 81% and the average plastic limit is 38%, giving an average plasticity index of 43%. The liquid limit is sensitive to oven drying, shown by a drop in liquid limit to 64% when tests were performed on an oven-dried sample. Loss on ignition averages 5.45 wt%. Constant rate of strain consolidation (CRSC) tests were performed to obtain the compression characteristics of the soil, as well as to determine the stress history of the site. CRSC tests also provided hydraulic conductivity and coefficient of consolidation characteristics for these sediments. The compression ratio (C_c) ranges from 0.340 to 0.704 (average = 0.568). C_c is fairly constant to a depth of 79 mbsf, after which C_c decreases downhole. The recompression ratio (C_r) ranges from 0.035 to 0.064 (average = 0.052). C_r is constant throughout the depth range. In situ hydraulic conductivity varies between 1.5×10^{-7} and 3×10^{-8} cm/s and shows no trend with depth.

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Ko-consolidated undrained compression/extension (CKoUC/E) tests were also performed to determine the peak undrained shear strength, stress-strain curve, and friction angle. The normalized undrained strength ranges from 0.29 to 0.35. The friction angle ranges from 27 to 37. Because of the limited amount of soil, CRSC and CKoUC/E tests were also conducted on resedimented specimens.

INTRODUCTION

Gas hydrates are gas-water compounds formed under high pressures and low temperatures. Gas hydrates consist of a gas molecule, most commonly methane, enclosed within a crystal lattice of water. The resulting compound is an icelike solid that dissociates into gaseous form when exposed to low pressures and high temperatures. Conditions favorable to the formation of gas hydrates exist beneath the seafloor in a region called the gas hydrate stability zone (GHSZ). The free gas zone (FGZ), beneath the GHSZ, is where the geothermal gradient causes the temperature to exceed that required for gas hydrate stability.

Ocean Drilling Program (ODP) Leg 204, a 2-month-long cruise to study the biogeochemical factors controlling the distribution and concentration of gas hydrates in an accretionary margin—specifically, Hydrate Ridge, Cascadia continental margin—began in July 2002. This region is located off the coast of Oregon in the Pacific Northwest, USA. ODP Site 1244 is located in 890 m of water, ~3 km northeast of the southern summit of Hydrate Ridge (Tréhu, Bohrmann, Rack, Torres, et al., 2003). Three-dimensional seismic data have shown that the bottom-simulating reflector (BSR) occurs at a depth of ~125 meters below seafloor (mbsf) at this location (Tréhu, Bohrmann, Rack, Torres, et al., 2003). Eight whole-core samples totaling 8.5 ft obtained from Hydrate Ridge were brought to the Massachusetts Institute of Technology (MIT; Cambridge, Massachusetts, USA) geotechnical laboratory to perform experiments with the following goals in mind:

1. To determine the consolidation and strength properties of the soil, such as the compression and recompression indexes, hydraulic conductivity, undrained strength, friction angle, and modulus.
2. To determine the stress history profile at the site, keeping in mind that Hydrate Ridge is located in an accretionary margin setting and may be under passive loading.
3. To estimate the stress history and normalized soil engineering properties (SHANSEP) parameters for the site as a means of determining the strength profile.
4. To obtain the input parameters for a complex soil model, specifically, the MIT E-3 soil model developed by Whittle (1987) using the "best-fit" parameter method proposed by Korchaiyapruk (2000).

Consolidation properties were determined from results of constant rate of strain consolidation (CRSC) tests on both intact and resedimented samples. Strength properties were measured from the results of Ko-consolidated undrained (CKoU) triaxial tests.

The eight whole-core samples were obtained from Holes 1244B and 1244C at various depths. Table T1 gives a list of the samples provided by ODP to MIT for laboratory tests. Sections 204-1244B-1H-4, 3H-3, 4H-

T1. Whole-core sections, p. 68.

6, and 6H-8 and 204-1244C-8H-7, 9H-5, and 13H-3 were located within the GHSZ. The sample from Section 204-1244C-17H-3 was located below the BSR in the FGZ. Table T2 gives an overview of all the tests performed.

T2. Tests conducted on Hydrate Ridge soil, p. 69.

LABORATORY TESTING METHODOLOGY

All laboratory tests were conducted in accordance with the American Society for Testing and Materials (ASTM) standard for each test. In the cases where ASTM standards do not exist, the procedures followed were according to established MIT geotechnical laboratory protocols.

Radiography and Logging

All samples were X-rayed at MIT's radiography facility in order to assess the sample quality, presence of inclusions, general soil type, and variation in soil fabric. The X-ray procedure followed is similar to ASTM standard D4452 (ASTM International, 2003f). Radiography allows selection of the best quality material for testing. The tube X-rays are found in "Appendix A," p. 16. In addition to the X-rays, a tube log was provided for each tube ("Appendix B," p. 18). These logs contain the various tests performed on samples from each tube, as well as their location relative to the tube length.

Remolded and Resedimented Sample Preparation

Because of the limited amount of intact, good-quality soil available for testing, a number of tests were conducted on laboratory reconstituted specimens. Remolded specimens were prepared by first mixing together trimmings left over from sample preparation and highly disturbed soil that could not be used for intact sample testing. The soil was then allowed to air dry until the water content was ~40%. For consolidation tests, the soil was pressed into the consolidation ring, making sure that the soil was tightly packed into the ring. For strength tests, the soil was placed in a mold that had the same dimensions of a triaxial test specimen. The soil was slowly packed, making sure that it was placed tightly in the mold and there were no voids.

Test results showed that preparing the soil using this method does not produce results similar to those of tests on intact specimens, especially in undrained shearing. Because of this, a more complicated method for preparing remolded specimens with a higher water content was employed. This method, called resedimentation, is similar to the process used to prepare resedimented Boston blue clay (Germaine, 1982). The soil for resedimentation is prepared by mixing trimmings from previous tests and soil deemed unsuitable for intact sample testing in a blender with distilled water to produce a slurry. The slurry is thickened by placing it in a 100°C oven and removing it every hour for ~5 min to stir it and let it cool. This process of stirring and cooling the soil ensures the soil is only thickened and not fully dried. Once the slurry has thickened, it is ready for bench consolidation. For consolidation tests, the slurry is placed in the consolidation ring and tested immediately. For strength tests, the slurry is first scooped into a tall oedometer ring. The slurry must be slowly scooped into the ring to prevent the formation of air pockets and voids. The slurry is incrementally loaded until the vertical effective stress reaches ~50 kPa. A load:increment ratio of

1 was used, with each load being maintained for at least 24 hr to ensure the completion of primary consolidation. Once 50 kPa is achieved, the load is reduced until an overconsolidation ratio (OCR) of 4 is reached. The sample is then extruded and trimmed as an undisturbed sample. The results show that resedimented specimens exhibit similar behavior to intact specimens, especially in undrained shearing.

Index Tests

Only one Atterberg limit test was performed on each tube. Hence, in order to obtain an average liquid and plastic limit for each tube, small amounts of soil from various locations within the tube were mixed together and used for each Atterberg limit test. The liquid limit was obtained by placing the soil in a casagrande cup, grooving the soil with an ASTM groove tool, and counting the number of blows necessary to close the groove by 0.5 in. The water content at 25 blows is the liquid limit. The plastic limit is the water content of a soil when rolled until crumbling occurs at a diameter of $^1/_8$ in. The Atterberg limits tests were conducted in accordance with ASTM D4318 (ASTM International, 2003b).

Water content is measured by taking the difference in the weight of a soil before and after oven drying and dividing this difference by the oven-dried weight. In the consolidation and strength tests, two water contents are measured: w_c and w_n. W_c refers to the water content measured from the leftover trimmings during sample preparation. W_n refers to the water content of the test specimen itself.

Loss on ignition is performed by placing a small amount (~5 g) of oven-dried sample in a muffle furnace at 440°C for 24 hr. The change in weight divided by the original weight gives the amount of loss on ignition. The test was performed in accordance with ASTM D2974 (ASTM International, 2003e).

Particle size analysis is used to determine the distribution of particle size for the soil. For the fine-grained particles, the particle size distribution is determined by performing the hydrometer test described in ASTM D422 (ASTM International, 2003d).

Mineralogy

Soil mineralogy can be identified using X-ray diffraction (XRD). The MIT XRD facility uses a Rigaku Rotaflex 180-mm diffractometer with a graphite-diffracted beam monochromator using CuKα radiation (λ = 1.5418 Å). The diffractometer is normally rotated between 4° and 56°.

Initial random powder XRD tests showed the presence of calcium carbonate. In order to eliminate the effect of calcium carbonate on the results of the tests, calcite-treated random powder samples were also prepared. The calcite was removed by HCl digestion in accordance with ASTM D4373 (ASTM International, 2004b).

XRD results show that the samples contain a significant amount of nonclay particles. As such, random powder XRD was performed on the clay-size fraction only. The clay-size fraction was separated by sedimentation in a volumetric flask. Sedimentation was performed by mixing the soil into a slurry and placing it in a flask filled with water at pH 9. The soil was then allowed to sediment in the flask for 48 hr. The sedimentation time was determined from the settlement time of the clay-size particles during the particle size analysis test.

Consolidation Testing

The MIT geotechnical laboratory has developed a standard method for performing CRSC tests. In addition, ASTM D4186 (ASTM International, 2003c) was used as a guideline in conducting CRSC tests.

The CRSC test can be divided into three stages. The first stage of the test involves sample preparation. This is performed by placing the sample in a trimming jig that lowers the consolidation ring into the soil. Excess soil is slowly trimmed from around the perimeter, and the ring is pushed into the soil in small increments. After the sample is trimmed into the CRSC ring, it is carefully placed in the CRSC cell. The CRSC cell is then filled with salt water and tightly sealed with the piston locked in place.

The second stage of the test is the backpressure saturation stage. The purpose of backpressure saturation is to ensure all the air bubbles go into solution. In this stage, a small effective stress is applied such that there is minimal to no change in axial strain. For the Hydrate Ridge soil, the applied effective stress ranges from 0.05 to 0.4 kgf/cm^2. Then, while maintaining the same effective stress, the axial stress and cell pressure are increased in increments of 1 kgf/cm^2 until the cell pressure reaches 4 kgf/cm^2.

The third stage of the test is the consolidation itself. All of the tests were run at a strain rate of 0.5%/hr. The strain rate was selected such that the maximum value of the pore pressure ratio does not exceed 4%. In addition, an unload–reload cycle to an OCR of 10 was introduced in all tests. For the standard- and small-diameter samples, the maximum vertical effective stress applied ranged from 20 to 25 and 80 kgf/cm^2, respectively. Prior to the unload–reload cycle and after the maximum vertical effective stress was reached, the applied stress was held constant to allow the excess pore pressure to dissipate and some secondary compression to set in. The hold stress portion was held for 6 hr for the standard-diameter sample and at least 12 hr for the small-diameter sample.

Undrained Strength Testing

The MIT geotechnical laboratory has developed a standard method for performing CKoU tests. Furthermore, ASTM D4767 (ASTM International, 2003a) was used as a reference for the triaxial testing. This test can be divided into four stages. The first stage of the test involves sample preparation by trimming the specimen in a trimming jig using a wire saw. After the sample is trimmed to the size of a triaxial specimen, it is placed on the triaxial base with a nylon filter fabric and porous stone placed on both ends. No side drains were used during the tests. Two thin impermeable membranes are rolled over the soil and sealed with three O-rings each at the top cap and bottom base. The cell is then filled with silicon oil and tightly sealed. Distilled water was used as the fluid in the drainage system.

The second stage of the test is the backpressure saturation stage. The purpose of backpressure saturation is to ensure the soil is fully saturated by applying enough pressure to dissolve all the remaining air bubbles in the soil. In this stage, a small effective stress is applied such that there is minimal to no change in axial strain. For the Hydrate Ridge soil, the applied effective stress ranges from 0.1 to 0.2 kgf/cm^2. Then, while maintaining the same effective stress, the axial stress and cell pressure are increased by an increment of 0.5 kgf/cm^2. The axial stress and cell pressure are increased incrementally until the measured B-value is 1.00

+ 0.02, which indicates complete saturation, or until the backpressure reaches 3 kgf/cm².

The third stage of the test is the Ko-consolidation stage. In Ko-consolidation, the sample is consolidated one-dimensionally (i.e., no radial strain). The MIT geotechnical laboratory employs the SHANSEP testing technique (Ladd, 1991). After consolidation, the applied stress was held by keeping the vertical, cell, and pore pressures constant for 24 hr. The hold stress portion is necessary to allow the excess pore pressure to dissipate and allow some secondary compression to set in.

The final stage of the test is the undrained shearing stage. Once the specimen has undergone 24 hr of hold stress, a leak check is performed by closing the drainage valves for 30 min. During this time, the backpressure should remain constant. After the leak check, the specimen is sheared with the drainage lines closed. The specimen is sheared at 0.5%/hr until a distinct failure plane has developed or 10% strain has been reached.

RESULTS

The experiments performed on each section are listed in Table T2. All of the variables are defined in Table T3. Included in this report are the data collected from the experiment program. For interpretation of these results, refer to Tan (2004).

T3. Nomenclature, p. 70.

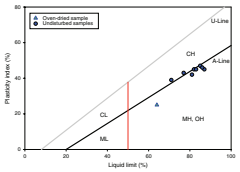
Atterberg Limits and Loss on Ignition

Atterberg limits were performed on eight undisturbed samples and one oven-dried sample (Table T2). The results of the tests can be found in Table T4. Interestingly, performing Atterberg limits on an oven-dried sample significantly decreases the liquid limit.

T4. Atterberg limits, organic matter content, and calcite content tests, p. 71.

Figure F1 shows the results of the Atterberg limits tests plotted on a plasticity chart in order to determine the soil classification based on the Unified Soil Classification System ASTM D2487 (ASTM International, 2004a). From this chart, a cohesive soil has high plasticity if it has a liquid limit >50% and low plasticity if the liquid limit is <50%. Furthermore, a soil is predominantly clay if it plots above the A-line and mostly silt if it plots below the A-line. Based on this chart, the Hydrate Ridge soil classifies as a high-plasticity silt (MH) or high-plasticity organic soil (OH). In addition, analysis reveals that the soil classifies as MH and not OH because the ratio of the oven-dried liquid limit to the undisturbed liquid limit is >75%. In general, however, there is little variation in the Atterberg limits, suggesting the soil consists of the same basic material.

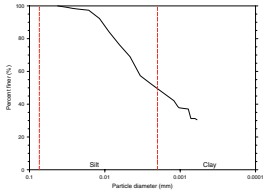
F1. Plasticity chart, p. 19.



Loss on ignition was performed on eight samples (Table T2). Table T4 gives the results and shows that loss on ignition is constant with depth and relatively large.

Particle size distribution was performed on a sample from Section 204-1244C-13H-3 (Table T2). Figure F2 gives the particle size distribution curve. The distribution curve shows that the soil contains 50% clay-size particles. Together with the plasticity index, the resulting activity is close to 1. This result is typical of the clay mineral illite.

F2. Particle size distribution curve, p. 20.



Mineralogy

The specimens prepared using random powder preparation are shown in Table T2. The X-ray diffractometer was rotated between 6° and 56° 2θ. Tables T5, T6, and T7 and Figures F3, F4, and F5 give XRD results of the three random powder samples. Note that the intensity is plotted on a log scale.

Table T2 gives a list of the specimens used in calcite-treated random powder preparation. Table T4 gives the calcium carbonate content of the soil. Tables T8, T9, T10, T11, T12, and T13 and Figures F6, F7, and F8 show the results of calcite-treated random powder testing. The results of the two random powder samples show a significant amount of nonclay particles.

In order to accurately identify the clay-size particles, XRD was performed on random powder samples containing only the clay-size fraction of the soil. Table T2 shows the samples that were tested using this preparation. Tables T14, T15, and T16 and Figures F9, F10, and F11 show XRD results on the clay-size fraction of random powder samples.

Consolidation Results

Table T17 gives a summary of the details and conditions of each CRSC test. The first section of the table gives the water content (w_c), plastic limit (w_p), and liquid limit (w_l) for each tube, as discussed in "Index Tests," p. 4. The water content is taken from the soil trimmings. Also indicated is the number of observations (#obs) and standard deviation (SD) for each water content measurement. The Atterberg limits are discussed in "Index Tests," p. 4, and are an average for each tube.

The next section of the table gives the specimen data such as the natural water content (w_n), plasticity index (I_p), total density (ρ_t), initial void ratio (e_i), initial saturation (S_i), and specific gravity (G_s). The natural water content and specific gravity were taken from Tréhu, Bohrmann, Rack, Torres, et al. (2003). The plasticity index describes the range over which the soil behaves plastically and is defined as the difference between the liquid and plastic limit.

The third section of the table gives the test conditions such as the backpressure (u_b) and the strain rate ($\delta\varepsilon/\delta t$). The backpressure gives the pressure at which the specimen is saturated.

The last section of the table gives consolidation properties such as the compression index, recompression index, and in situ hydraulic conductivity. The compression index refers to the slope of the normally consolidated portion of the compression curve while in e-log (σ'v) space. The compression index (C_c) ranges from 0.340 to 0.704 (average = 0.568). C_c is fairly constant to a depth of 79 mbsf, after which C_c decreases downhole. The recompression index refers to the slope of the unload–reload portion of the curve while in e-log (σ'v) space. The recompression index (C_r) ranges from 0.035 to 0.064 (average = 0.052). C_r is constant throughout the depth. It must be noted that the recompression index varies with the amount of unloading that occurs. As such, the quoted recompression indexes are for unloading to an OCR of 10. The in situ hydraulic conductivity is obtained by extrapolating the hydraulic conductivity to the in situ void ratio. The in situ hydraulic conductivity varies between 1.5×10^{-7} and 3×10^{-8} cm/s with no trend with depth.

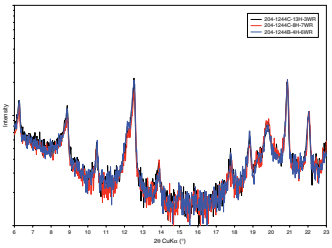
Figures F12, F13, F14, F15, F16, F17, F18, F19, F20, F21, F22, F23, F24, F25, F26, F27, F28, and F29 show the consolidation curves in both

T5. XRD random powder sample, Section 204-1244B-4H-6, p. 72.

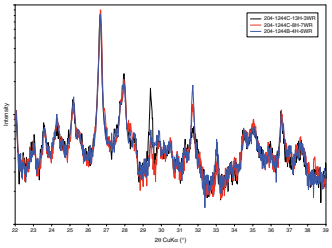
T6. XRD random powder sample, Section 204-1244C-8H-7, p. 73.

T7. XRD random powder sample, Section 204-1244C-13H-3, p. 74.

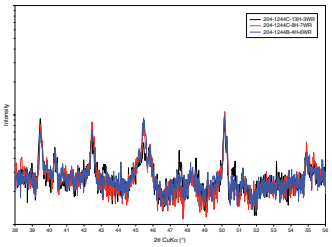
F3. XRD on random powder sample 2 = 6° to 23°, p. 21.



F4. XRD on random powder sample 2 = 22° to 39°, p. 22.



F5. XRD on random powder sample 2 = 38° to 56°, p. 23.



T8. Calcite-treated XRD random powder sample, Section 204-1244B-3H-3, p. 75.

T9. Calcite-treated XRD random powder sample, Section 204-1244B-4H-6, p. 76.

T10. Calcite-treated XRD random powder sample, Section 204-1244B-6H-8, p. 77.

e-log (σ′v) and ε-log (σ′v), normalized excess pore pressure, coefficient of consolidation (c_v), strain energy, and hydraulic conductivity (k) for each CRSC test. The CRSC data can be found in tabular form in Tables **T18, T19, T20, T21, T22, T23, T24, T25, T26, T27, T28, T29, T30, T31, T32, T33, T34,** and **T35.** The first column of the table gives the time each measurement was made. The second column gives the strain (ε) in percent. The third, fourth, and fifth columns give the vertical stress (σ v), pore pressure (u), and cell pressure (σ cell), respectively. The sixth column gives the effective stress (σ′v), which is defined as

$$\sigma'_v = \sigma_v - 2/3(u - \sigma_{cell}). \quad (1)$$

The seventh column gives the void ratio (e). The eighth column gives the excess pore pressure, which is defined as

$$u - \sigma_{cell}. \quad (2)$$

The ninth and tenth columns give the hydraulic conductivity (k) and coefficient of consolidation (c_v), respectively. The following are the equations used to define these parameters:

$$k = (\varepsilon \times H^2 \times \gamma)/(2 \times \Delta u_b), \text{ and} \quad (3)$$

$$c_v = (H^2/2 \times \Delta u_b)\ (\Delta\sigma_v/\Delta t). \quad (4)$$

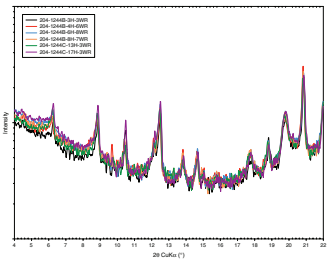
The eleventh and twelfth columns give the normalized excess pore pressure ($\Delta U/\sigma_v$) and the work, which is used for the strain energy calculations. The following equation is used to measure the work:

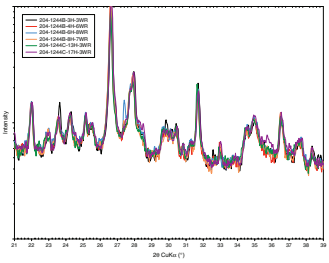
$$\text{work} = [(\sigma_i + \sigma_{i-1})/2] \times \ln[(1 - \varepsilon_{i-1})/(1 - \varepsilon_i)]. \quad (5)$$

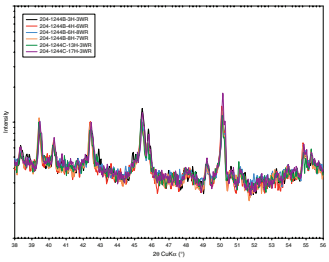
It must be noted that all stresses are measured in ksc (kgf/cm²). The conversion of ksc to SI units is 1 kPa = 98.07 kPa.

Strength Results

Table **T36** gives the details and conditions of each CKoU triaxial for the consolidation stage of the test. The first and second sections refer to the same parameters in the CRSC results. The third section gives the initial effective stress (σ_i) and backpressure (u_b). In this section, ε_a refers to the axial strain at the end of saturation. ε_{vol} is the water inflow necessary to saturate the soil and system. Included in this section is the B-value, which is used to test the degree of saturation of the sample. A sample with a B-value of 100 ± 2 means that it has been fully saturated after the backpressure saturation stage. The fourth section of this table gives the general consolidation results. This section gives the preconsolidation pressure (σ'_p) using the strain energy method, the strain rate ($\delta\varepsilon/\delta t$), and the compression index (C_c). The fifth section gives the consolidation properties at the maximum stress condition. ε_a and ε_{vol} give the axial and volumetric strain at this condition, whereas σ'_{vm} gives the maximum vertical effective stress. t_s gives the length of time the stress was held constant, and K_c gives the maximum lateral stress ratio (σ'_h/σ'_v). The sixth section gives the consolidation properties at the preshear condition. For normally consolidated specimens, the maximum stress condition is the preshear condition; hence, these consolidation proper-







ties are the same. For overconsolidated specimens, the vertical effective stress is reduced, causing the maximum stress condition to differ from the preshear condition; hence, certain consolidation properties will be different. ε_a and ε_{vol} give the axial and volumetric strain at the end of unloading, whereas σ'_{vc} gives the consolidation vertical effective stress. t_s gives the length of time the stress was held constant, and K_c gives the lateral stress ratio (σ'_h/σ'_v) after unloading. OCR indicates the overconsolidation ratio at the end of unloading.

Table **T37** gives the details, test conditions, and strength properties for the undrained shearing stage of each test. The strength properties are given for both the case when maximum shear occurs and when either maximum obliquity or the end of shearing is reached. Obliquity refers to the ratio of the normalized shear stress to the normalized mean effective stress (q/p'). The normalized undrained strength ranges from 0.29 to 0.35, whereas the friction angle ranges from 27 to 37 at peak strength.

Incidentally, maximum obliquity also occurs when the friction angle is the greatest. It must be noted that shearing in extension was performed after shearing in compression for tests on Samples 204-1244B-1H-4, 138–148 cm, 4H-6, 125–135 cm, 204-1244C-9H-5, 115–125 cm, and the resedimented sample (TX 644).

Figures **F30, F31, F32, F33, F34, F35, F36, F37, F38, F39, F40, F41, F42, F43, F44, F45, F46, F47, F48,** and **F49** show the consolidation and undrained shearing results for each triaxial test. The odd-numbered figures show the consolidation results including the consolidation curve in e-log (σ'v) and ε-log (σ'v) space, lateral stress ratio, strain energy, and stress path for each test. The even-numbered figures show the undrained shearing results including the normalized shear stress vs. strain, normalized excess pore pressure and shear-induced pore pressure, normalized secant modulus, friction angle, and normalized stress path for each test. The results of the consolidation and undrained shearing portions of the triaxial tests can be found in Tables **T38, T39, T40, T41, T42, T43, T44, T45, T46, T47, T48, T49, T50, T51, T52, T53, T54, T55, T56,** and **T57.** The first column of the table gives the time each measurement was made. The second, seventh, and eighth columns give the axial strain (ε_a), volumetric strain (ε_{vol}), and void ratio (e), respectively. The third and fourth columns give the vertical effective stress (σ'_v) and the horizontal effective stress (σ'_h), respectively. The fifth and sixth columns give the mean effective stress (p') and shear stress (q), respectively. The following equations are used to define the mean effective stress and shear stress:

$$p' = (\sigma'_v + \sigma'_h)/2, \text{ and} \quad (6)$$

$$q = (\sigma_v - \sigma_h)/2. \quad (7)$$

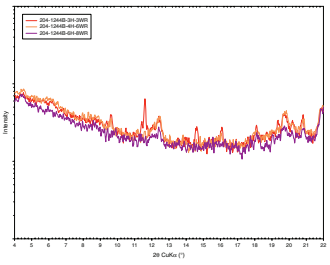
The ninth column gives the lateral stress ratio, which is defined as

$$K = \sigma'_h/\sigma'_v. \quad (8)$$

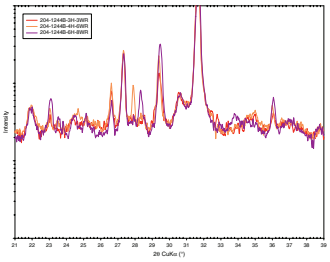
The tenth column gives the work, which is used for the strain energy method of calculating the preconsolidation pressure. Equation 5 gives the equation used to calculate work. The eleventh column gives the area of the specimen at midheight. The twelfth column gives the applied backpressure (u_b). The thirteenth, fourteenth, and fifteenth col-

T16. Clay-fraction XRD random powder sample, Section 204-1244C-13H-3, p. 83.

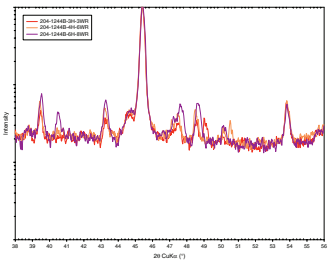
F9. XRD on clay-fraction random powder sample 2 = 4° to 22°, p. 27.



F10. XRD on clay-fraction random powder sample 2 = 21° to 39°, p. 28.

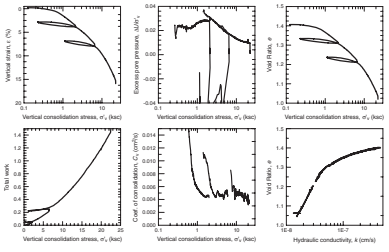


F11. XRD on clay-fraction random powder sample 2 = 38° to 56°, p. 29.



T17. CRSC test conditions and consolidation properties, p. 84.

F12. CRS 491 consolidation data, p. 30.



umns give the axial membrane correction, radial membrane correction, and axial drainage correction, respectively. Similar to the CRSC tests, all stresses are measured in ksc (kgf/cm²). The conversion of ksc to SI units is 1 kPa = 98.07 kPa.

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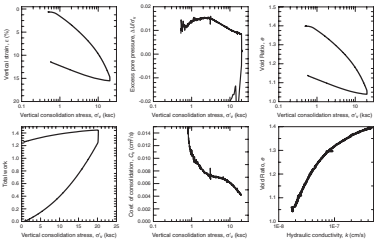
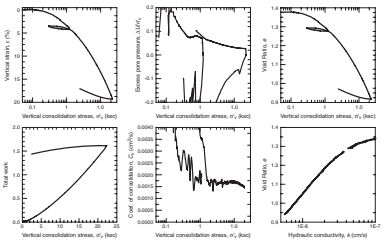
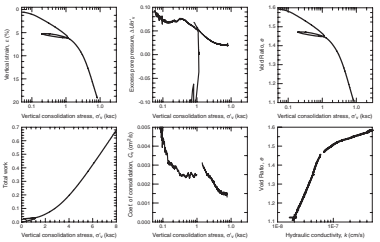
F13. CRS 493 consolidation data, p. 31.



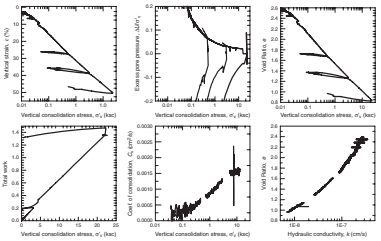
F14. CRS 495 consolidation data, p. 32.



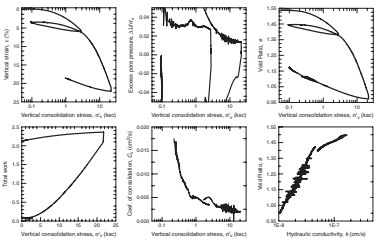
F15. CRS 497 consolidation data, p. 33.



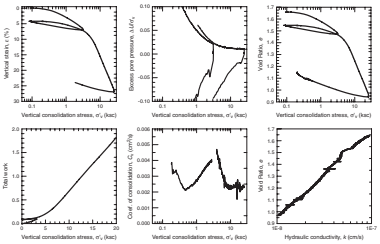
F16. CRS 499 consolidation data, p. 34.



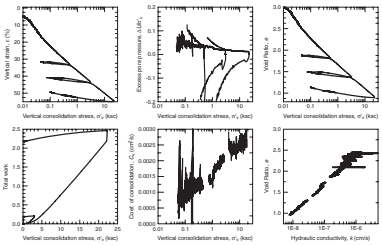
F17. CRS 504 consolidation data, p. 35.



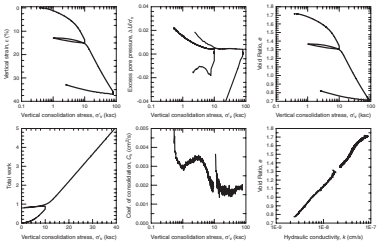
F18. CRS 508 consolidation data, p. 36.



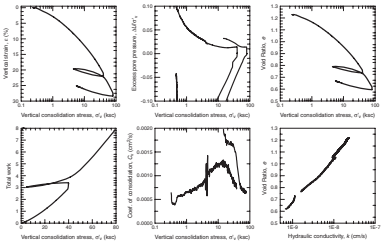
F19. CRS 511 consolidation data, p. 37.



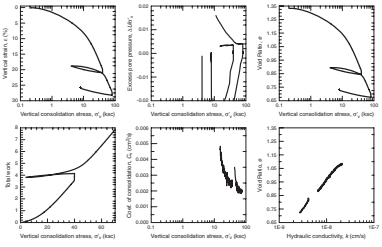
F20. CRS 563 consolidation data, p. 38.



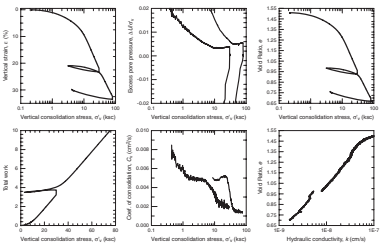
F21. CRS 564 consolidation data, p. 39.



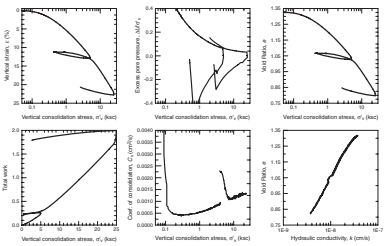
F22. CRS 567 consolidation data, p. 40.



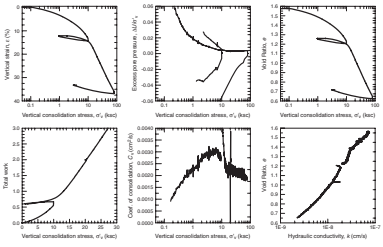
F23. CRS 569 consolidation data, p. 41.



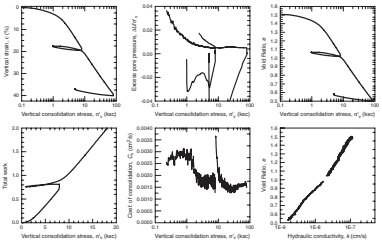
F24. CRS 577 consolidation data, p. 42.



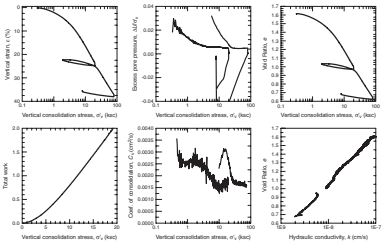
F25. CRS 578 consolidation data, p. 43.



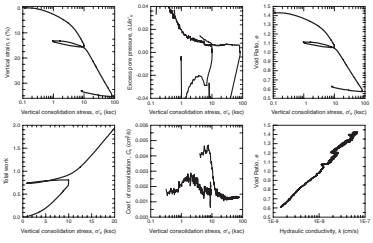
F26. CRS 580 consolidation data, p. 44.



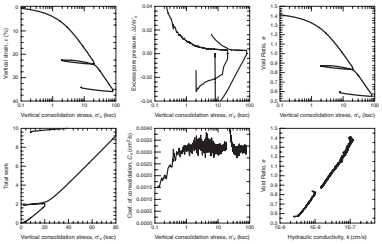
F27. CRS 584 consolidation data, p. 45.



F28. CRS 585 consolidation data, p. 46.



F29. CRS 608 consolidation data, p. 47.



T18. CRS 491 consolidation data, Sample 204-1244C-13H-3, 144–147 cm, p. 85.

T19. CRS 493 consolidation data, Sample 204-1244C-13H-3, 139–142 cm, p. 86.

T20. CRS 495 consolidation data, Sample 204-1244C-17H-3, 97–100 cm, p. 87.

T21. CRS 497 consolidation data, Sample 204-1244B-3H-3, 145–148 cm, p. 88.

T22. CRS 499 consolidation data, resedimented sample, p. 89.

T23. CRS 504 consolidation data, Sample 204-1244C-8H-7, 71–74 cm, p. 90.

T24. CRS 508 consolidation data, Sample 204-1244B-4H-6, 120–125 cm, p. 91.

T25. CRS 511 consolidation data, resedimented Sample 204-1244B-6H-8, 24–29 cm, p. 92.

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APPENDIX A

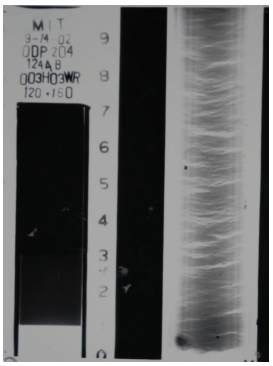
Tube Radiographs

This appendix contains positive prints of the X-ray negatives for each tube sample. Each print contains the date the tube was X-rayed, as well as the name of the tube. The first print gives the X-ray for the first 9 in (markers 0–9) of the tube, and the second print gives the X-ray for the next 3 in, with a 4-in overlap (markers 5–C). See Figures **AF1, AF2, AF3, AF4, AF5, AF6, AF7, AF8, AF9, AF10, AF11, AF12, AF13, AF14, AF15,** and **AF16.**

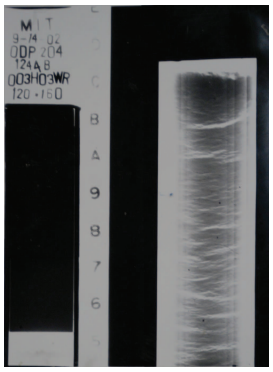
AF1. Tube radiograph, Sample 204-1244B-1H-4WR, 120–150 cm, print 1, p. 125.

AF2. Tube radiograph, Sample 204-1244B-1H-4WR, 120–150 cm, print 2, p. 126.

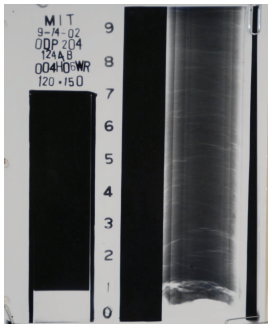
AF3. Tube radiograph, Sample 204-1244B-3H-3WR, 120–160 cm, print 1, p. 127.



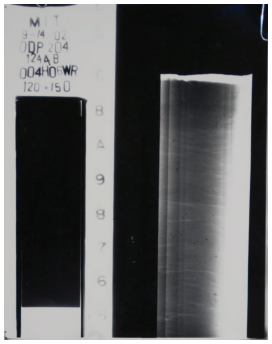
AF4. Tube radiograph, Sample 204-1244B-3H-3WR, 120–160 cm, print 2, p. 128.



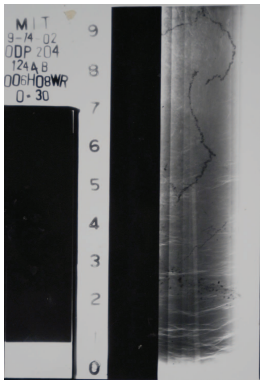
AF5. Tube radiograph, Sample 204-1244B-4H-6WR, 120–150 cm, print 1, p. 129.



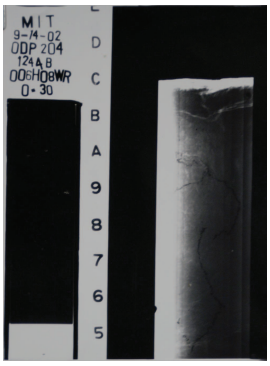
AF6. Tube radiograph, Sample 204-1244B-4H-6WR, 120–150 cm, print 2, p. 130.



AF7. Tube radiograph, Sample 204-1244B-6H-8WR, 0–30 cm, print 1, p. 131.

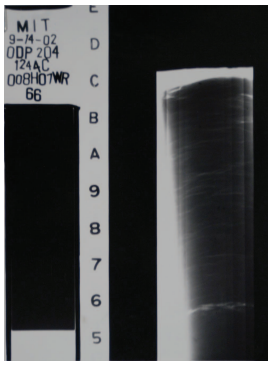


AF8. Tube radiograph, Sample 204-1244B-6H-8WR, 0–30 cm, print 2, p. 132.

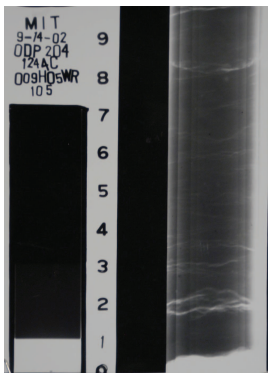


AF9. Tube radiograph, Sample 204-1244C-8H-7WR, 66 cm, print 1, p. 133.

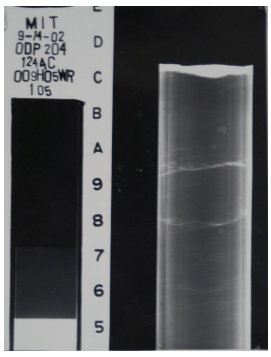
AF10. Tube radiograph, Sample 204-1244C-8H-7WR, 66 cm, print 2, p. 134.



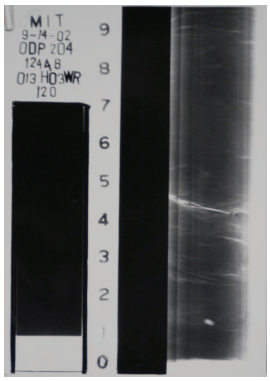
AF11. Tube radiograph, Sample 204-1244C-9H-5WR, 105 cm, print 1, p. 135.



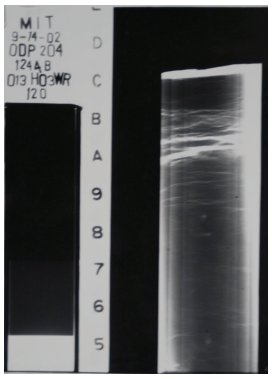
AF12. Tube radiograph, Sample 204-1244C-9H-5WR, 105 cm, print 2, p. 136.



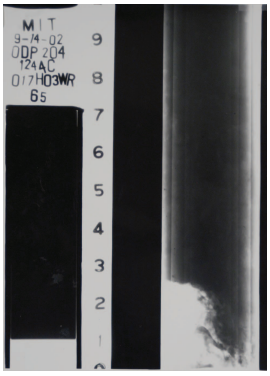
AF13. Tube radiograph, Sample 204-1244B-13H-3WR, 120 cm, print 1, p. 137.



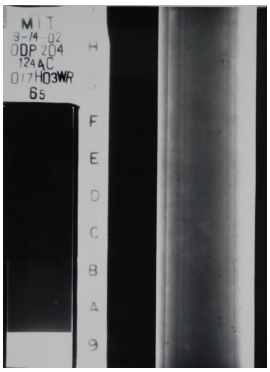
AF14. Tube radiograph, Sample 204-1244B-13H-3WR, 120 cm, print 2, p. 138.



AF15. Tube radiograph, Sample 204-1244C-17H-3WR, 65 cm, print 1, p. 139.



AF16. Tube radiograph, Sample 204-1244C-17H-3WR, 65 cm, print 2, p. 140.

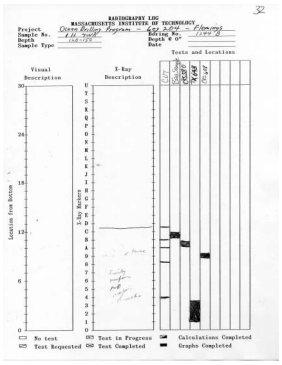


APPENDIX B

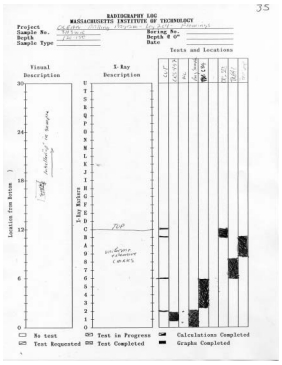
Radiography Logs

This appendix contains the radiography logs for each sampling tube. The top of the log contains the name of each tube, as well as the location of the top portion of the tube within the coring section. The right-hand side of each log marks the specimen locations of the consolidation and triaxial tests performed on each tube. The left-hand side shows a brief description of the soil from the tube X-rays. See Figures **AF17, AF18, AF19, AF20, AF21, AF22, AF23,** and **AF24.**

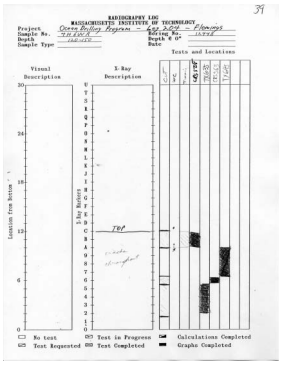
AF17. Radiography log, Sample 204-1244B-1H-4WR, 120–150 cm, p. 141.



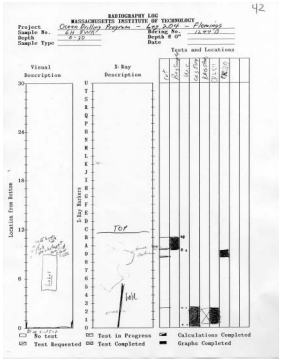
AF18. Radiography log, Sample 204-1244B-3H-3WR, 120–150 cm, p. 142.



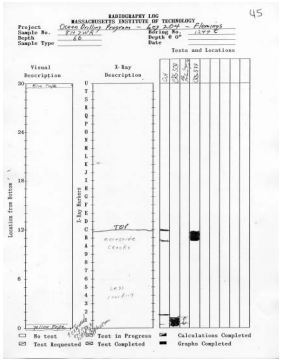
AF19. Radiography log, Sample 204-1244B-4H-6WR, 120–150 cm, p. 143.



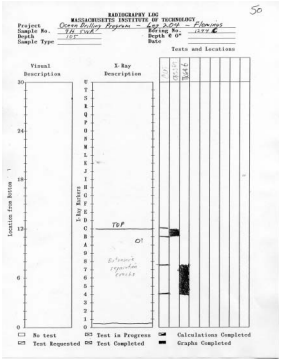
AF20. Radiography log, Sample 204-1244B-6H-8WR, 0–30 cm, p. 144.



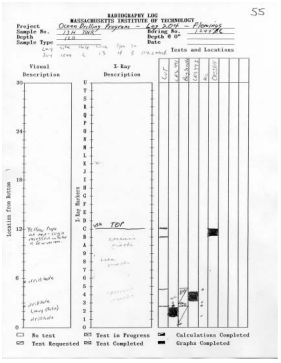
AF21. Radiography log, Sample 204-1244C-8H-7WR, 66 cm, p. 145.



AF22. Radiography log, Sample 204-1244C-9H-5WR, 105 cm, p. 146.



AF23. Radiography log, Sample 204-1244C-13H-3WR, 120 cm, p. 147.



AF24. Radiography log, Sample 204-1244C-17H-3WR, 65 cm, p. 148.

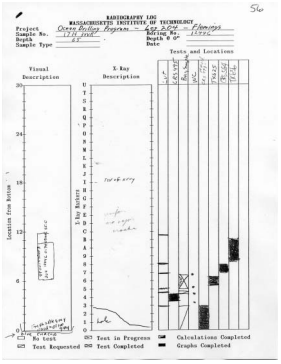


Figure F1. Plasticity chart showing results of Atterberg limits on undisturbed and oven-dried samples (data from Table T4, p. 71). CL = low-plasticity clay, CH = high-plasticity clay, ML = low-plasticity silt, MH = high-plasticity silt, OH = high-plasticity organic soil.

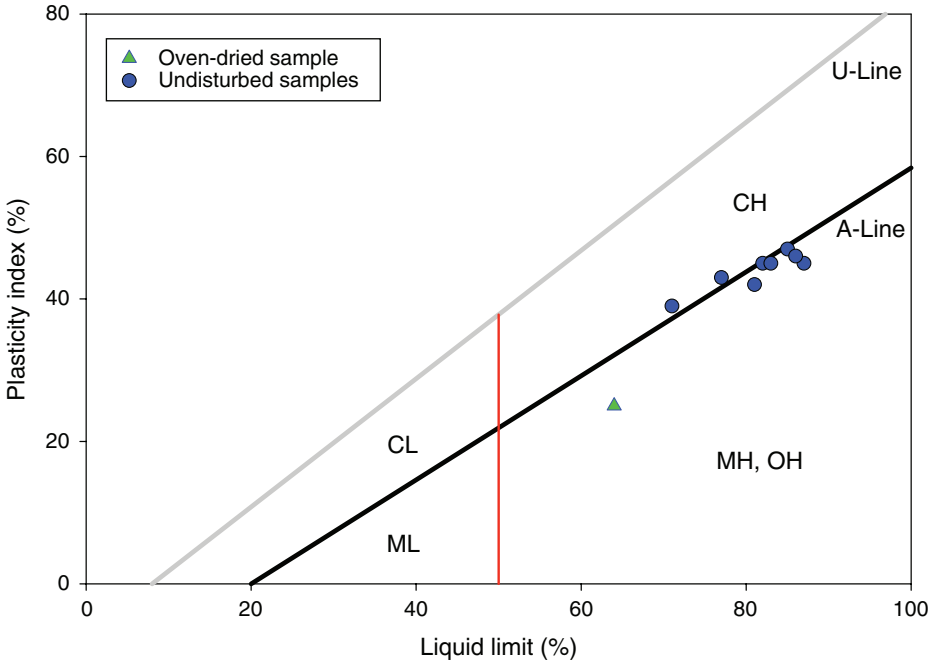


Figure F2. Particle size distribution curve for Hydrate Ridge soil (Section 204-1244C-13H-3).

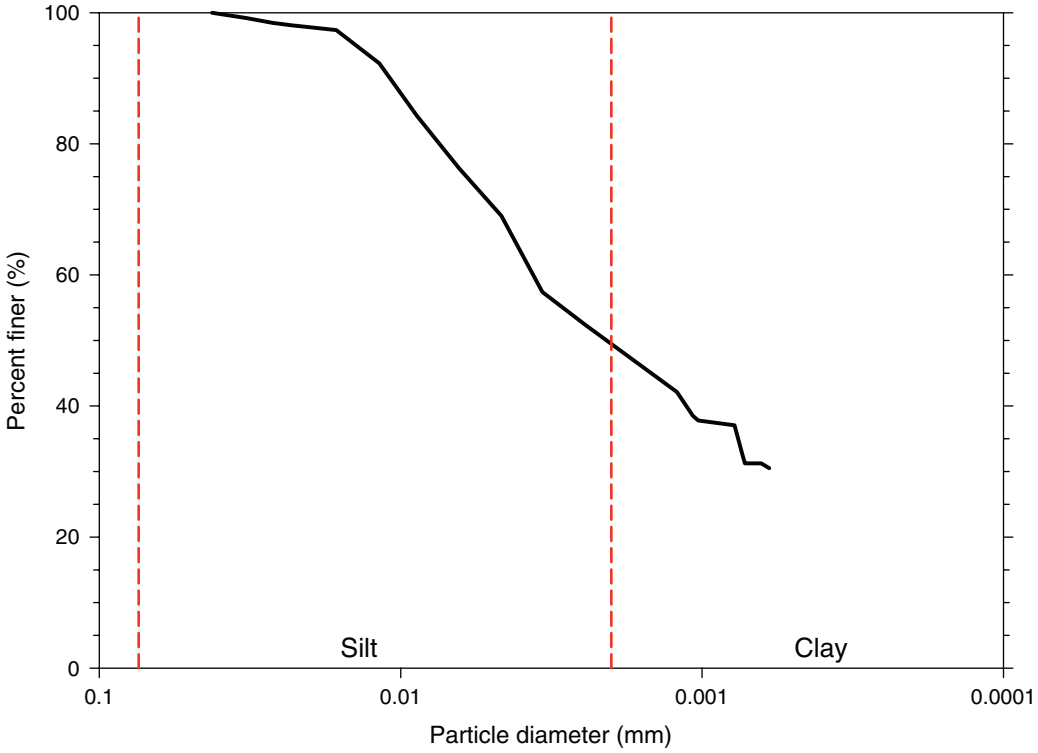


Figure F3. X-ray diffraction on random powder sample 2 = 6° to 23°2θ (data from Tables T5, p. 72, T6, p. 73, and T7, p. 74).

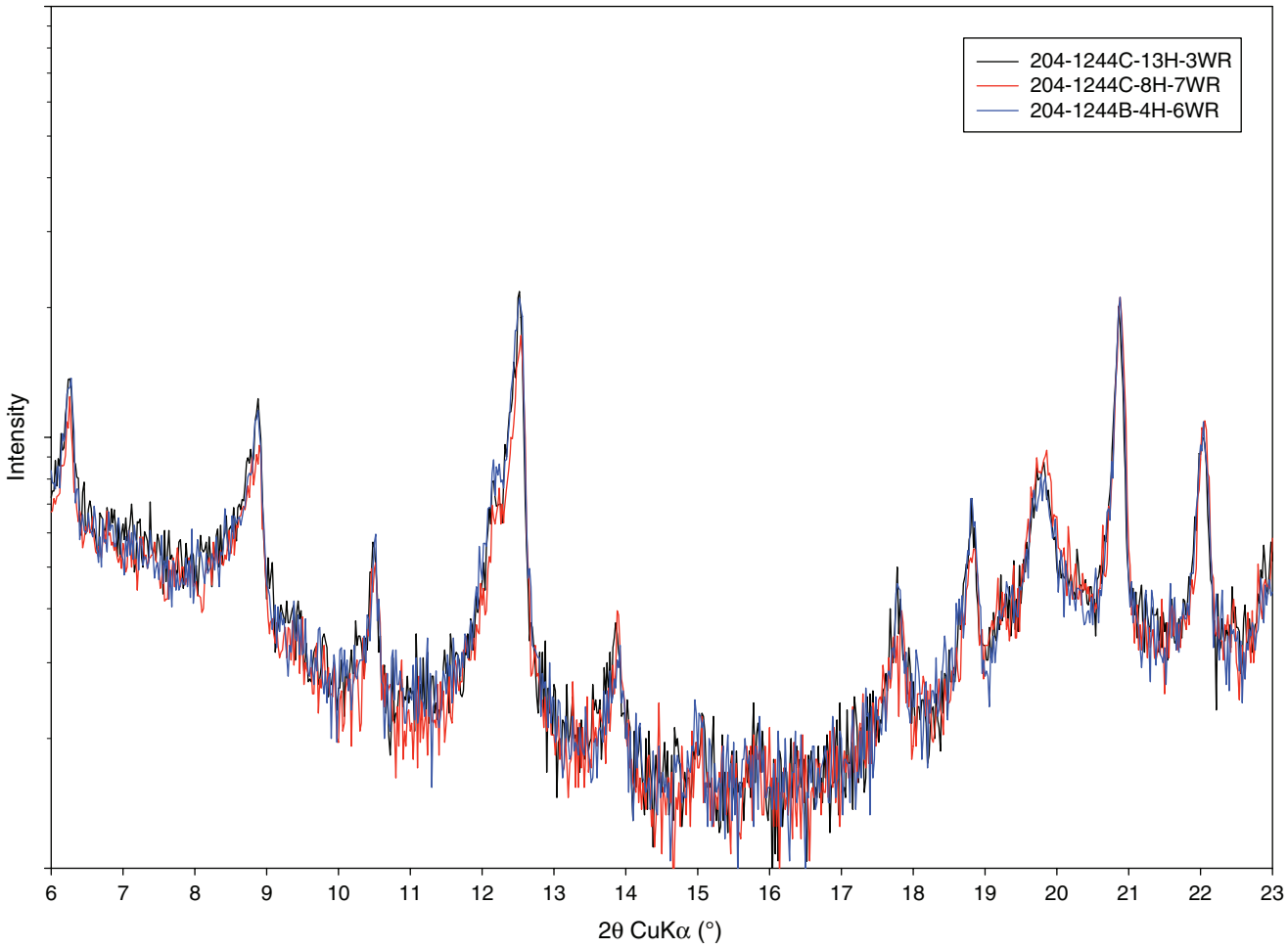


Figure F4. X-ray diffraction on random powder sample 2 = 22° to 39°2θ (data from Tables T5, p. 72, T6, p. 73, and T7, p. 74).

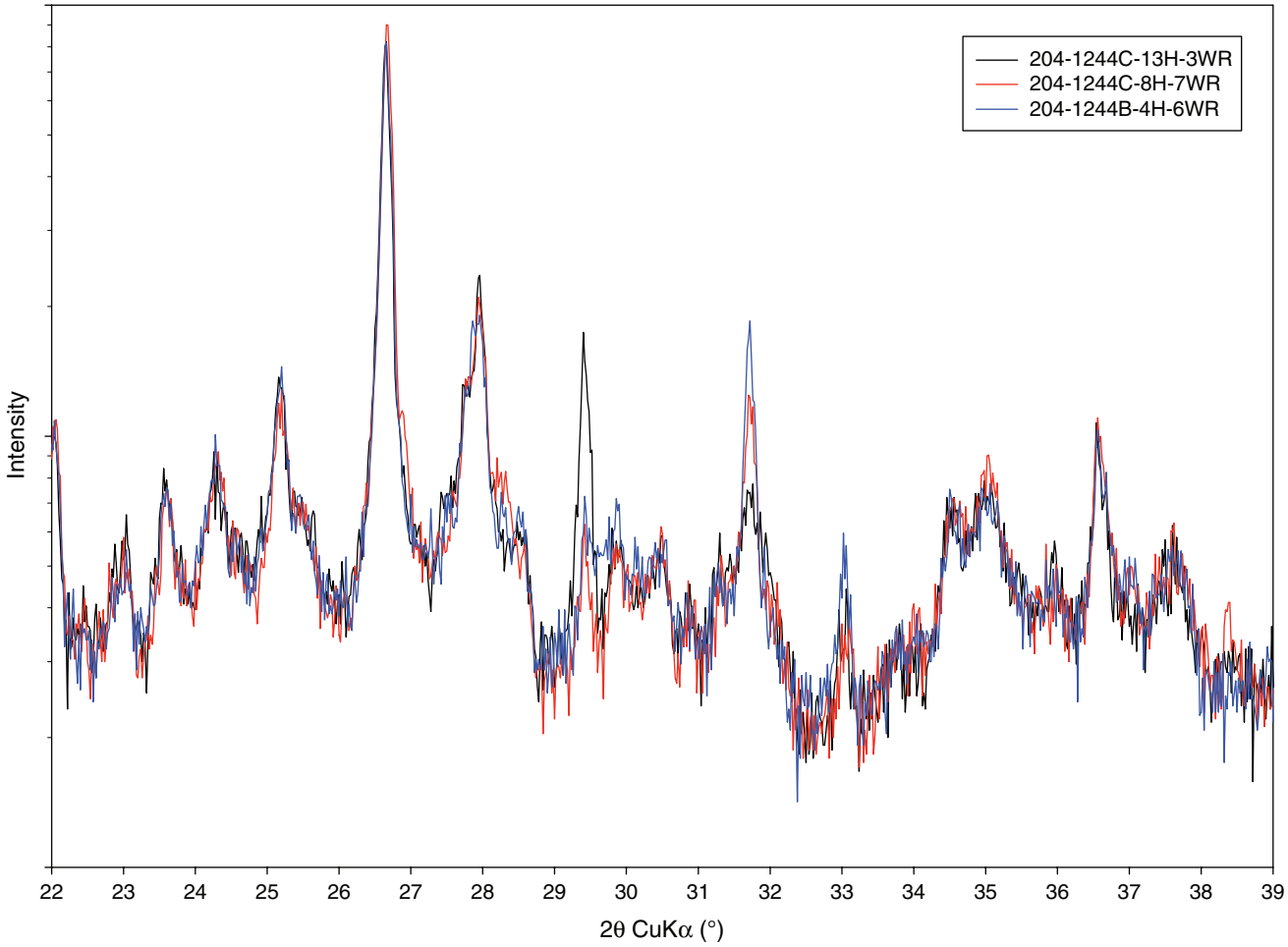


Figure F5. X-ray diffraction on random powder sample 2 = 38° to 56°2θ (data from Tables T5, p. 72, T6, p. 73, and T7, p. 74).

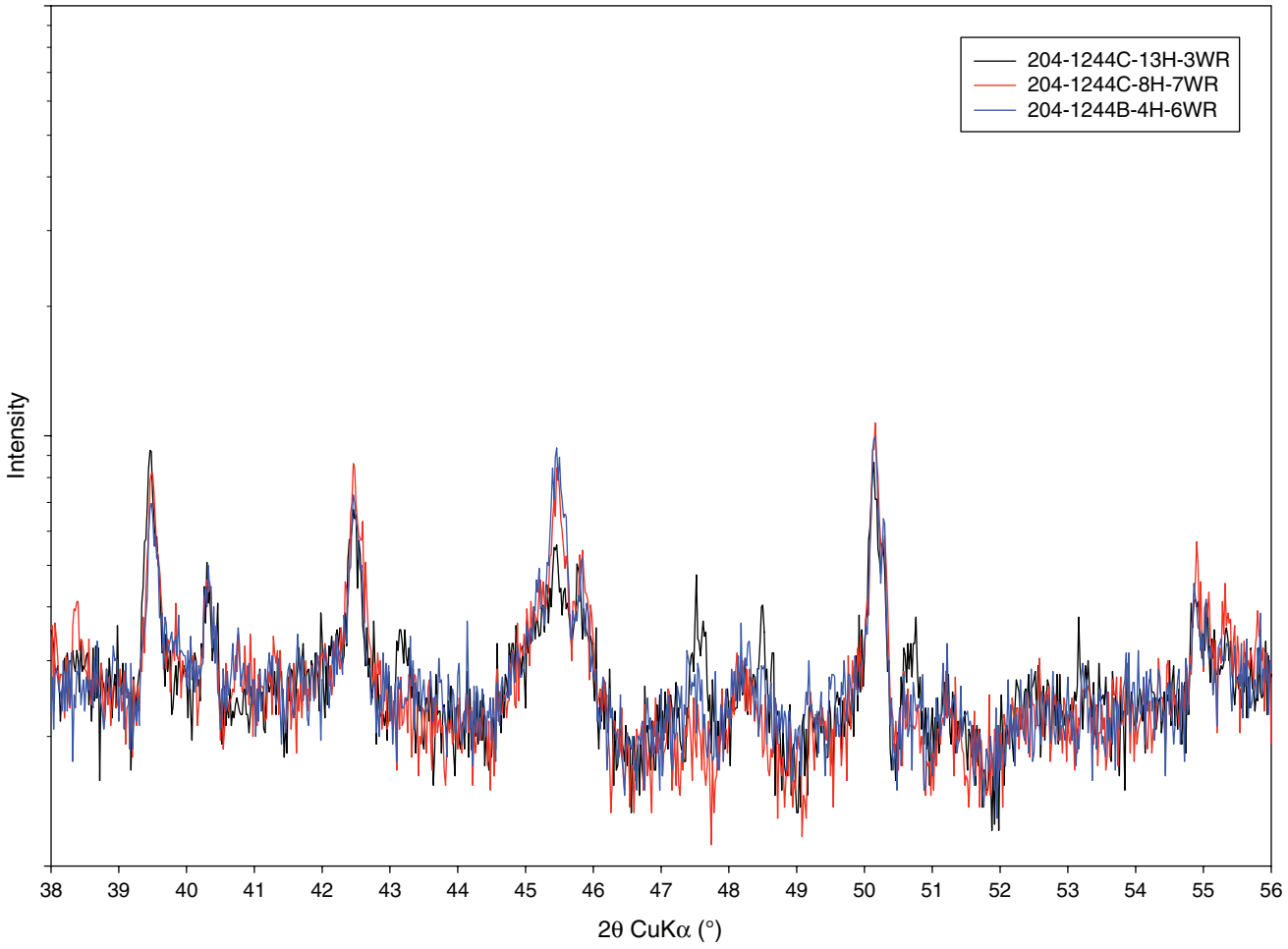


Figure F6. X-ray diffraction on calcite-treated random powder sample 2 = 4° to 22°2θ (data from Tables T8, p. 75, T9, p. 76, T10, p. 77, T11, p. 78, T12, p. 79, and T13, p. 80).

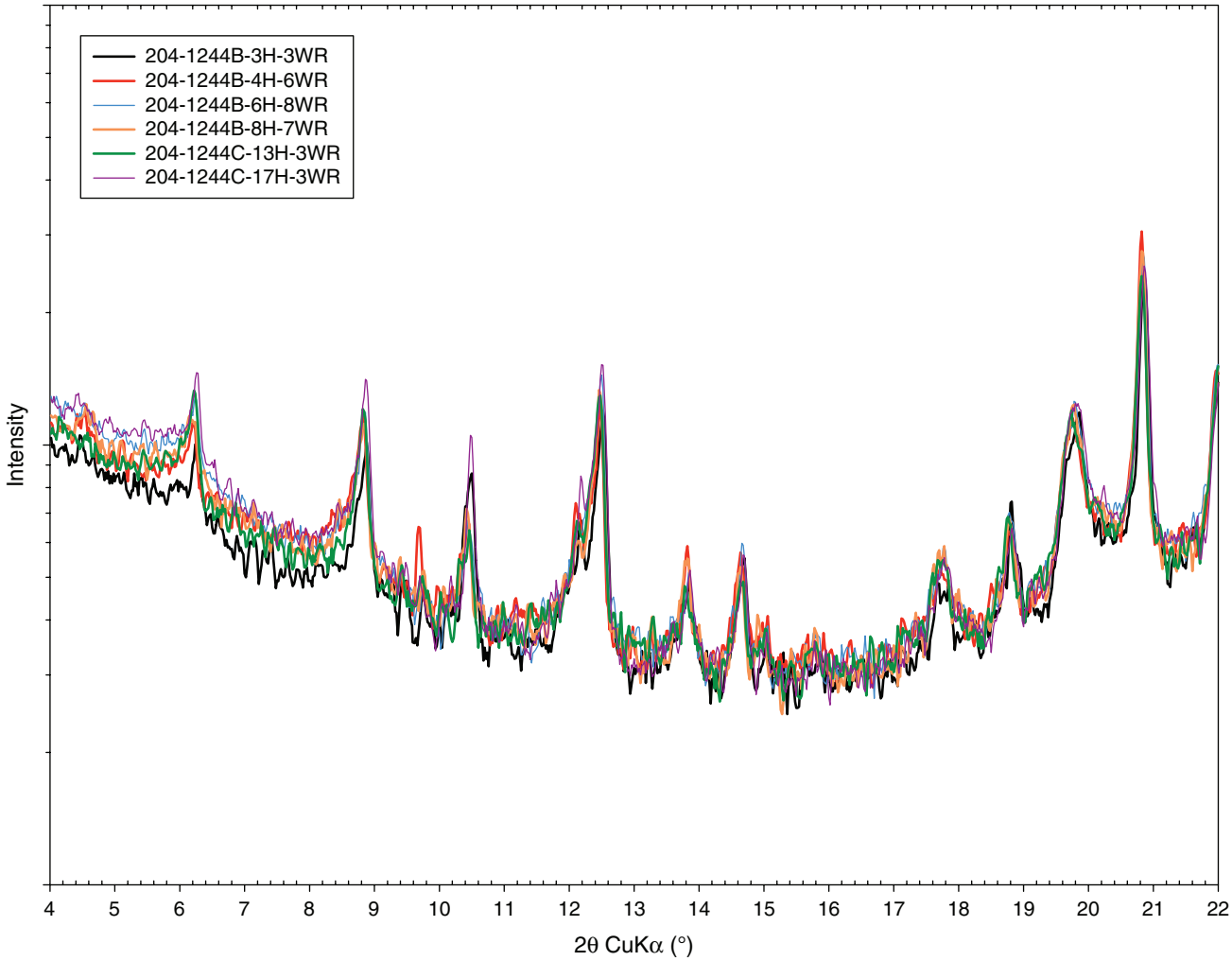


Figure F7. X-ray diffraction on calcite-treated random powder sample 2 = 21° to 39°2θ (data from Tables T8, p. 75, T9, p. 76, T10, p. 77, T11, p. 78, T12, p. 79, and T13, p. 80).

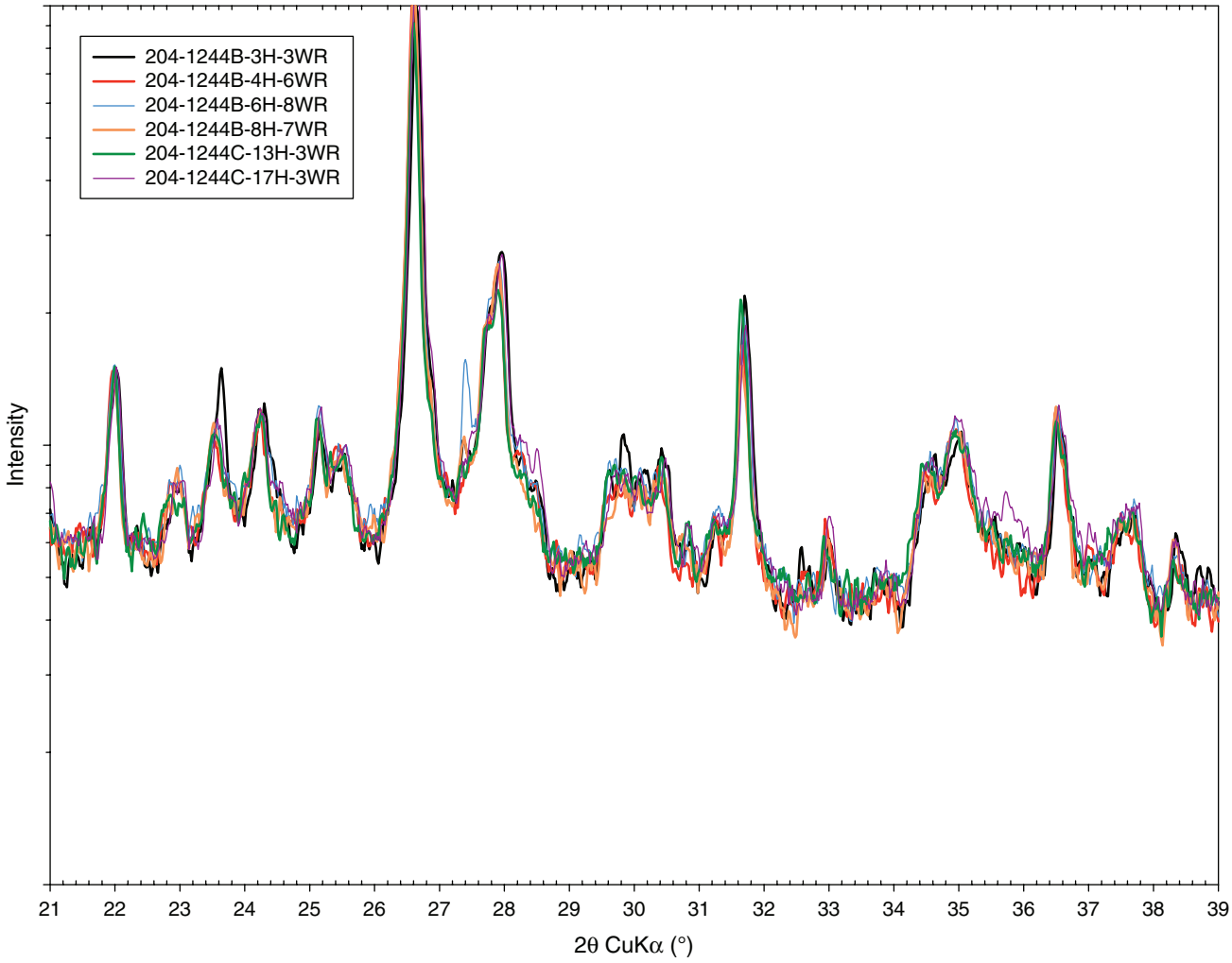


Figure F8. X-ray diffraction on calcite-treated random powder sample 2 = 38° to 56°2θ (data from Tables T8, p. 75, T9, p. 76, T10, p. 77, T11, p. 78, T12, p. 79, and T13, p. 80).

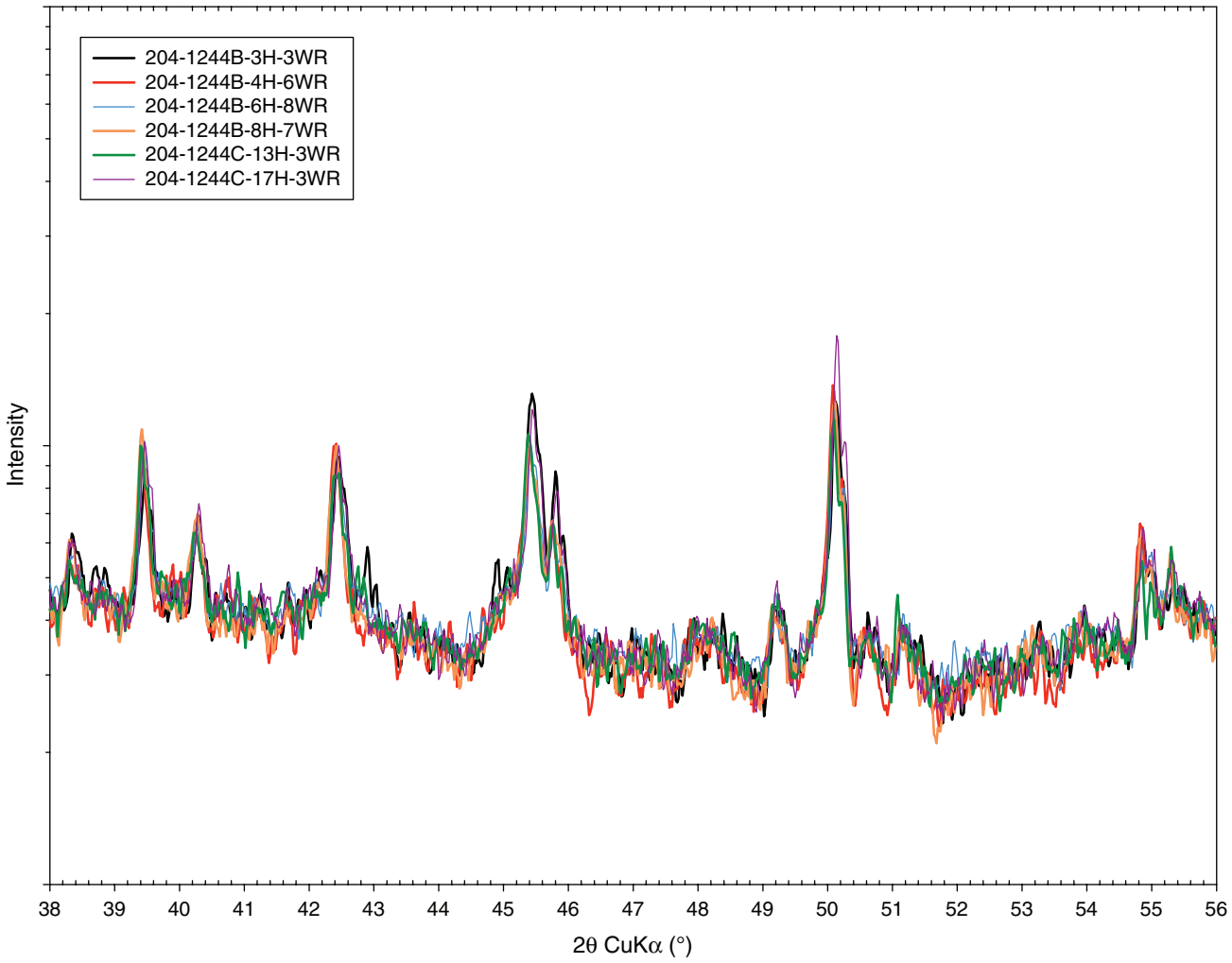


Figure F9. X-ray diffraction on clay-fraction random powder sample 2 = 4° to 22°2θ (data from Tables T14, p. 81, T15, p. 82, and T16, p. 83).

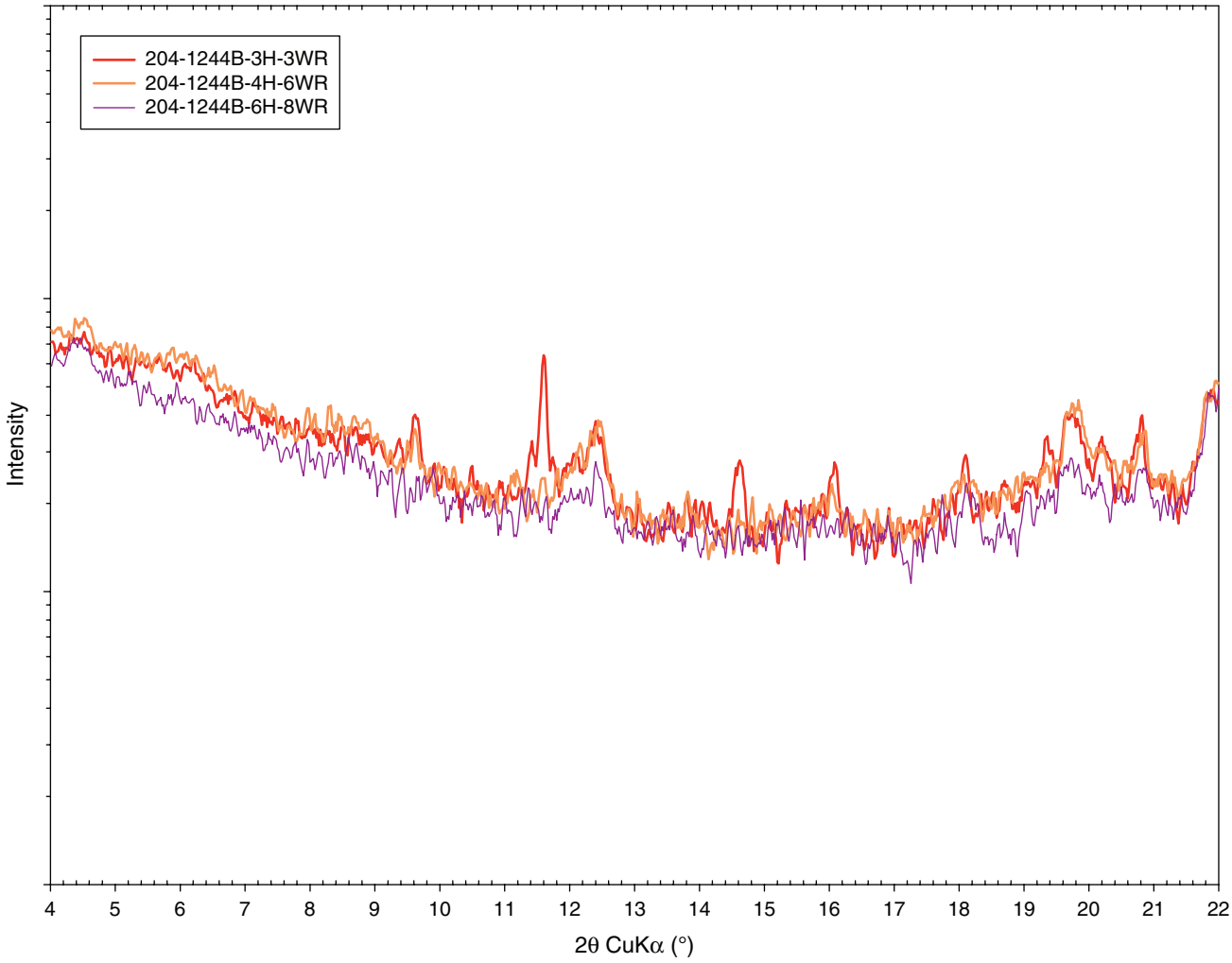


Figure F10. X-ray diffraction on clay-fraction random powder sample 2 = 21° to 39°2θ (data from Tables T14, p. 81, T15, p. 82, and T16, p. 83).

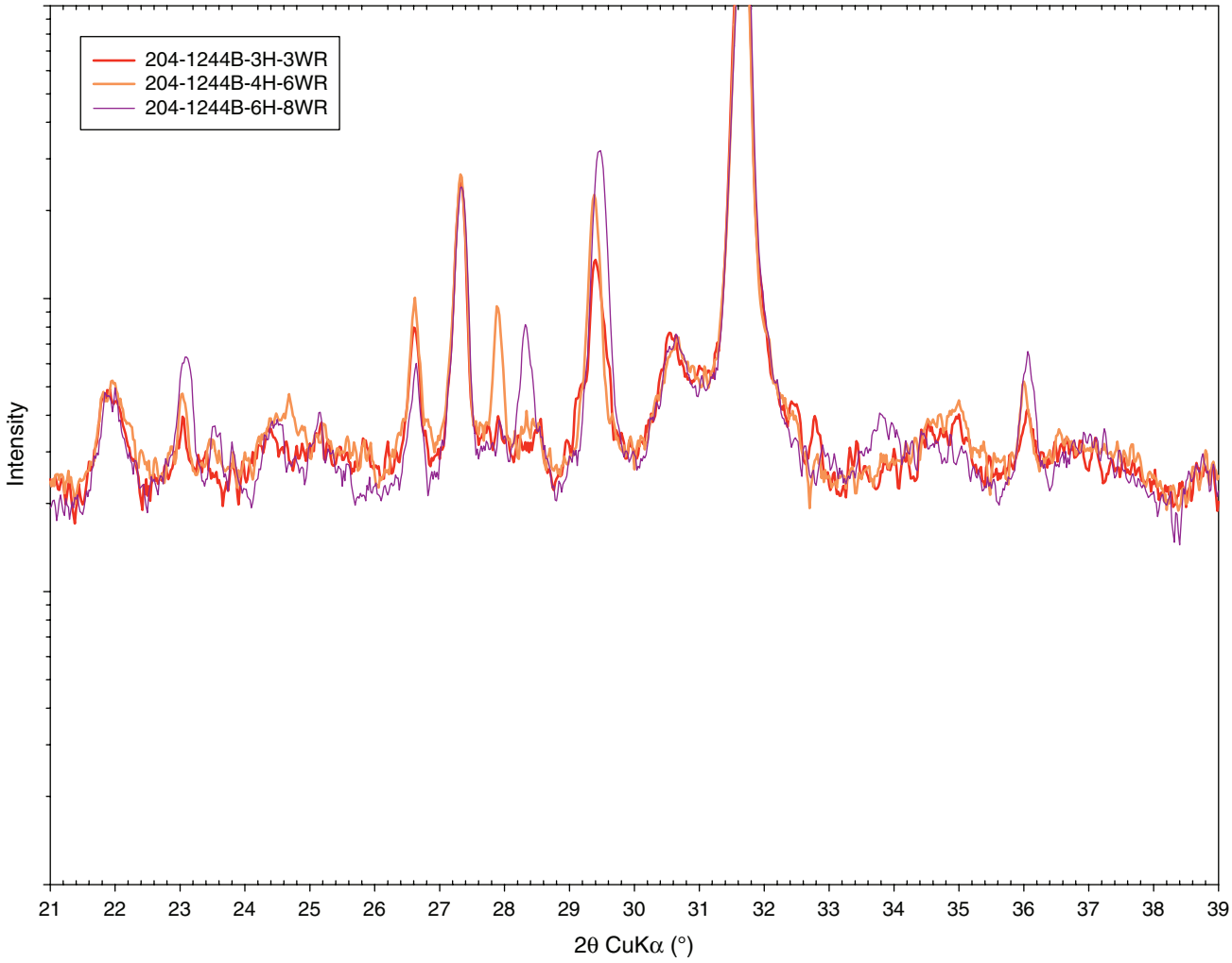


Figure F11. X-ray diffraction on clay-fraction random powder sample 2 = 38° to 56°2θ (data from Tables T14, p. 81, T15, p. 82, and T16, p. 83).

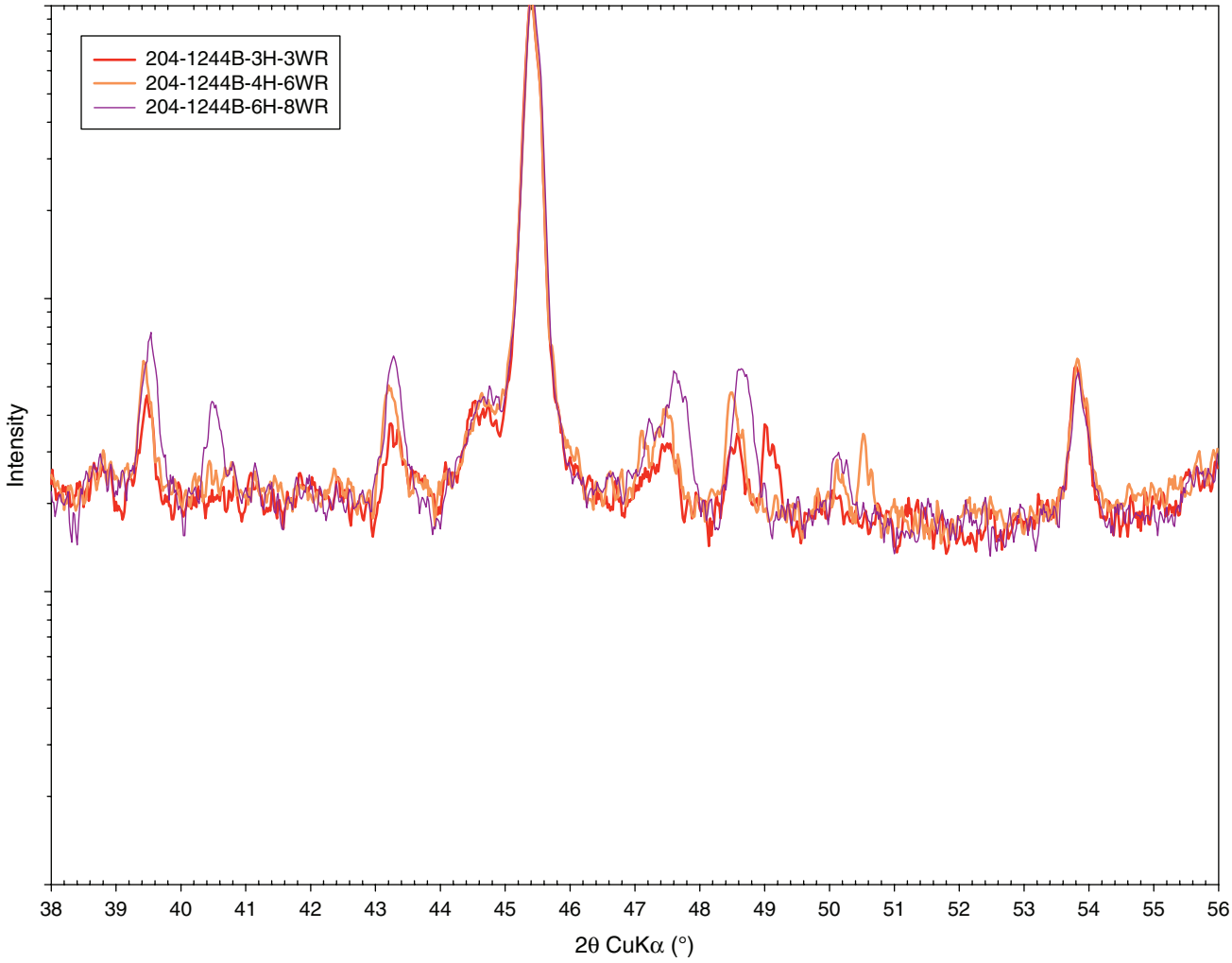


Figure F12. CRS 491 consolidation data for Sample 204-1244C-13H-3, 144–147 cm (data from Table T18, p. 85). Coef. = coefficient.

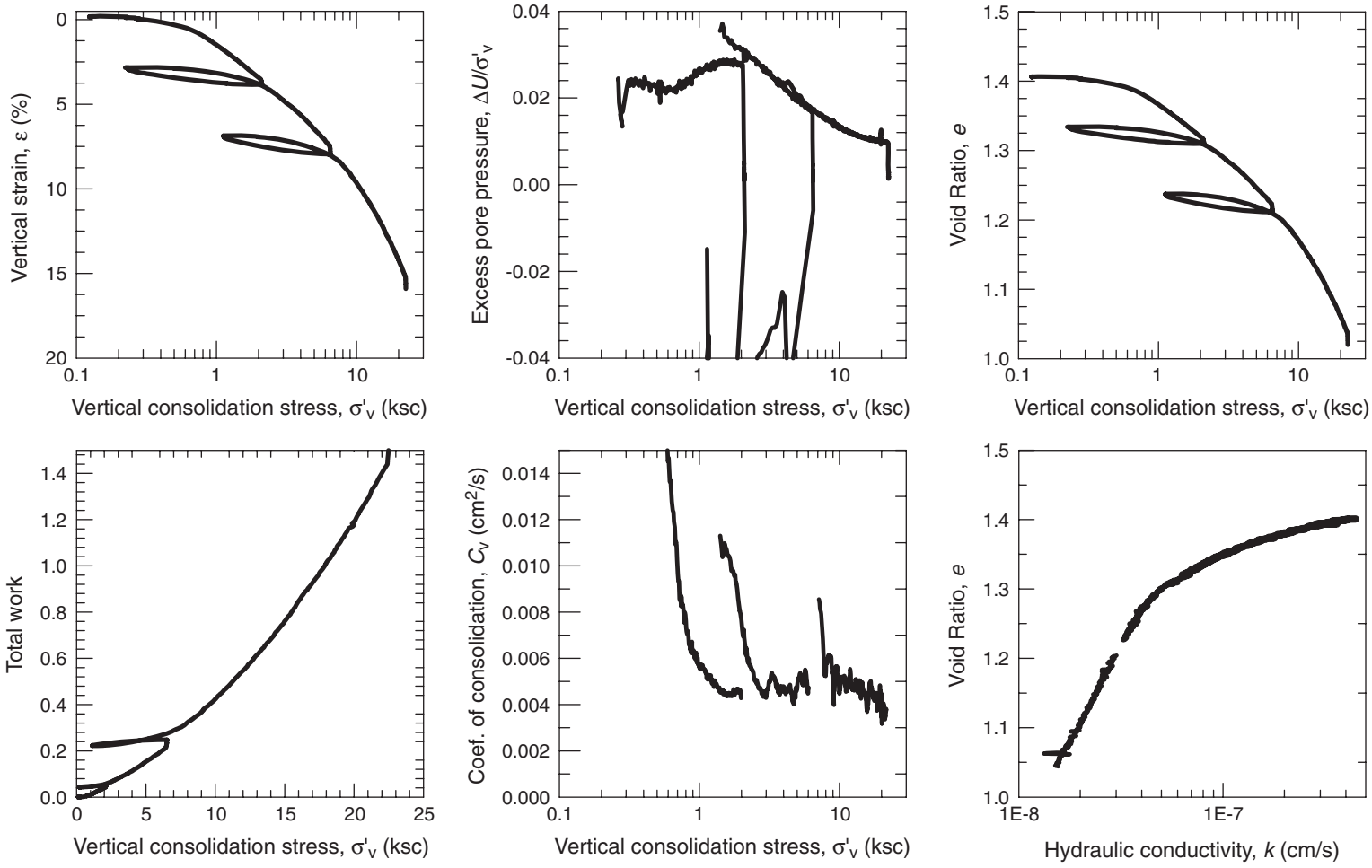


Figure F13. CRS 493 consolidation data for Sample 204-1244C-13H-3, 139–142 cm (data from Table T19, p. 86). Coef. = coefficient.

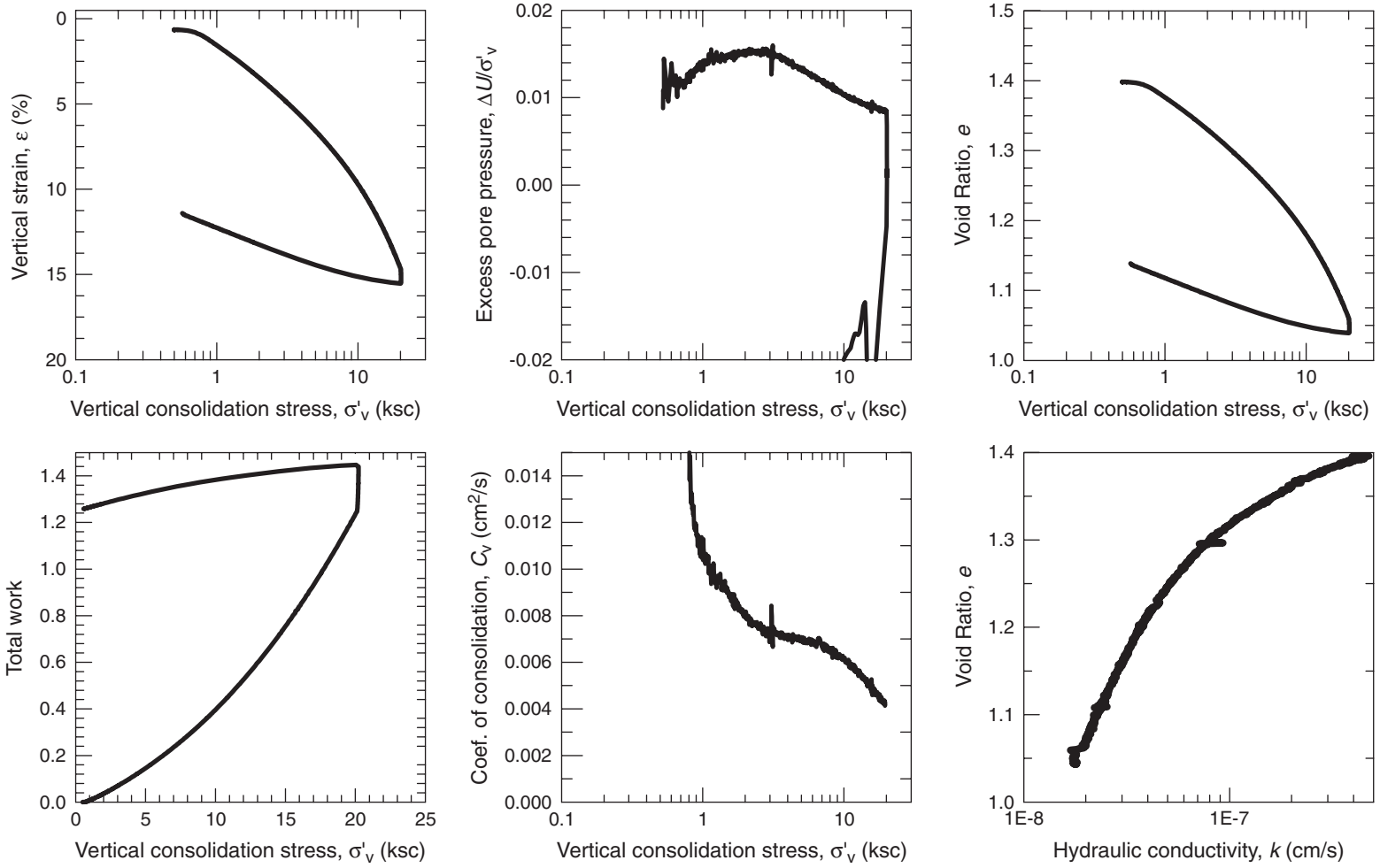
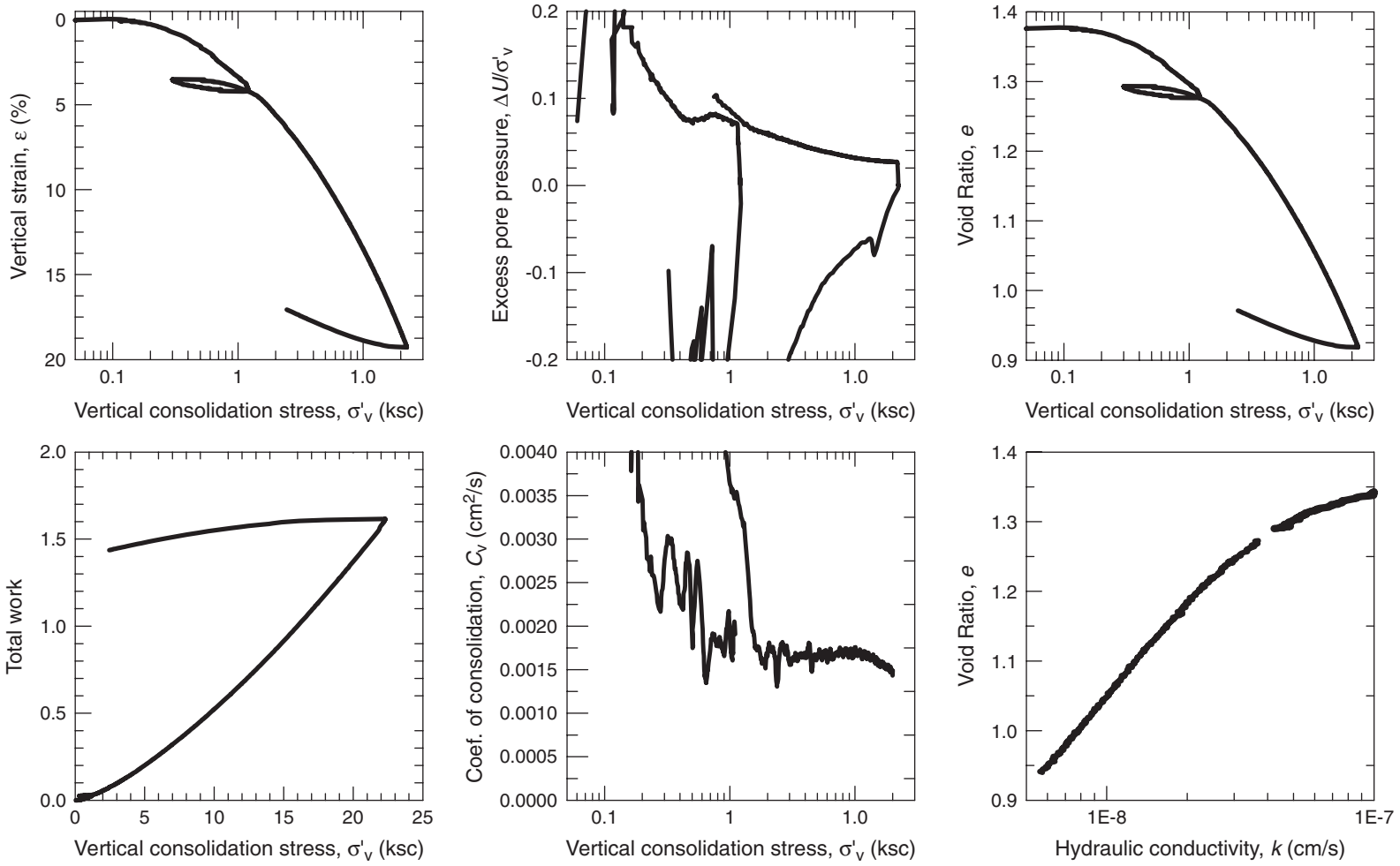


Figure F14. CRS 495 consolidation data for Sample 204-1244C-17H-3, 97–100 cm (data from Table T20, p. 87). Coef. = coefficient.



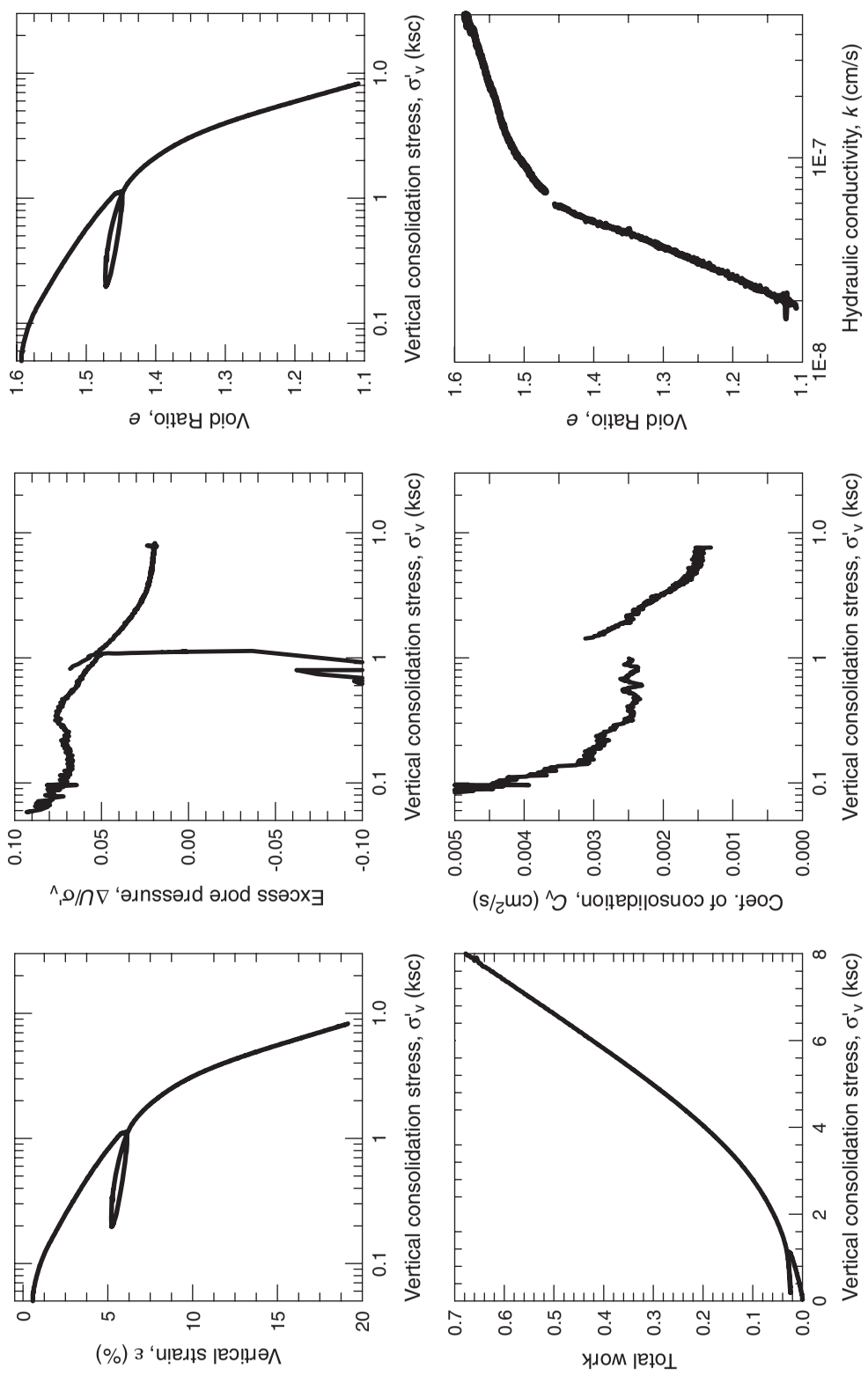
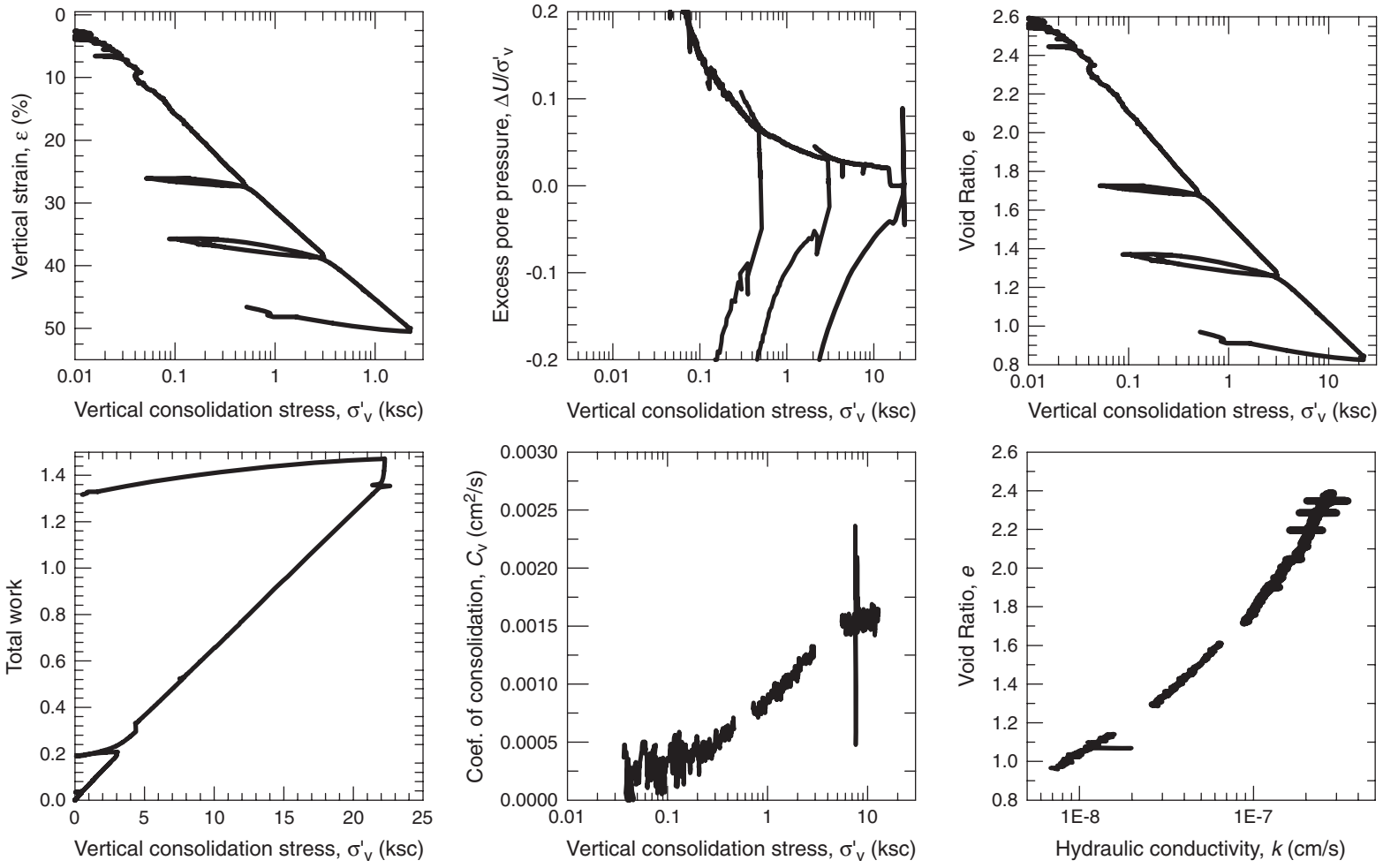


Figure F15. CRS 497 consolidation data for Sample 204-1244B-3H-3, 145–148 cm (data from Table T21, p. 88). Coef. = coefficient.

Figure F16. CRS 499 consolidation data for resedimented sample (data from Table T22, p. 89). Coef. = coefficient.



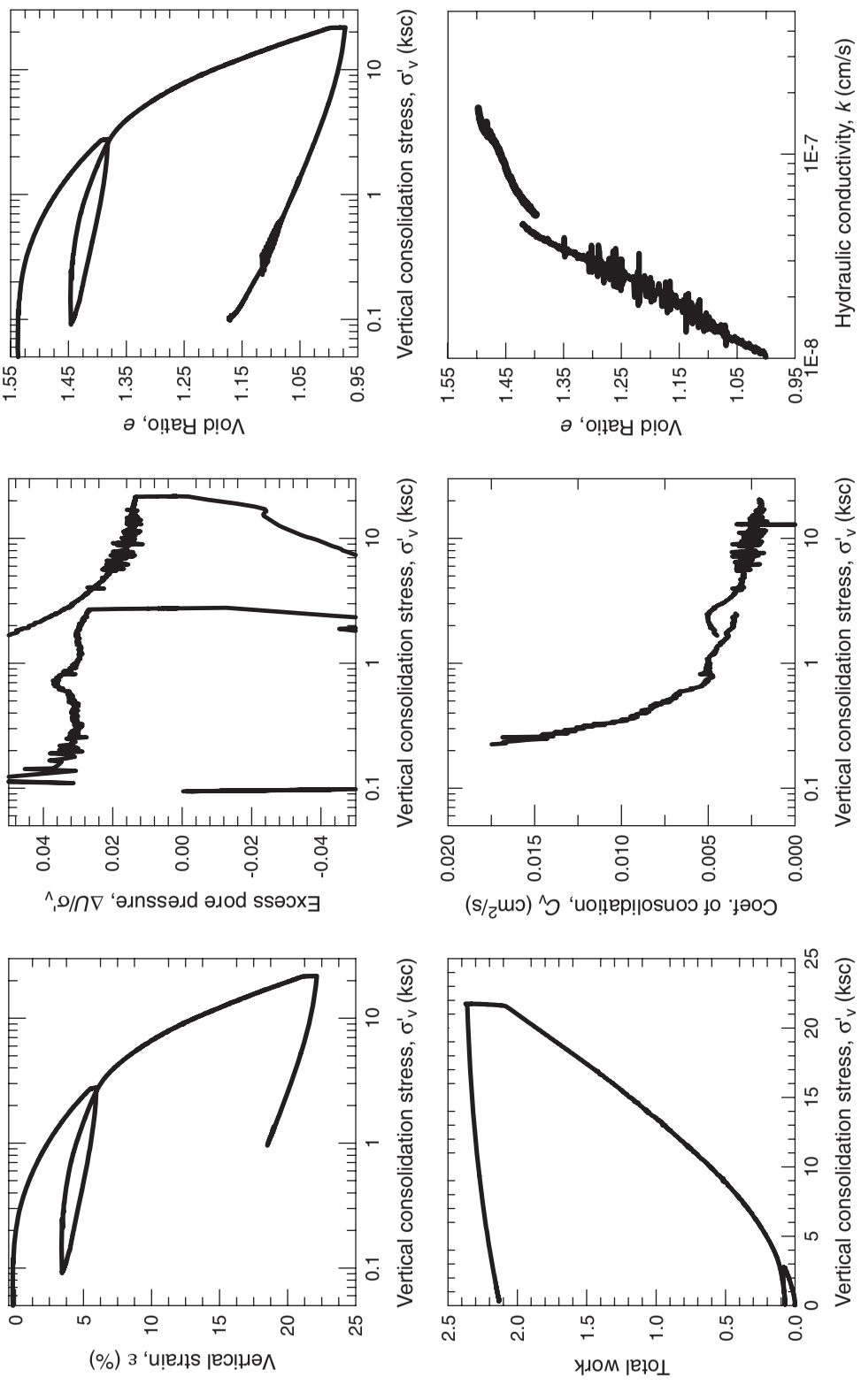


Figure F17. CRS 504 consolidation data for Sample 204-1244C-8H-7, 71–74 cm (data from Table T23, p. 90). Coef. = coefficient.

Figure F18. CRS 508 consolidation data for Sample 204-1244B-4H-6, 120–125 cm (data from Table T24, p. 91). Coef. = coefficient.

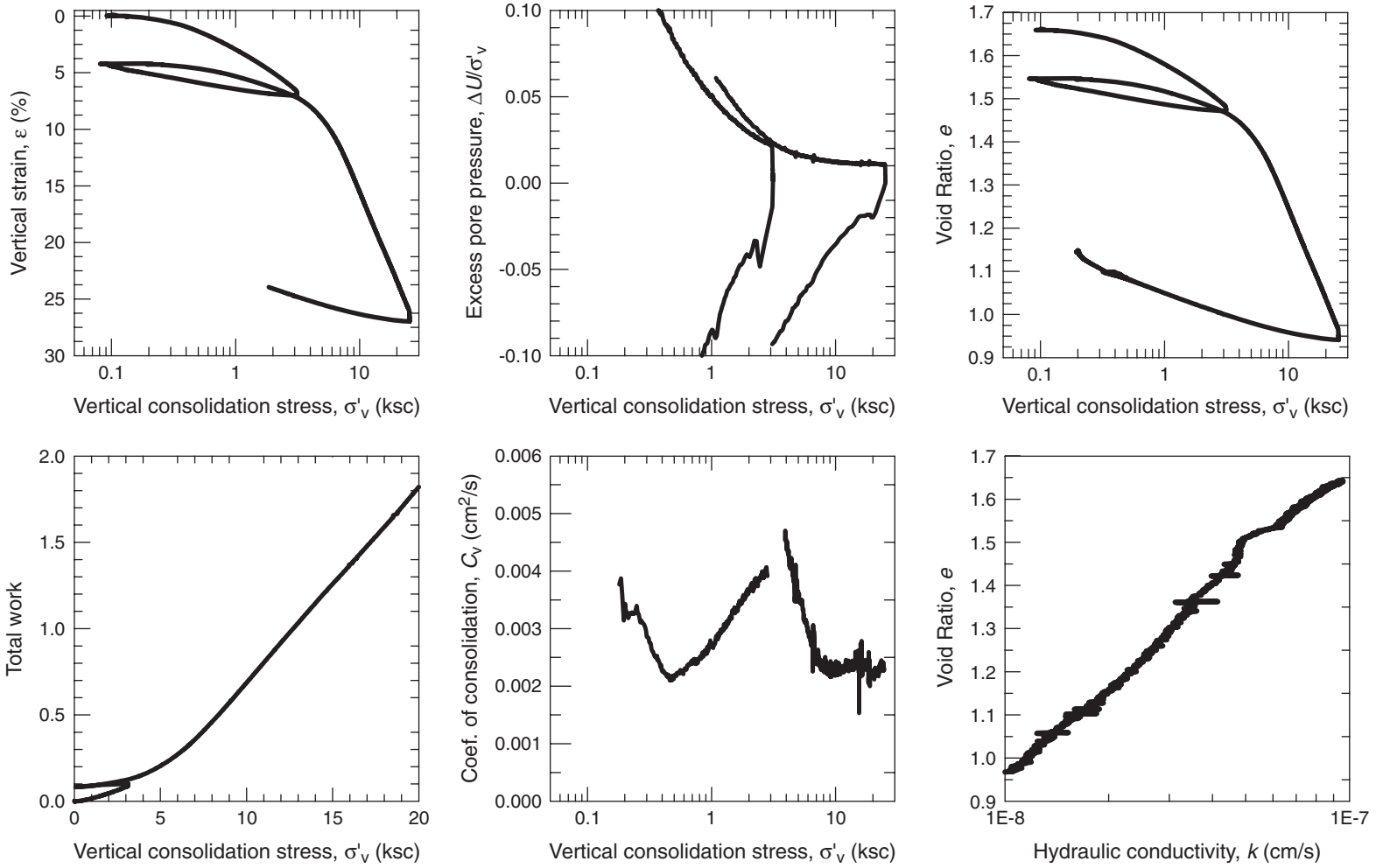


Figure F19. CRS 511 consolidation data for resedimented Sample 204-1244B-6H-8, 24–29 cm (data from Table T25, p. 92). Coef. = coefficient.

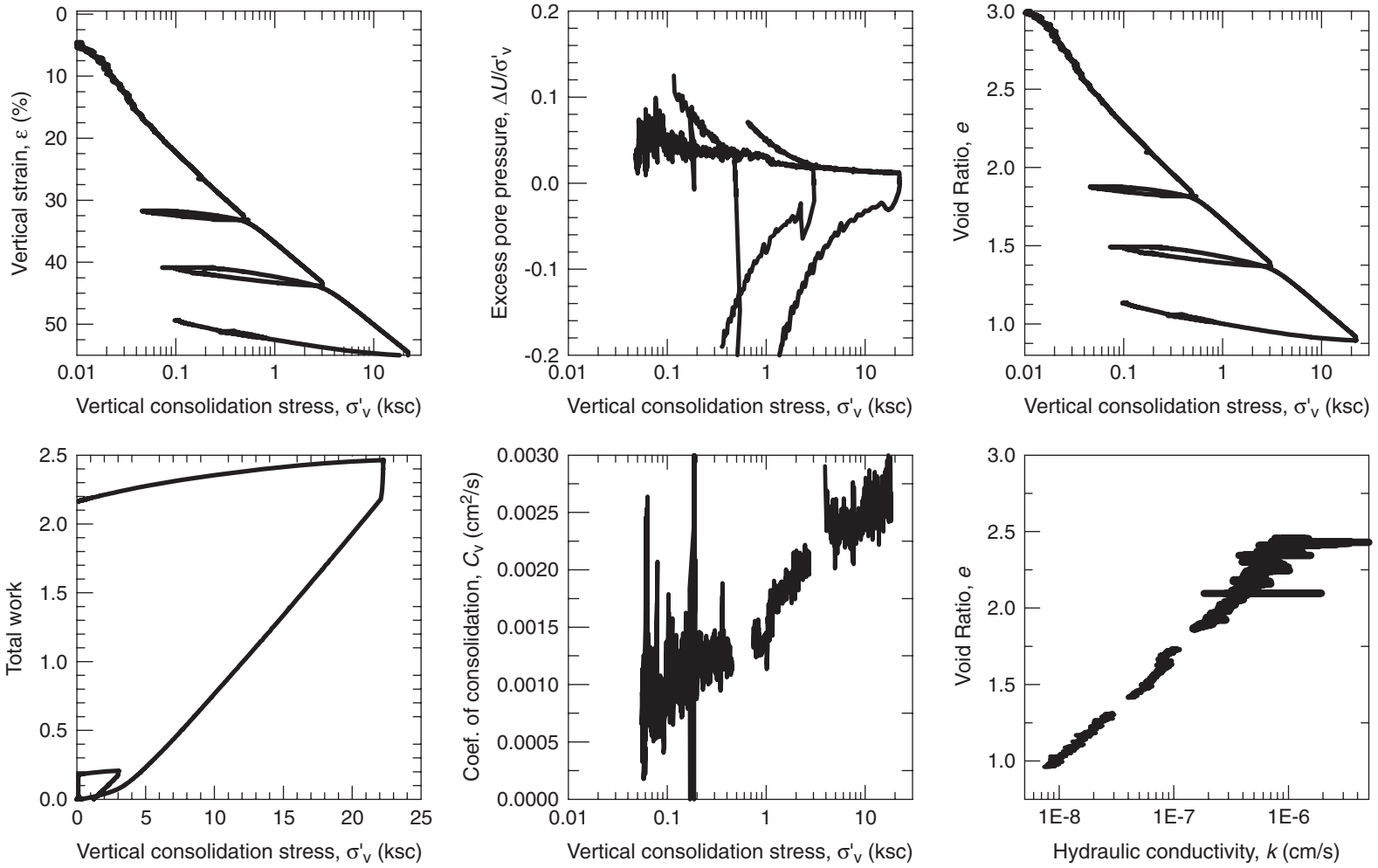


Figure F20. CRS 563 consolidation data for Sample 204-1244B-4H-6, 134–137 cm (data from Table T26, p. 93). Coef. = coefficient.

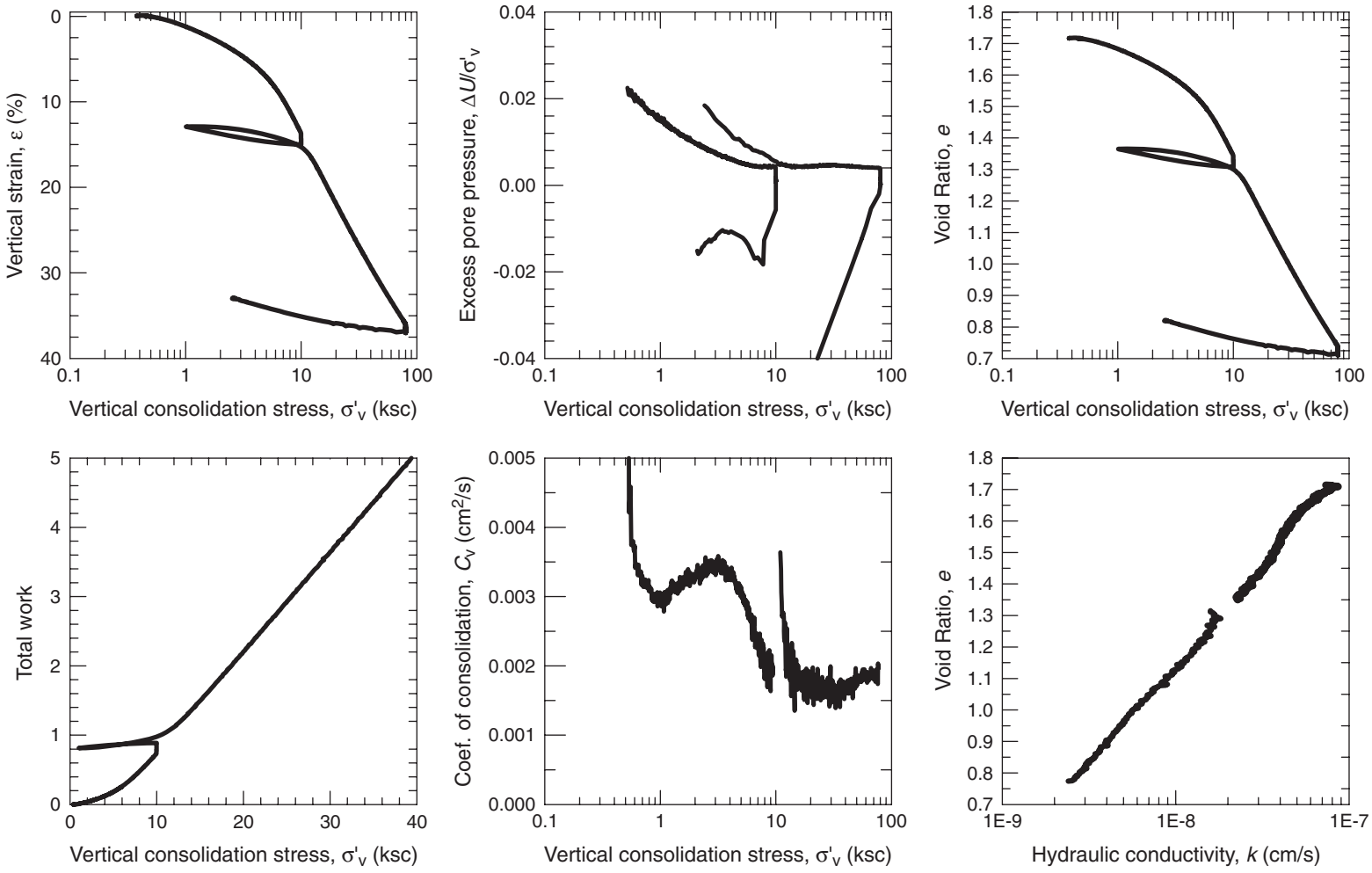
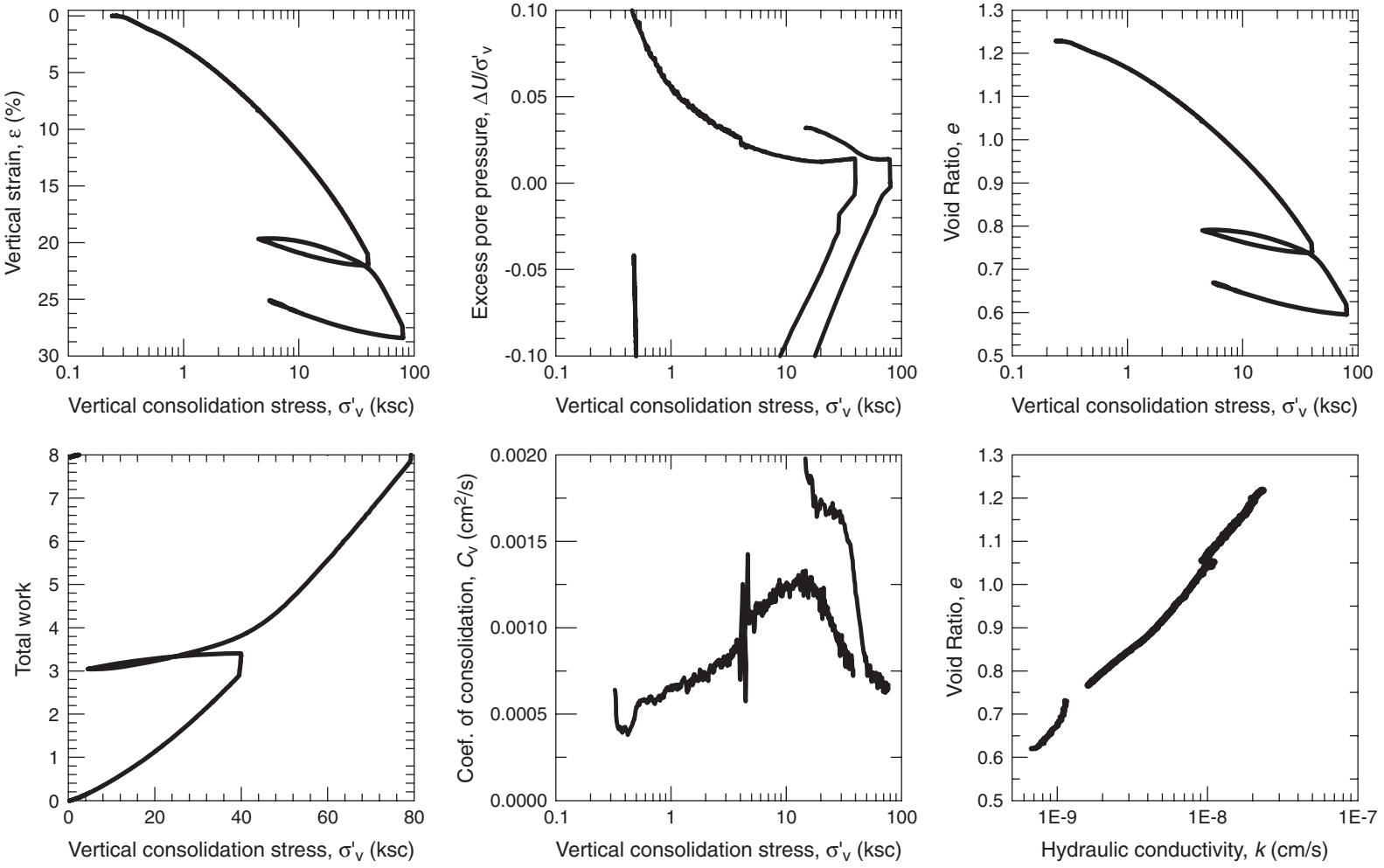


Figure F21. CRS 564 consolidation data for Sample 204-1244C-17H-3, 88–91 cm (data from Table T27, p. 94). Coef. = coefficient.



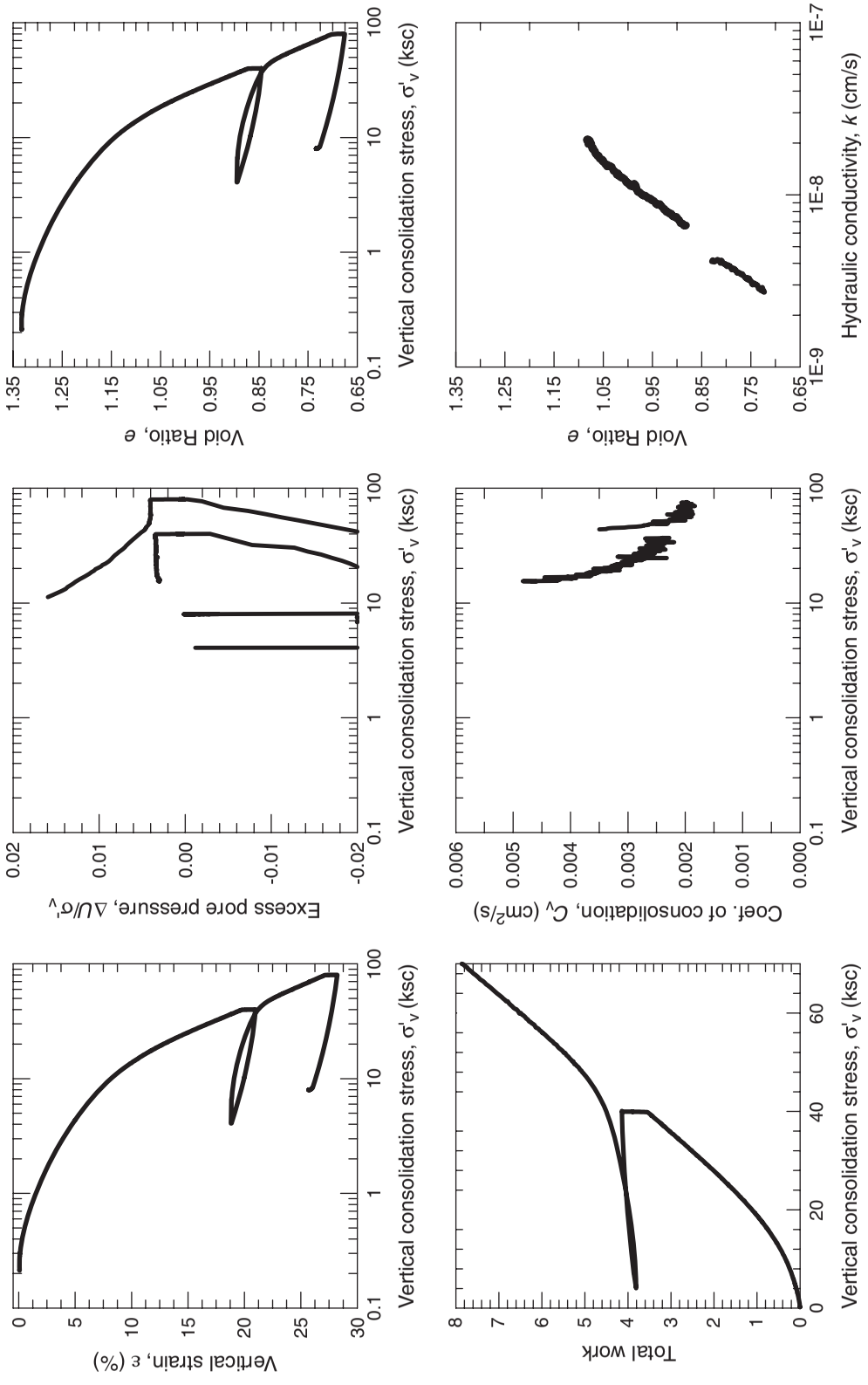


Figure F22. CRS 567 consolidation data for Sample 204-1244C-13H-3, 120–123 cm (data from Table T28, p. 95). Coef. = coefficient.

Figure F23. CRS 569 consolidation data for Sample 204-1244C-9H-5, 105–108 cm (data from Table T29, p. 96). Coef. = coefficient.

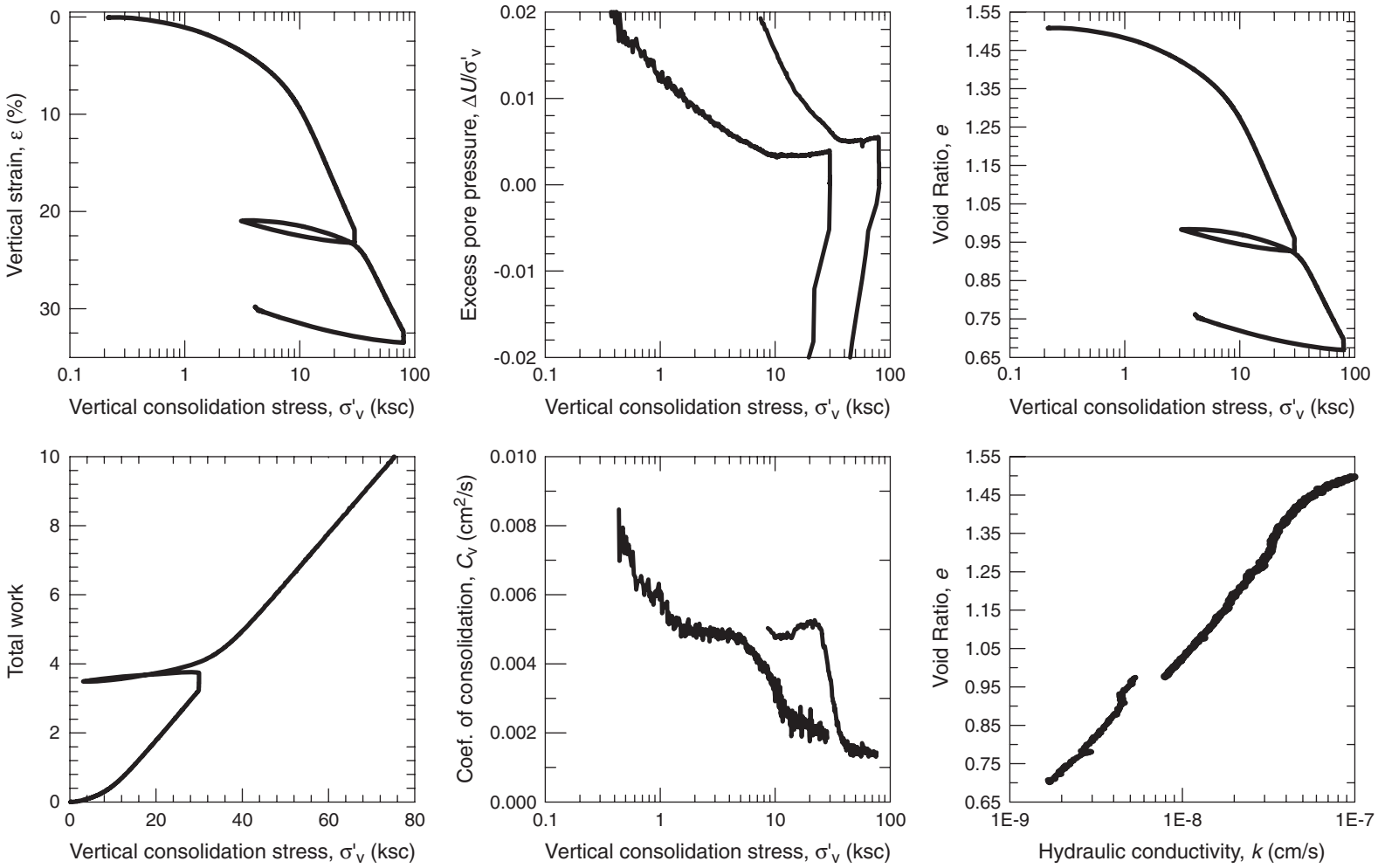
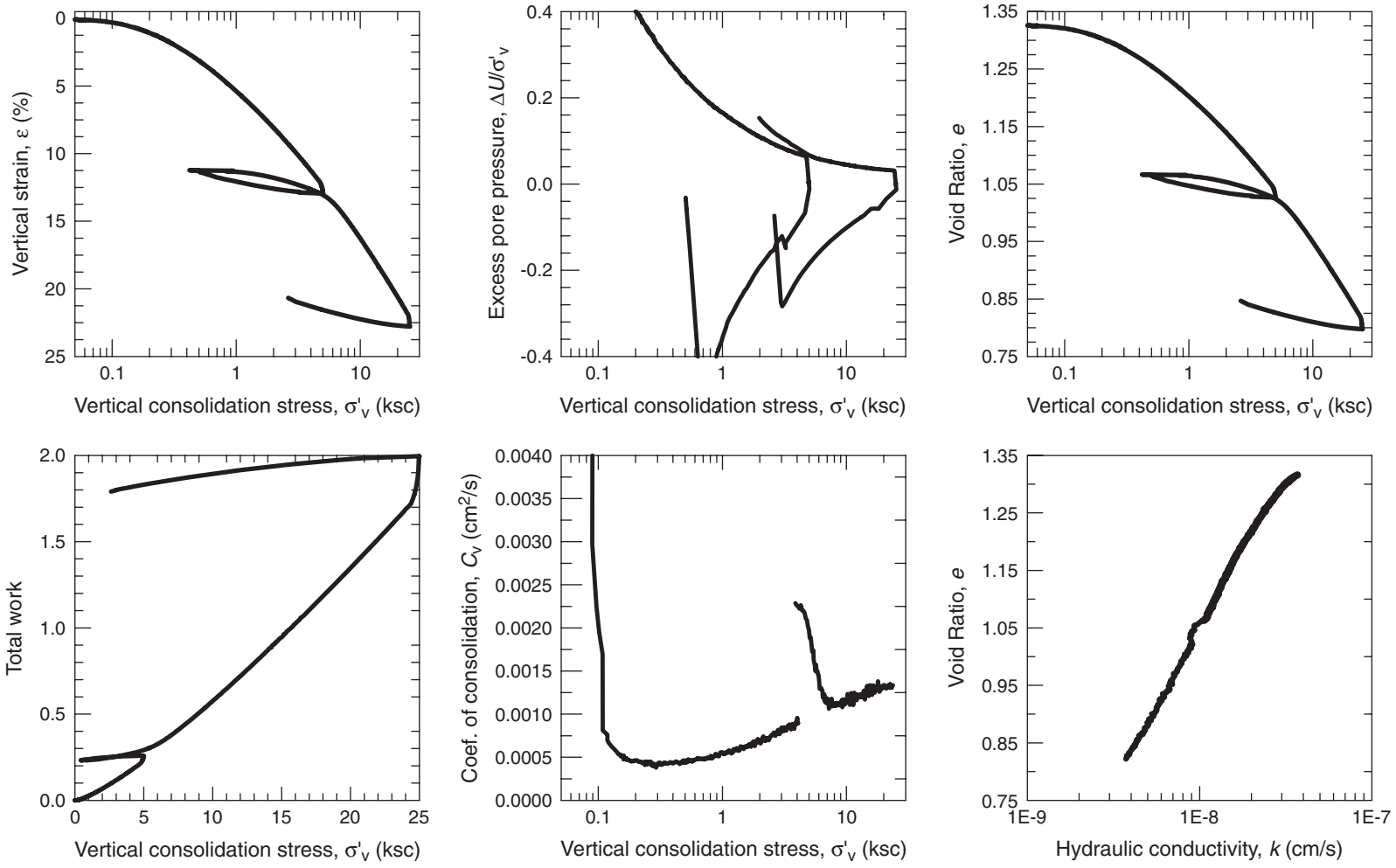


Figure F24. CRS 577 consolidation data for remolded sample (data from Table T30, p. 97). Coef. = coefficient.



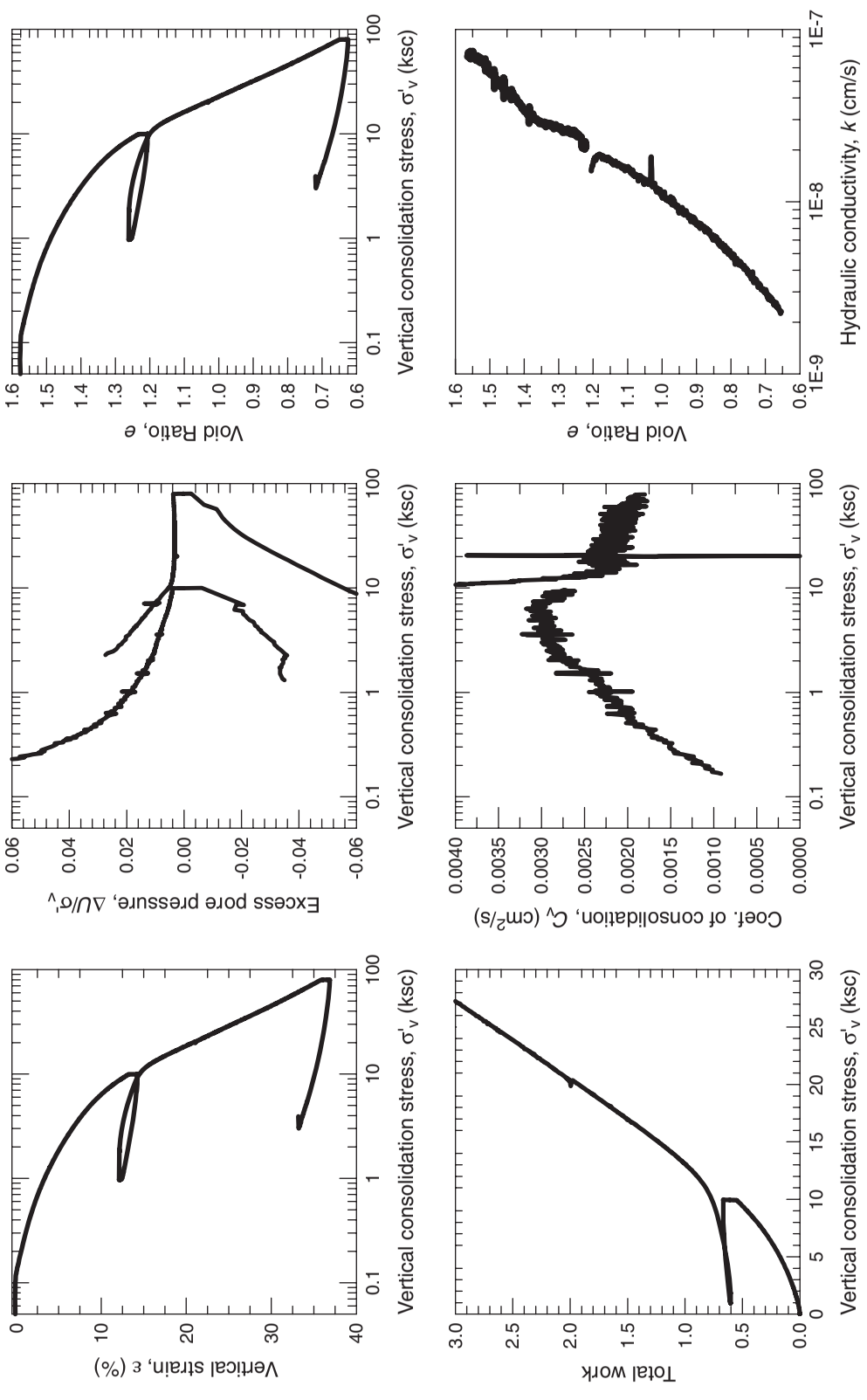


Figure F25. CRS 578 consolidation data for Sample 204-1244C-8H-7, 45–48 cm (data from Table T31, p. 98). Coef. = coefficient.

Figure F26. CRS 580 consolidation data for Sample 204-1244B-1H-4, 125–128 cm (data from Table T32, p. 99). Coef. = coefficient.

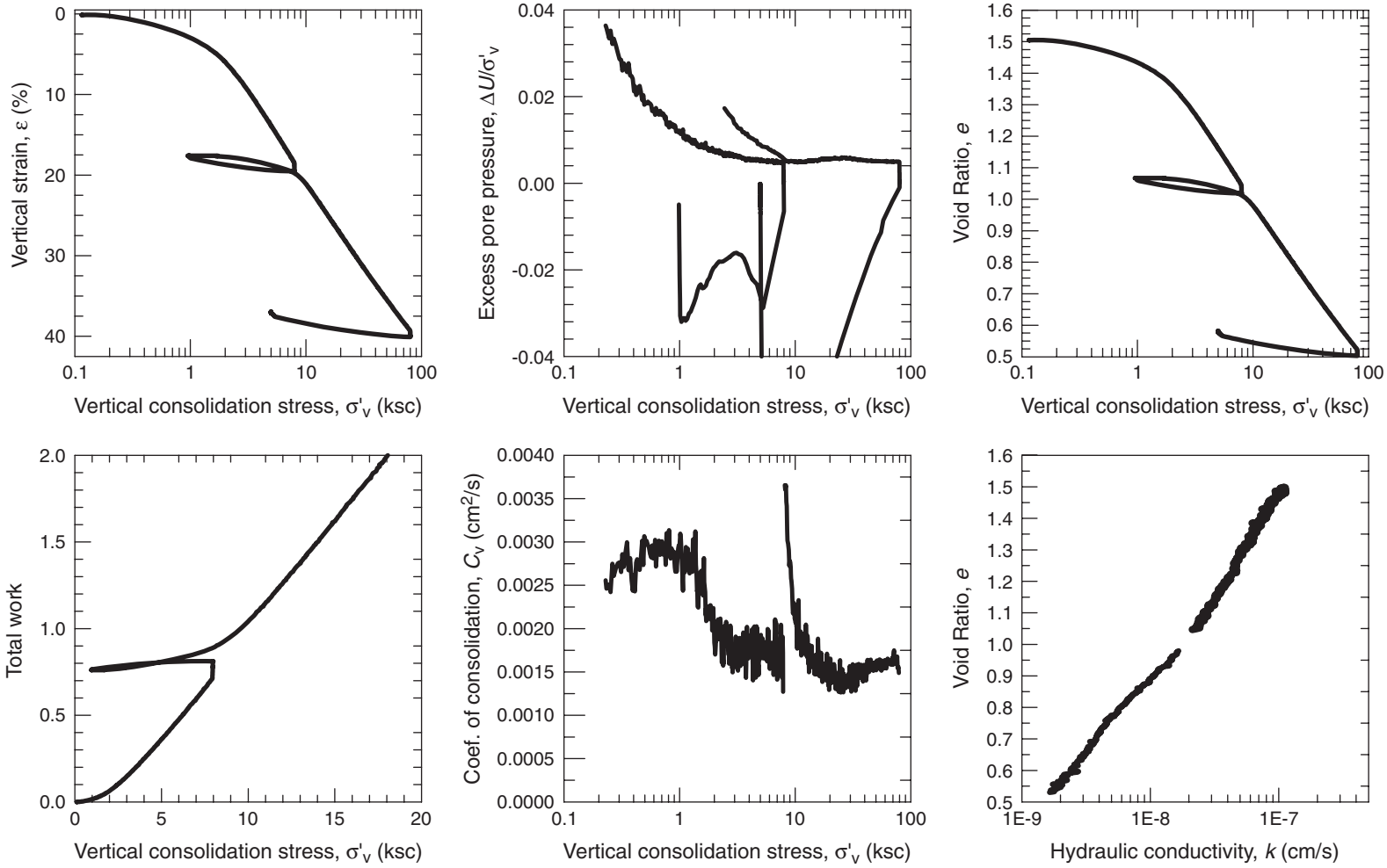


Figure F27. CRS 584 consolidation data for Sample 204-1244B-6H-8, 6–9 cm (data from Table T33, p. 100). Coef. = coefficient.

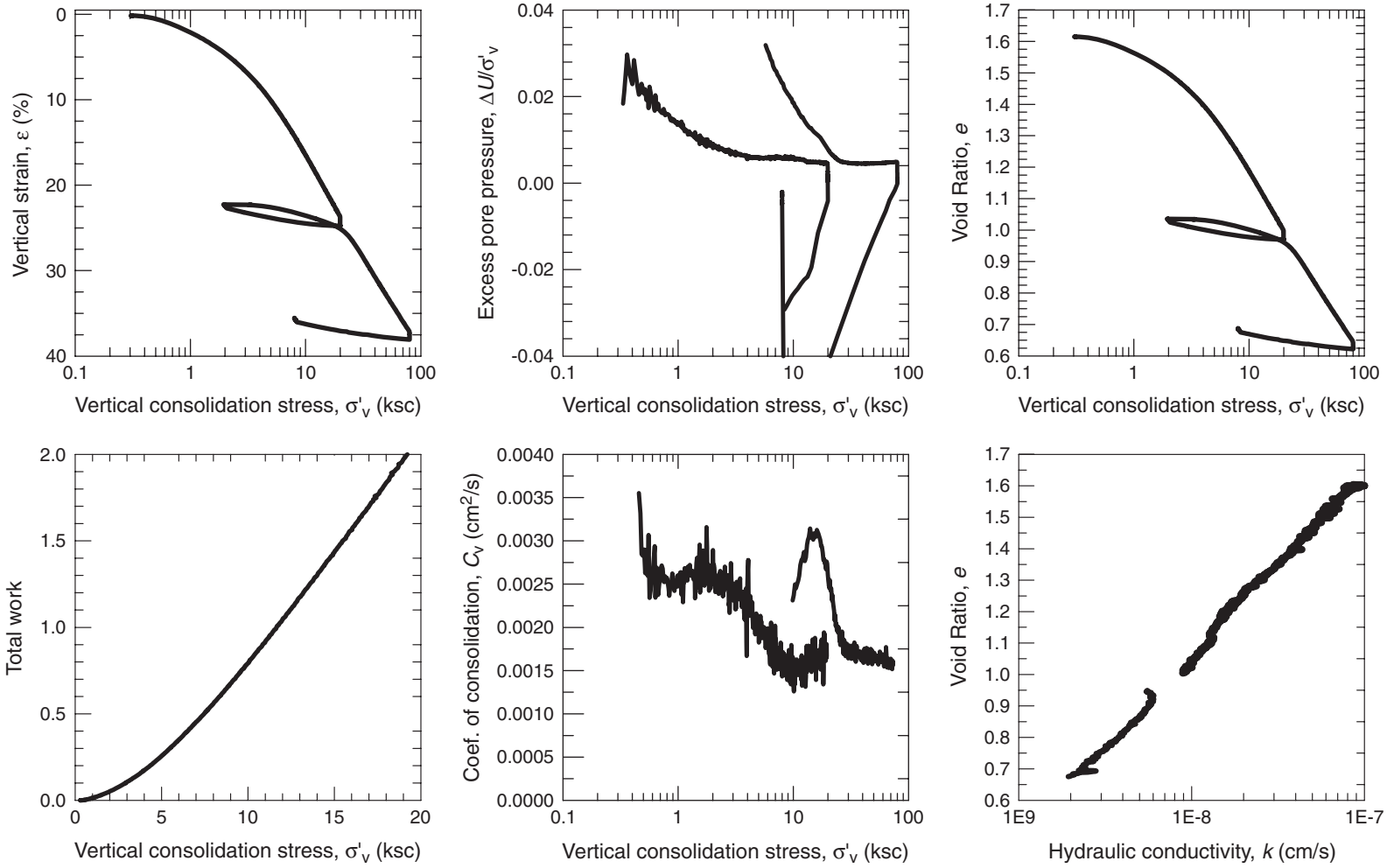


Figure F28. CRS 585 consolidation data for Sample 204-1244B-3H-3, 120–123 cm (data from Table T34, p. 101). Coef. = coefficient.

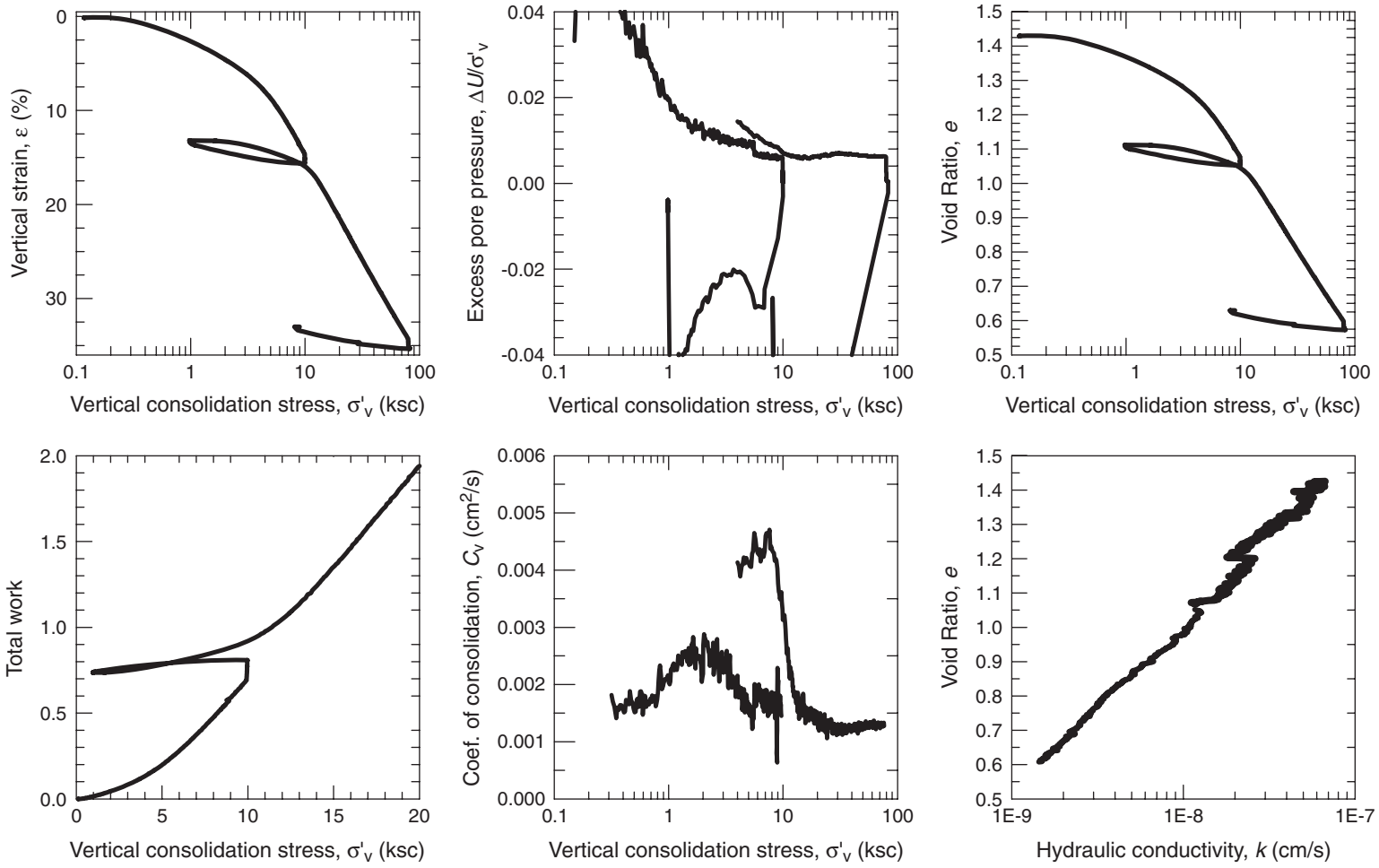
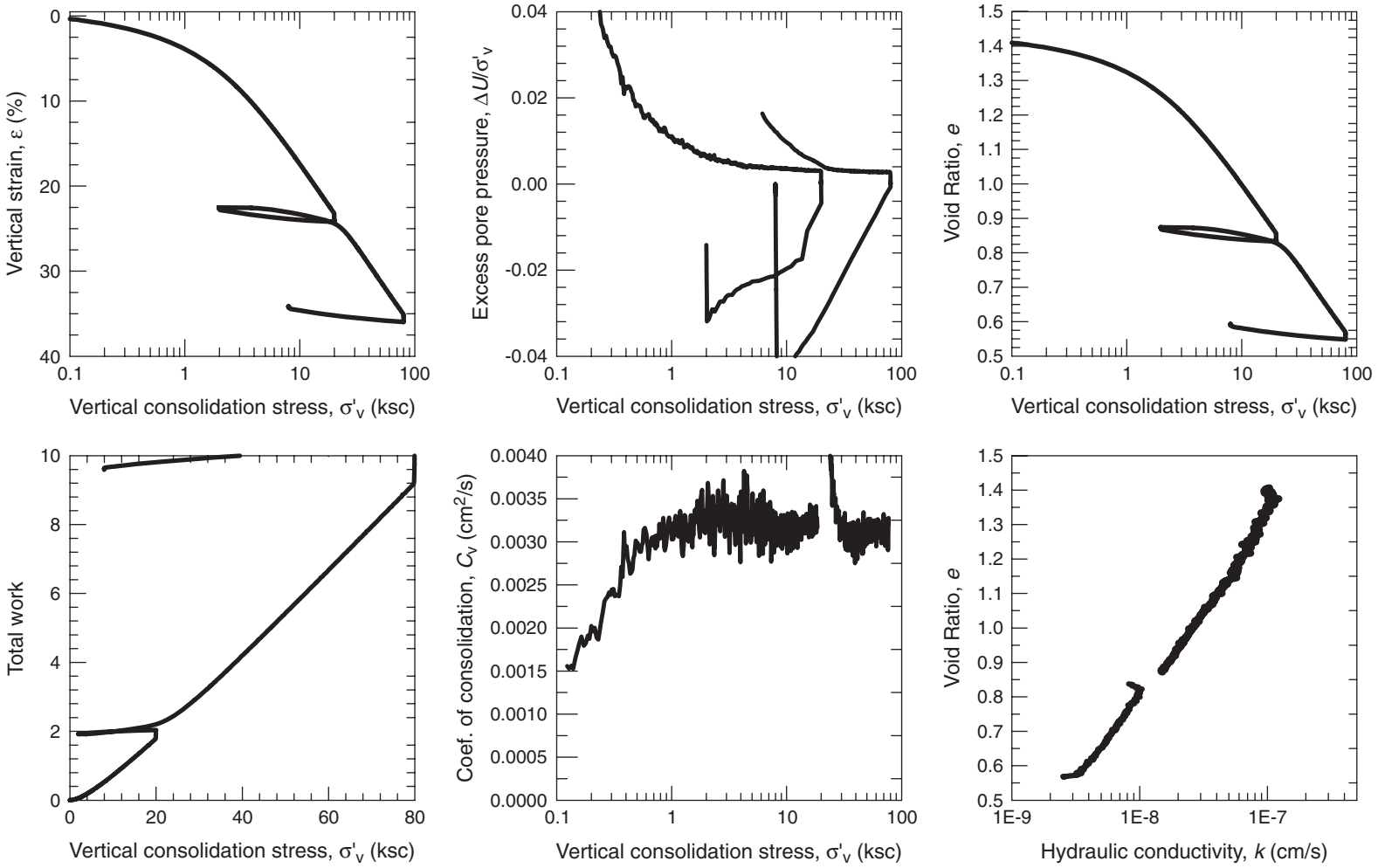


Figure F29. CRS 608 consolidation data for Sample 204-1244B-1H-4, 126–129 cm (data from Table T35, p. 102). Coef. = coefficient.



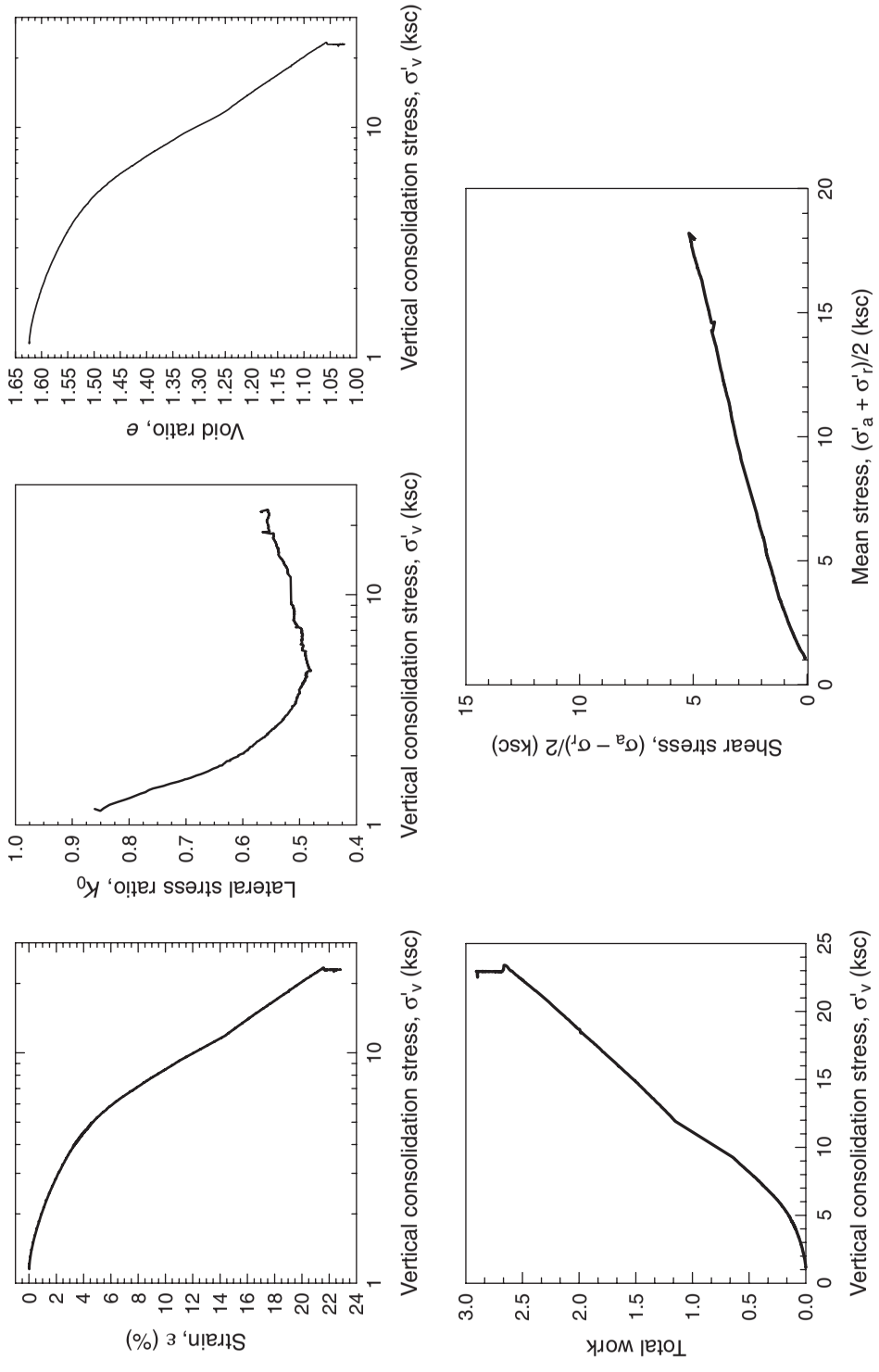


Figure F30. TX 635 consolidation data for Sample 204-1244B-4H-6, 135–145 cm (data from Table T38, p. 105).

Figure F31. TX 635 undrained shearing data for Sample 204-1244B-4H-6, 135–145 cm (data from Table T39, p. 106).

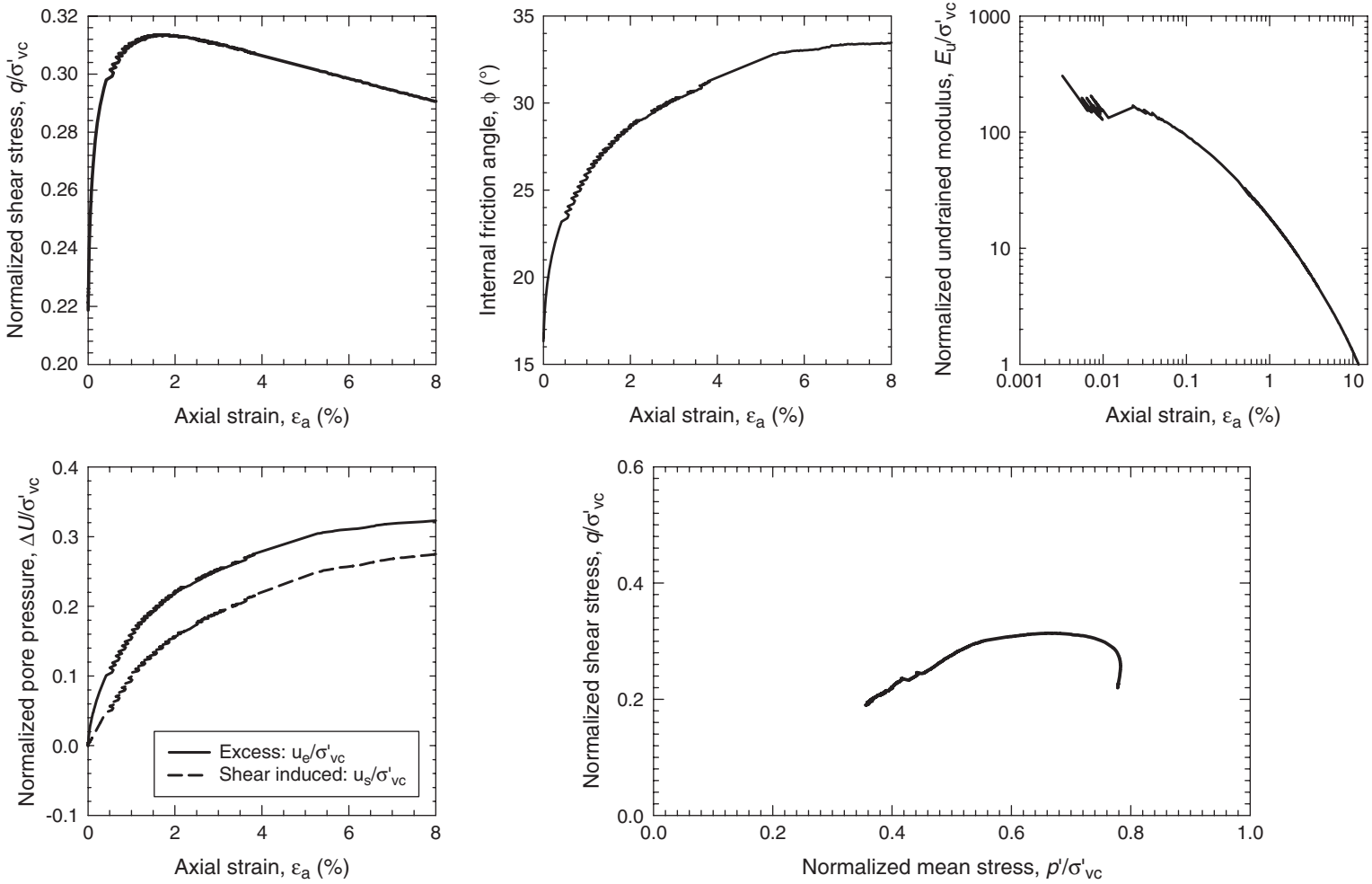


Figure F32. TX 636 consolidation data for Sample 204-1244C-17H-3, 80–90 cm (data from Table **T40,** p. 107).

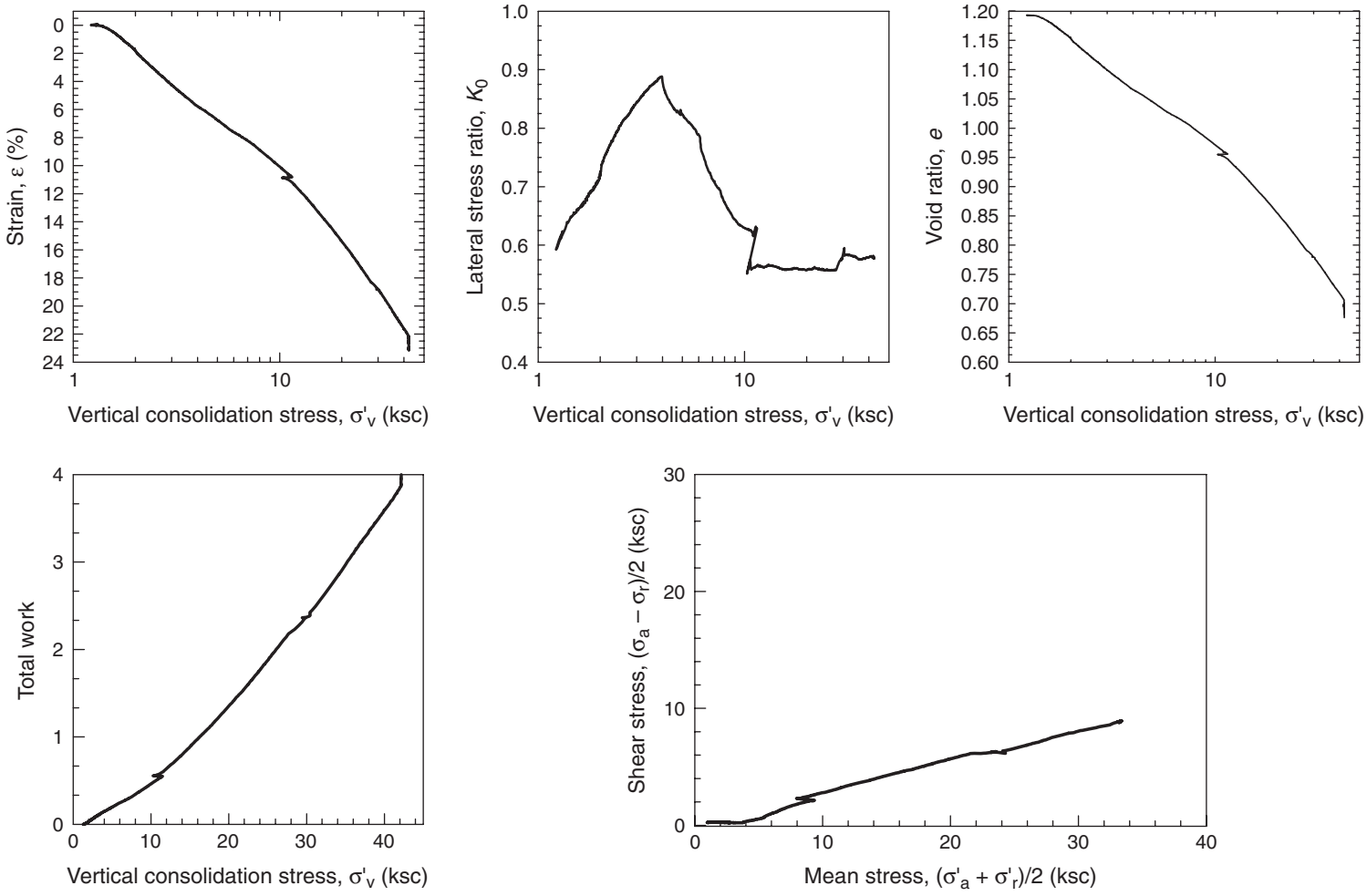
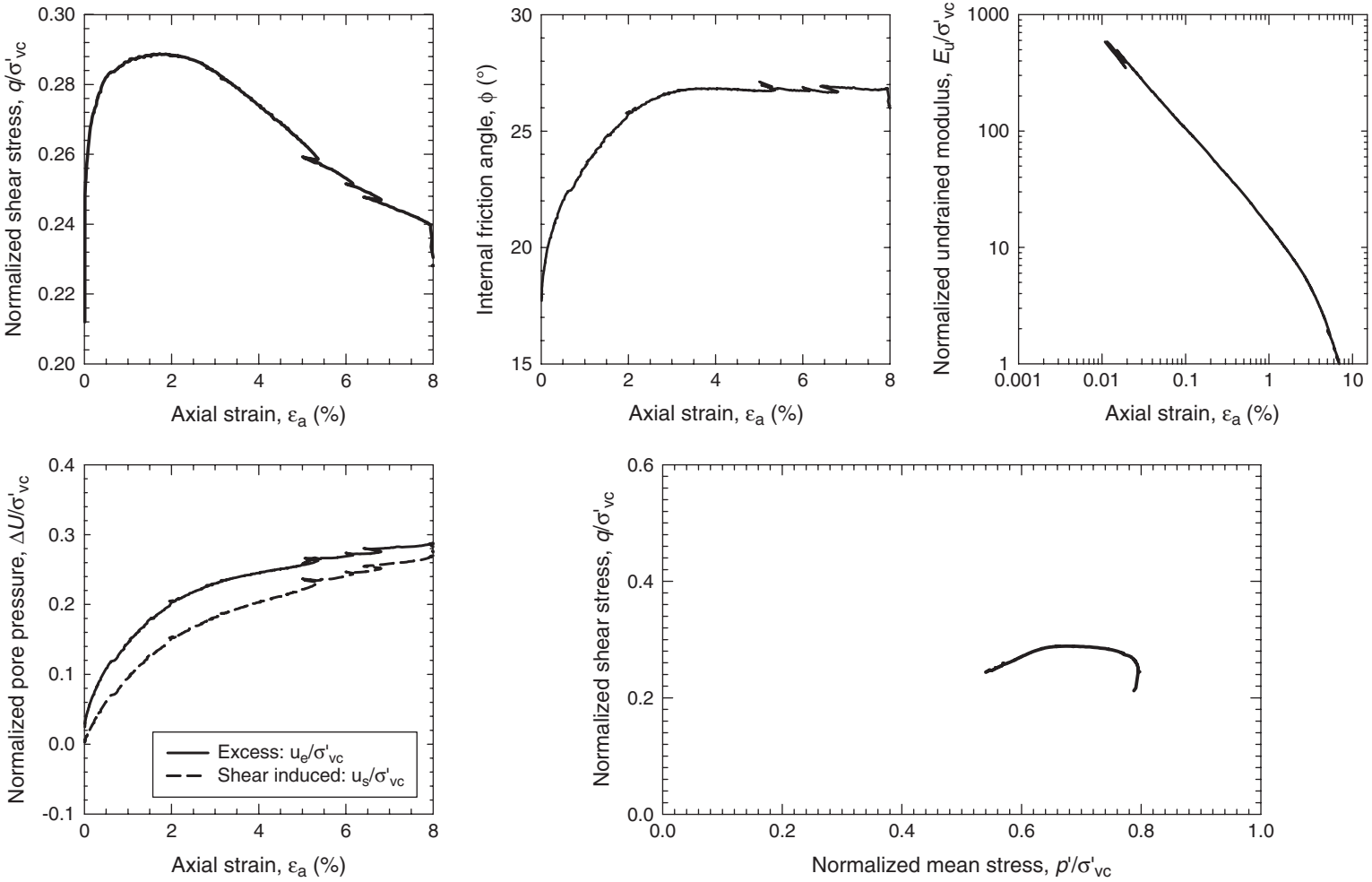


Figure F33. TX 636 undrained shearing data for Sample 204-1244C-17H-3, 80–90 cm (data from Table T41, p. 108).



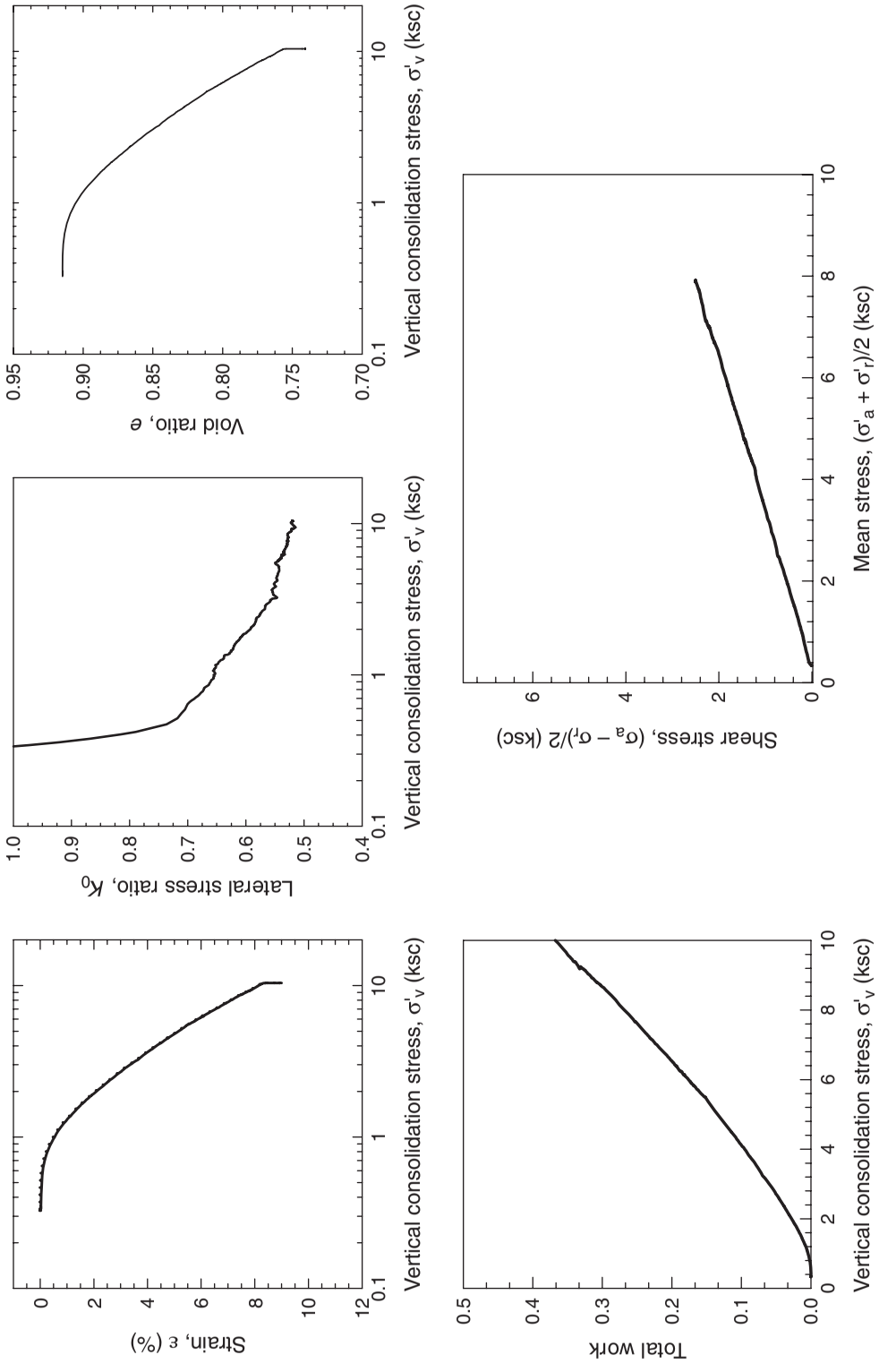


Figure F34. TX 641 consolidation data for remolded sample (data from Table T42, p. 109).

Figure F35. TX 641 undrained shearing data for remolded sample (data from Table **T43,** p. 110).

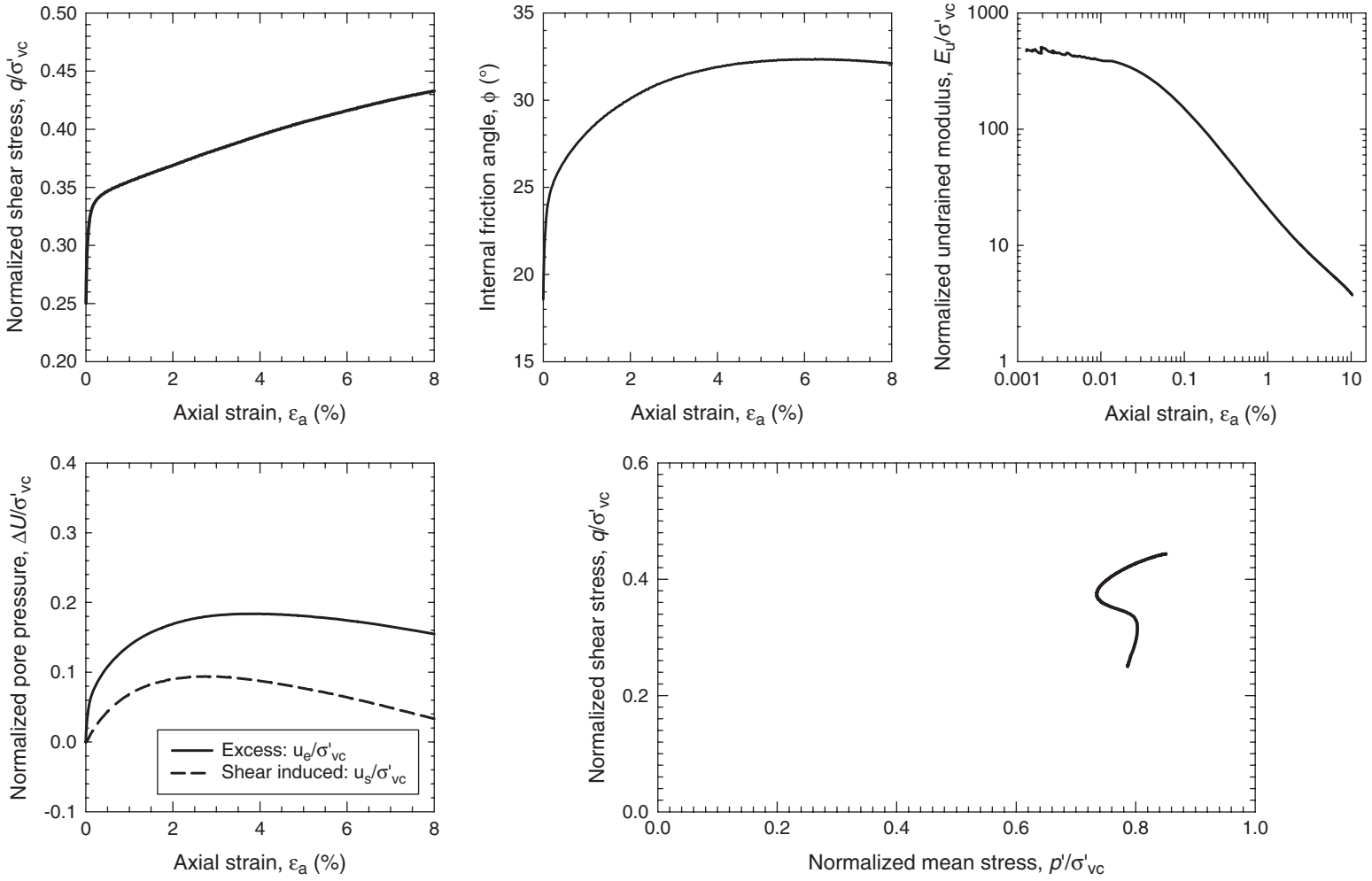


Figure F36. TX 642 consolidation data for Sample 204-1244B-3H-3, 128–138 cm (data from Table **T44,** p. 111).

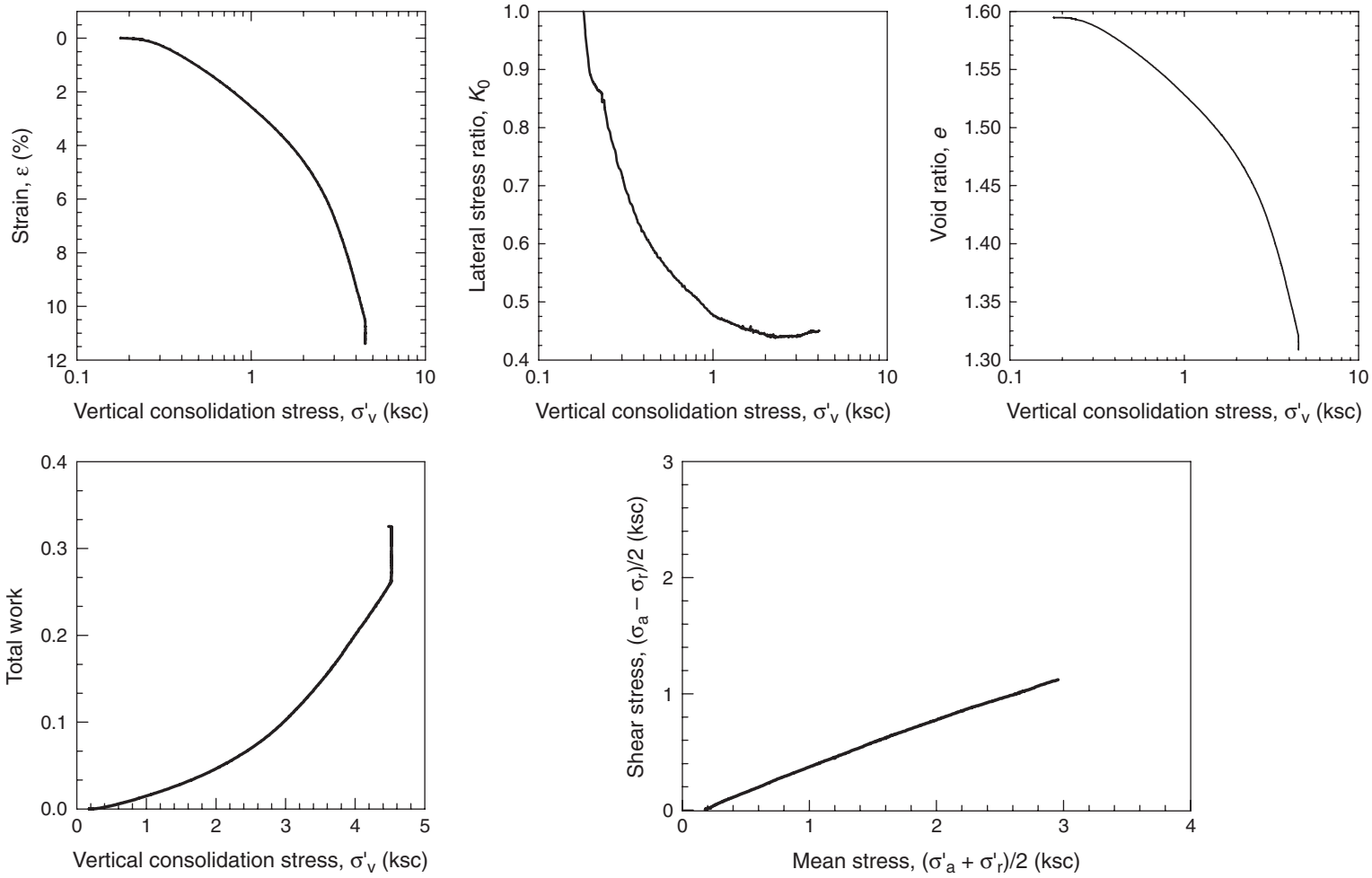


Figure F37. TX 642 undrained shearing data for Sample 204-1244B-3H-3, 128–138 cm (data from Table T45, p. 112).

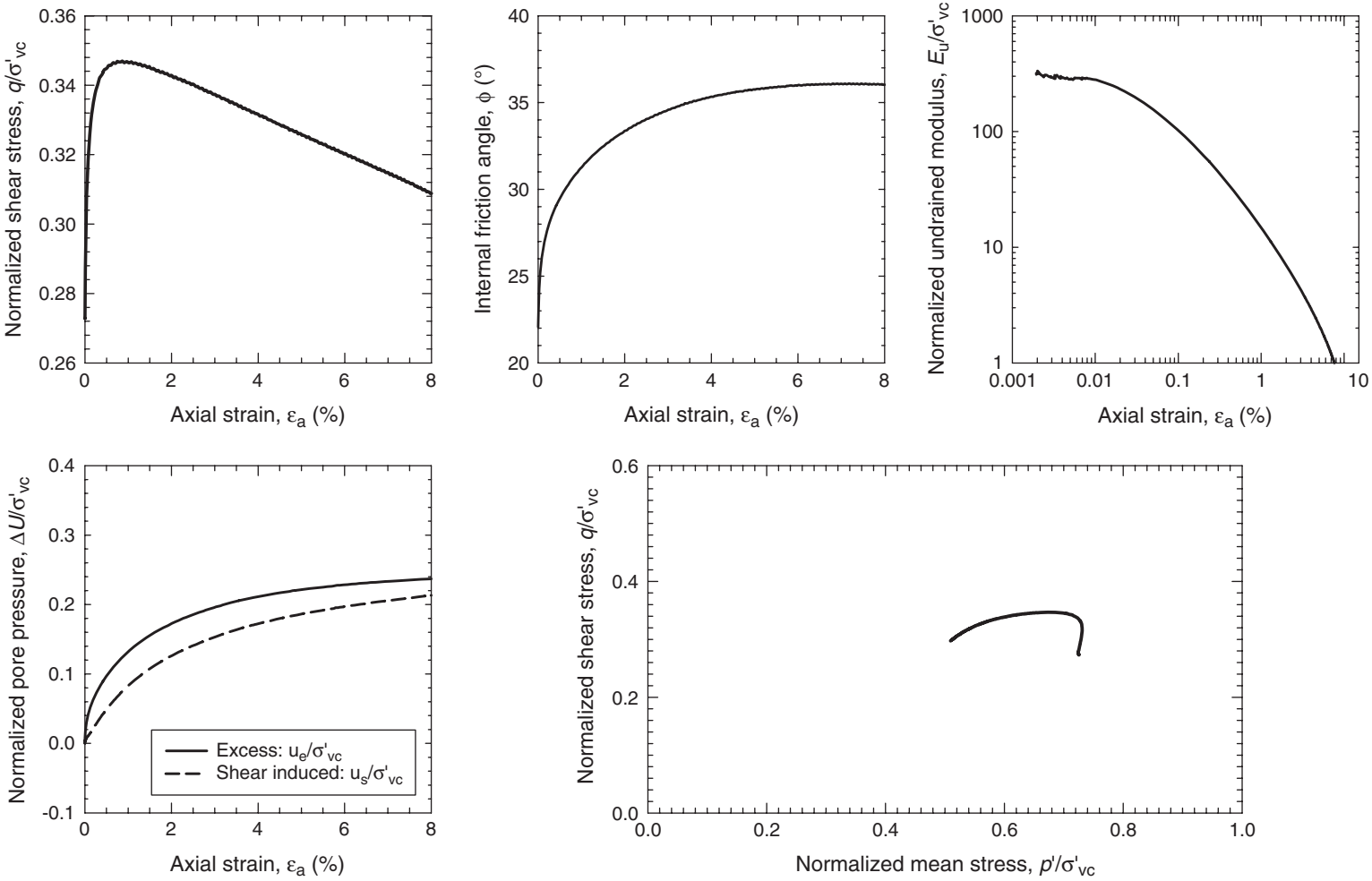


Figure F38. TX 643 consolidation data for Sample 204-1244B-1H-4, 138–148 cm (data from Table T46, p. 113).

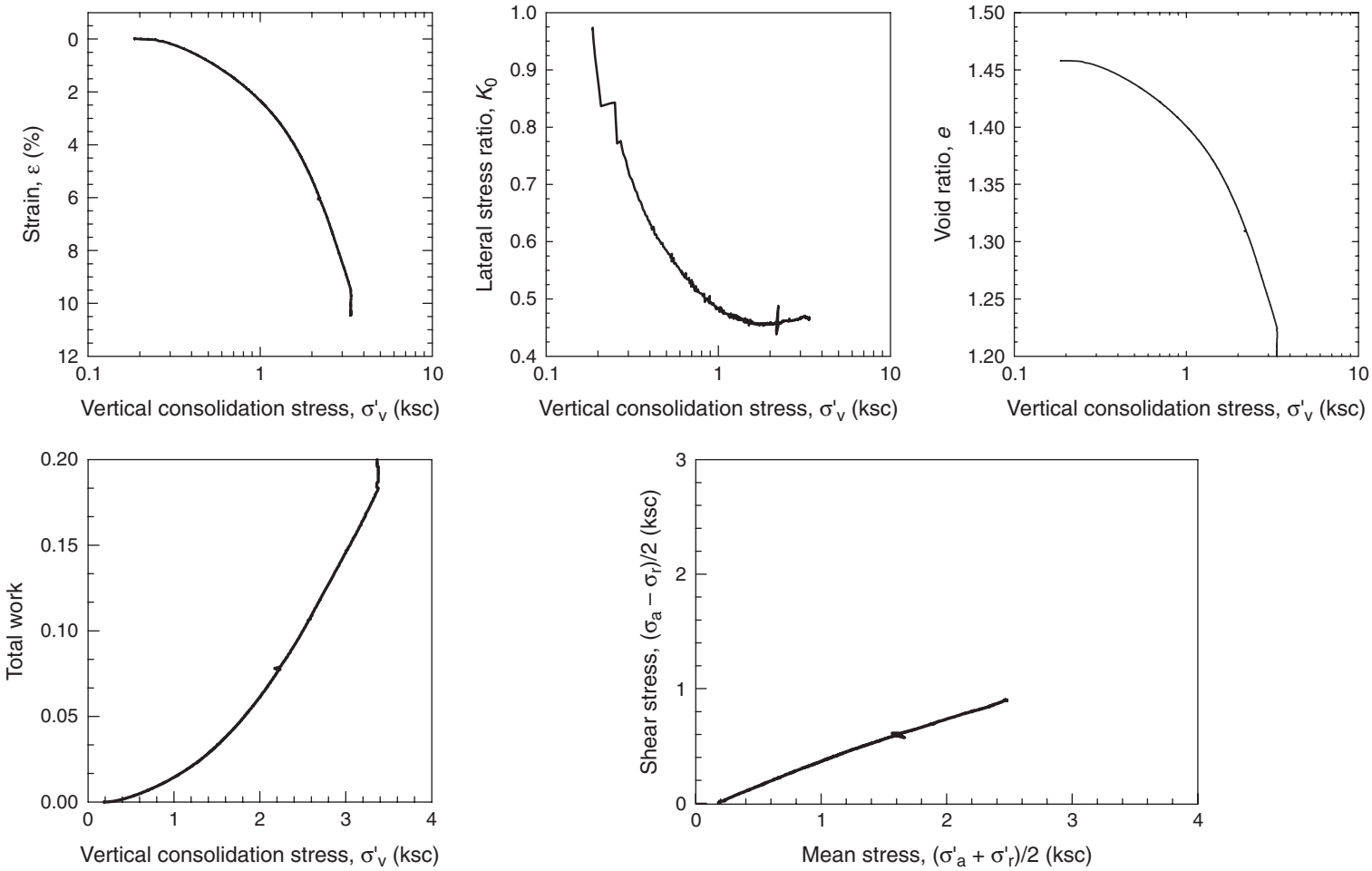


Figure F39. TX 643 undrained shearing data for Sample 204-1244B-1H-4, 138–148 cm (data from Table **T47,** p. 114).

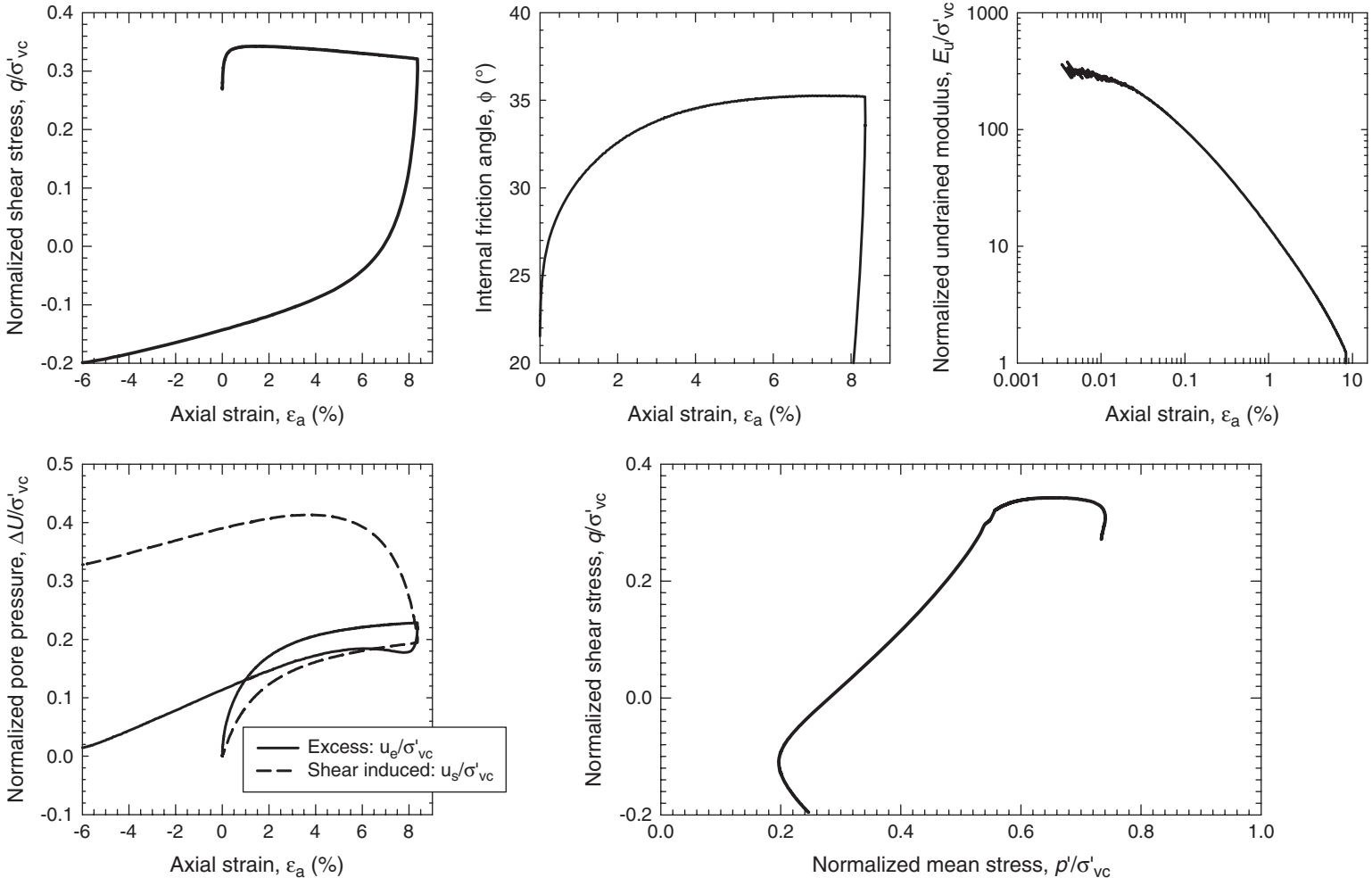


Figure F40. TX 644 consolidation data for resedimented sample (data from Table T48, p. 115).

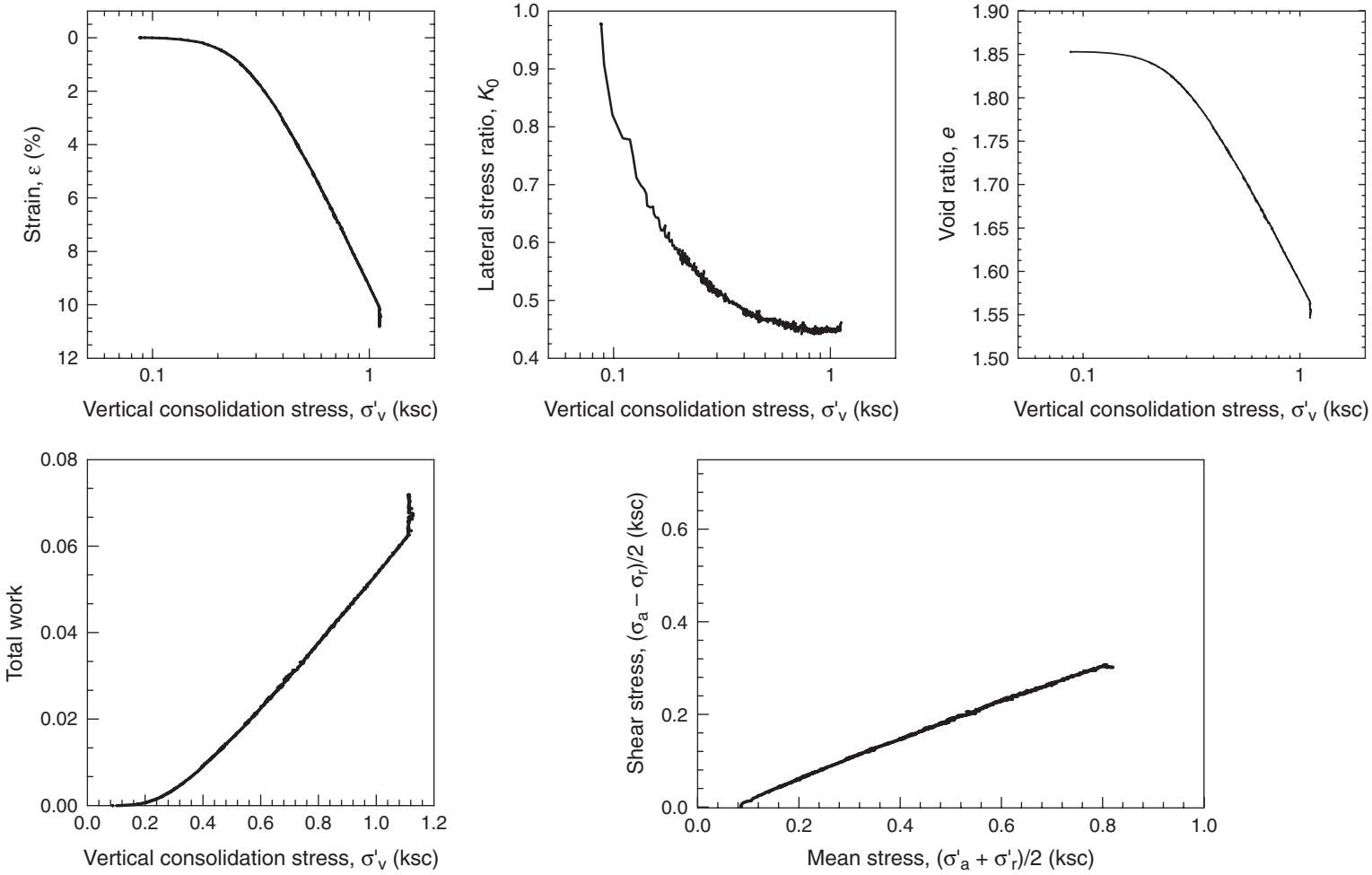
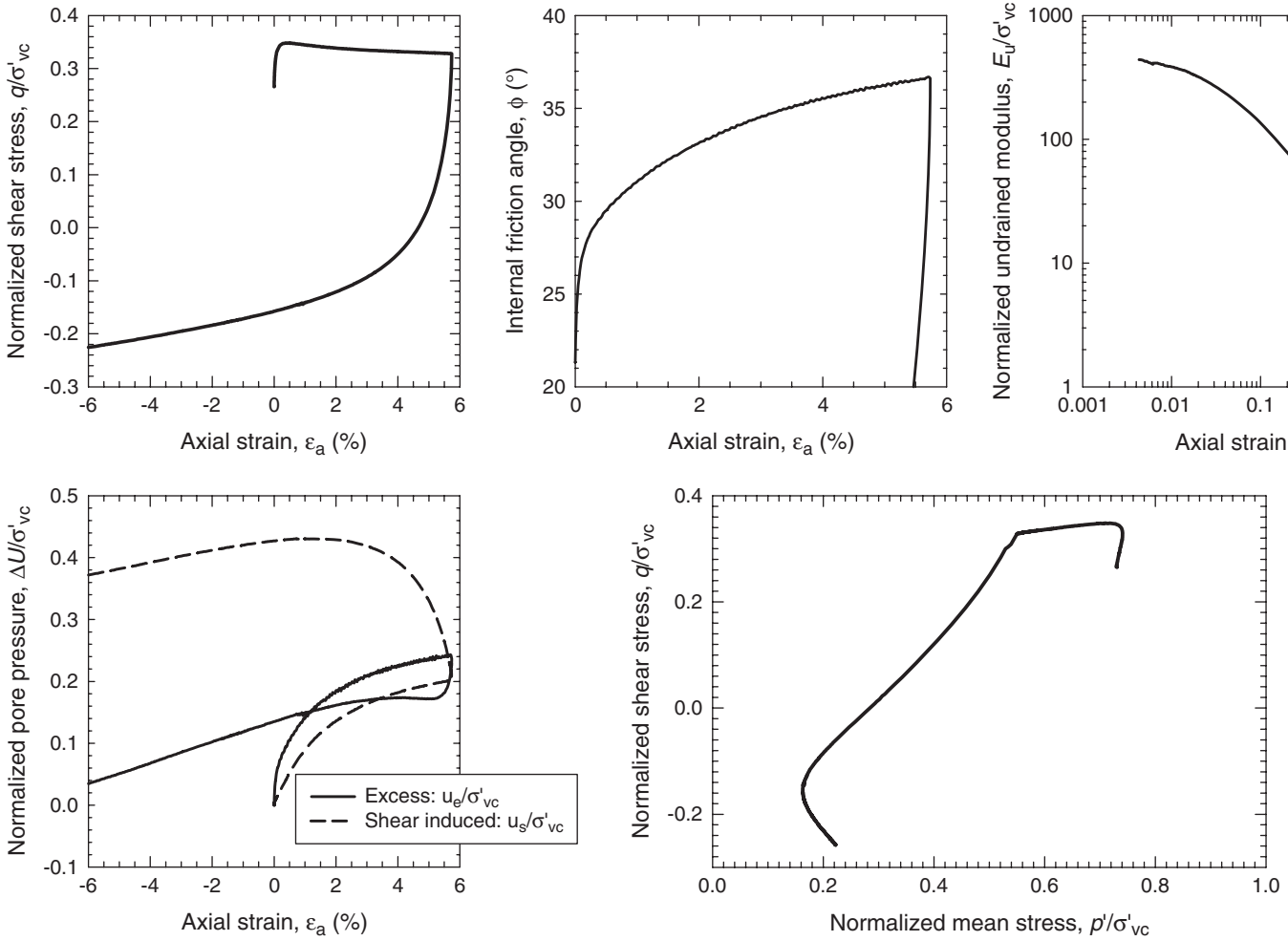


Figure F41. TX 644 undrained shearing data for resedimented sample (data from Table **T49**, p. 116).



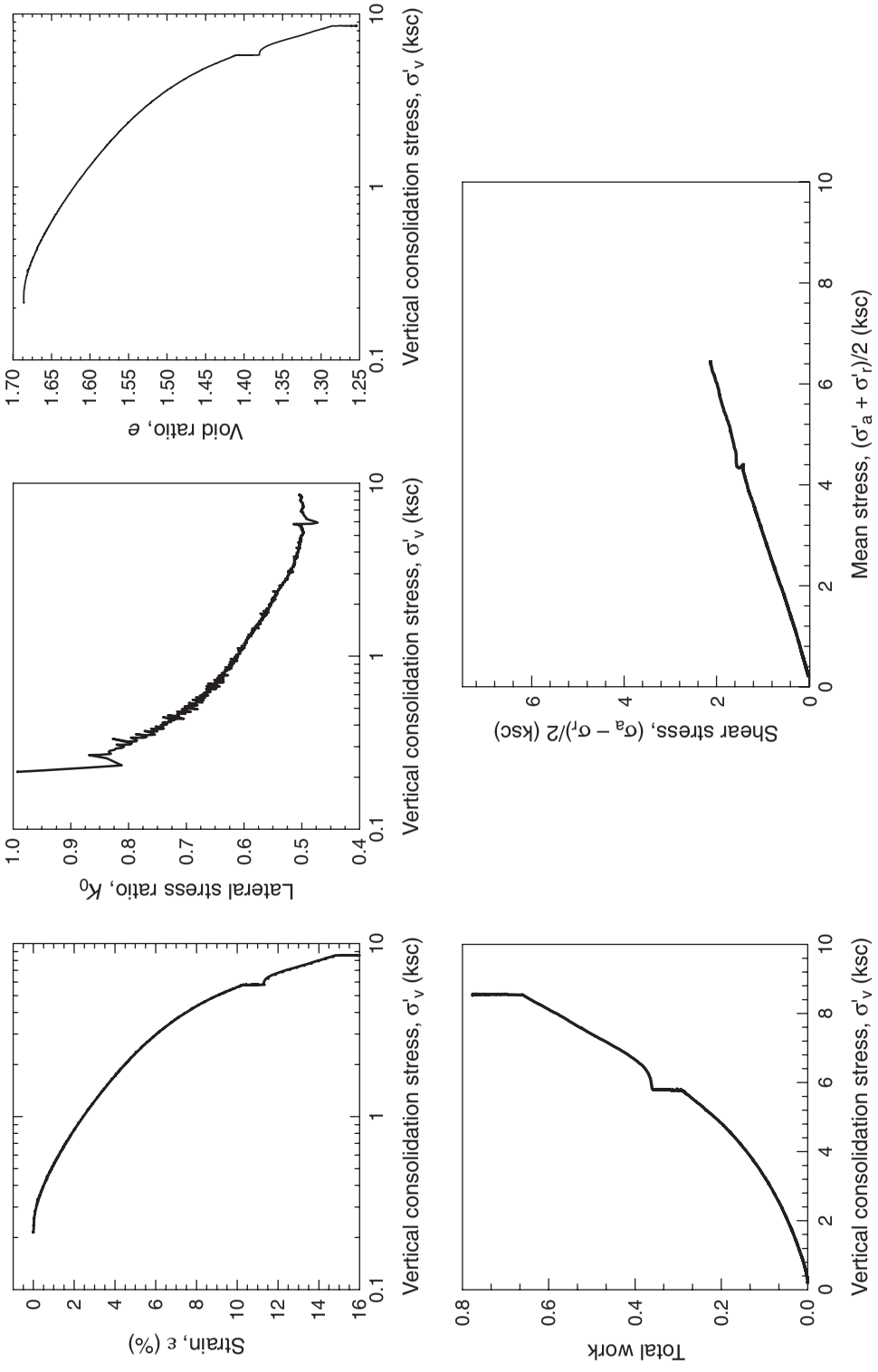
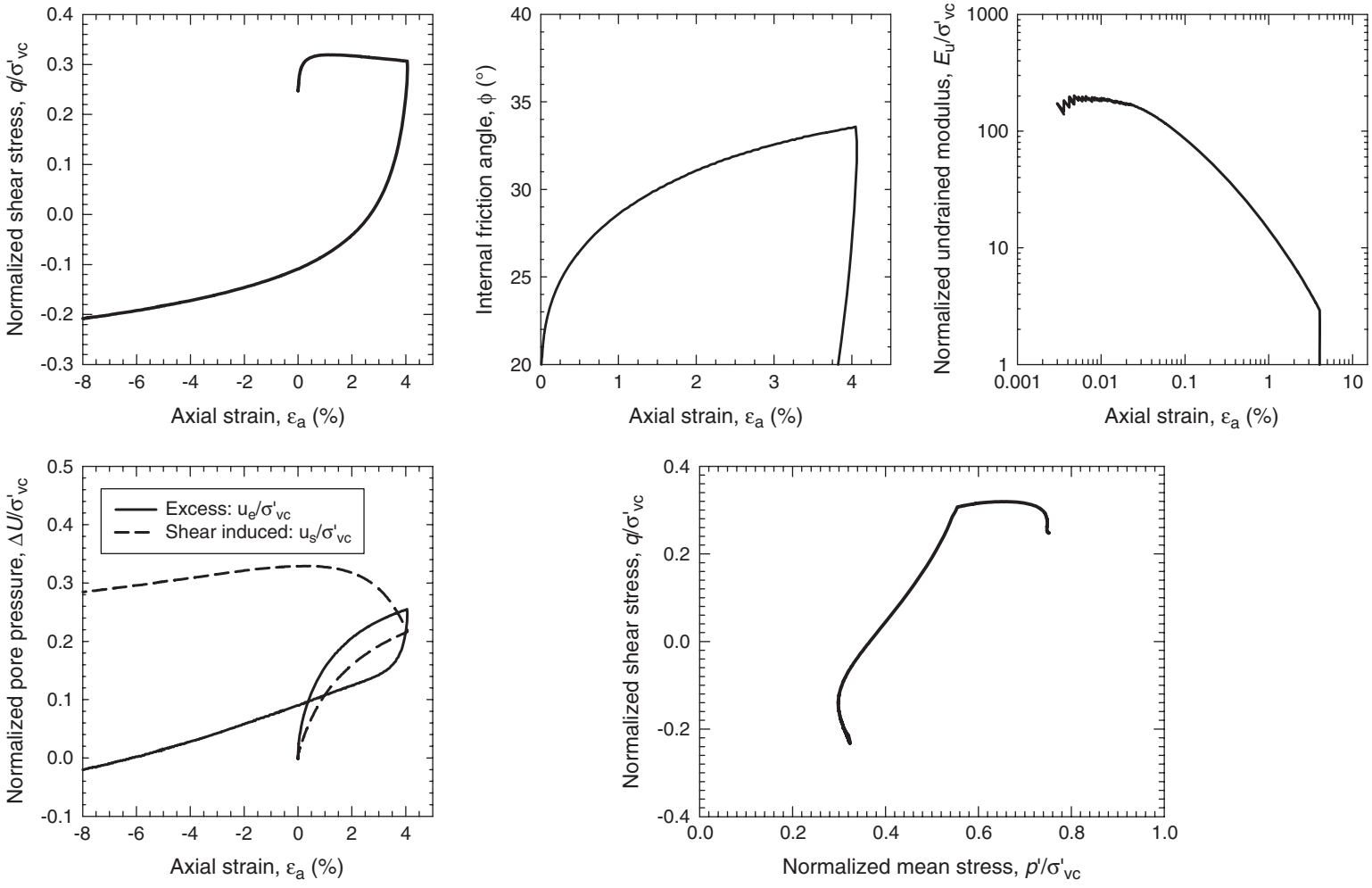


Figure F42. TX 645 consolidation data for Sample 204-1244B-4H-6, 125–135 cm (data from Table T50, p. 117).

Figure F43. TX 645 undrained shearing data for Sample 204-1244B-4H-6, 125–135 cm (data from Table T51, p. 118).



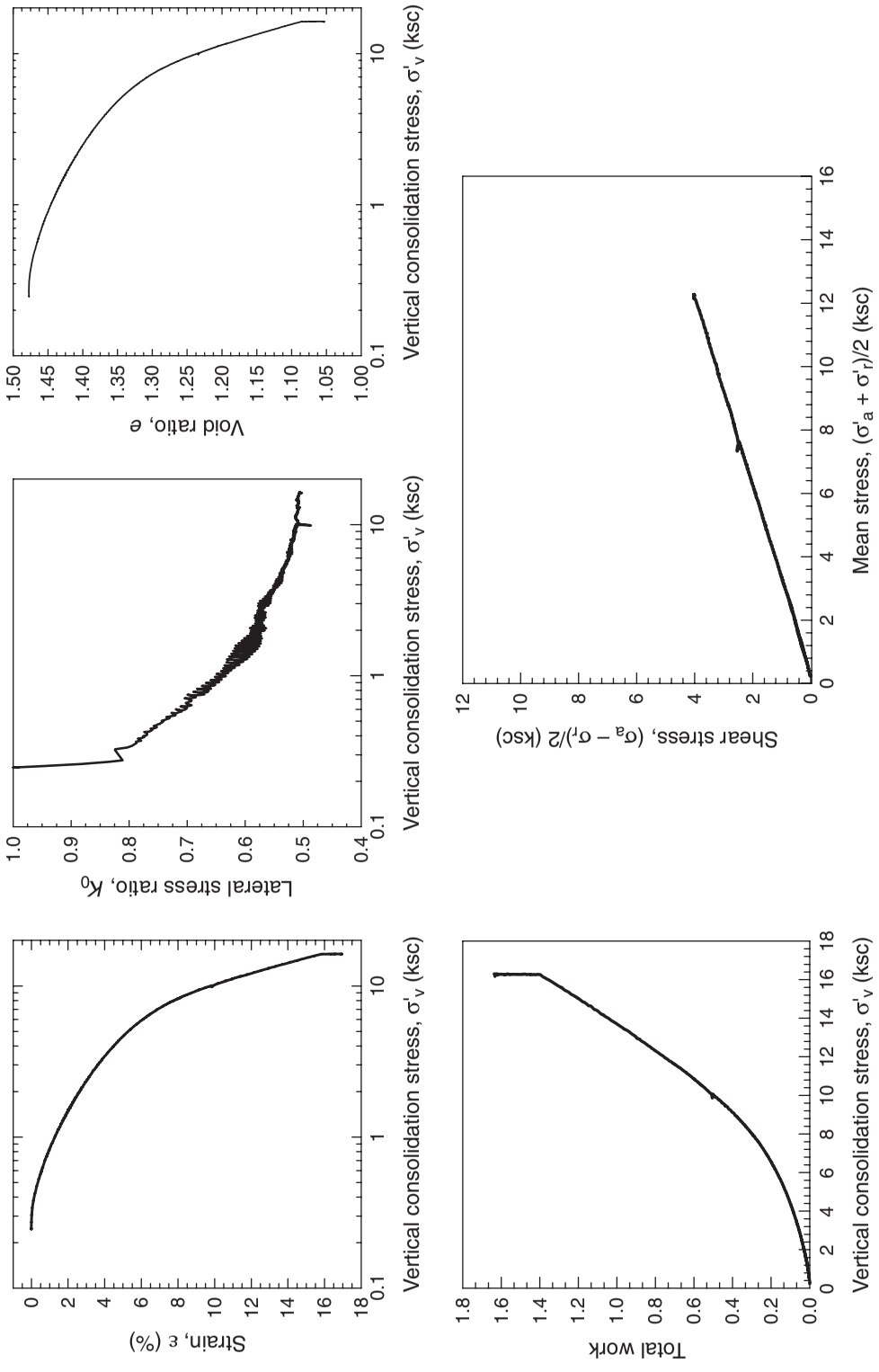


Figure F44. TX 646 consolidation data for Sample 204-1244C-9H-5, 115–125 cm (data from Table T52, p. 119).

Figure F45. TX 646 undrained shearing data for Sample 204-1244C-9H-5, 115–125 cm (data from Table T53, p. 120).

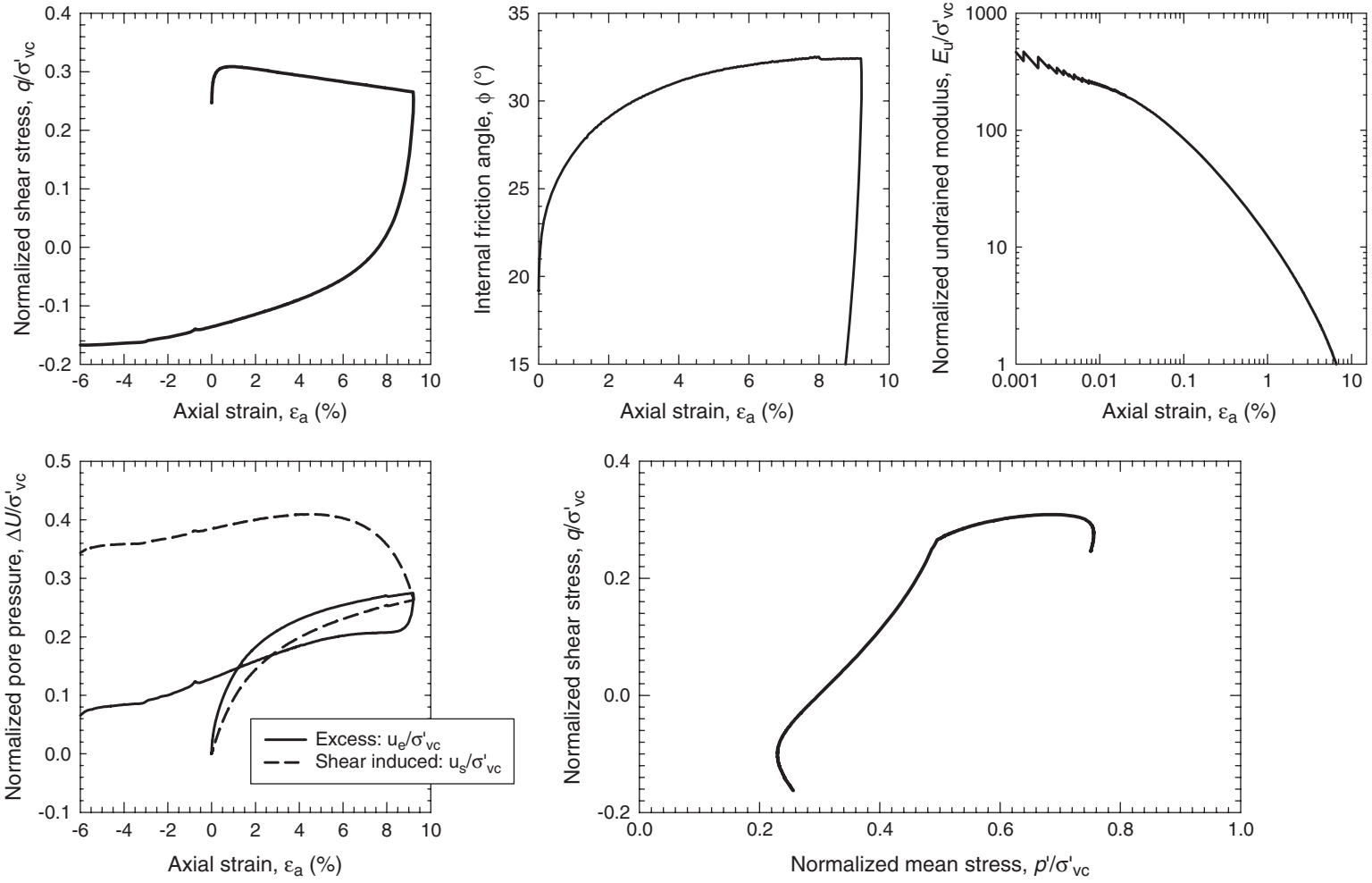


Figure F46. TX 647 consolidation data for resedimented sample (data from Table T54, p. 121).

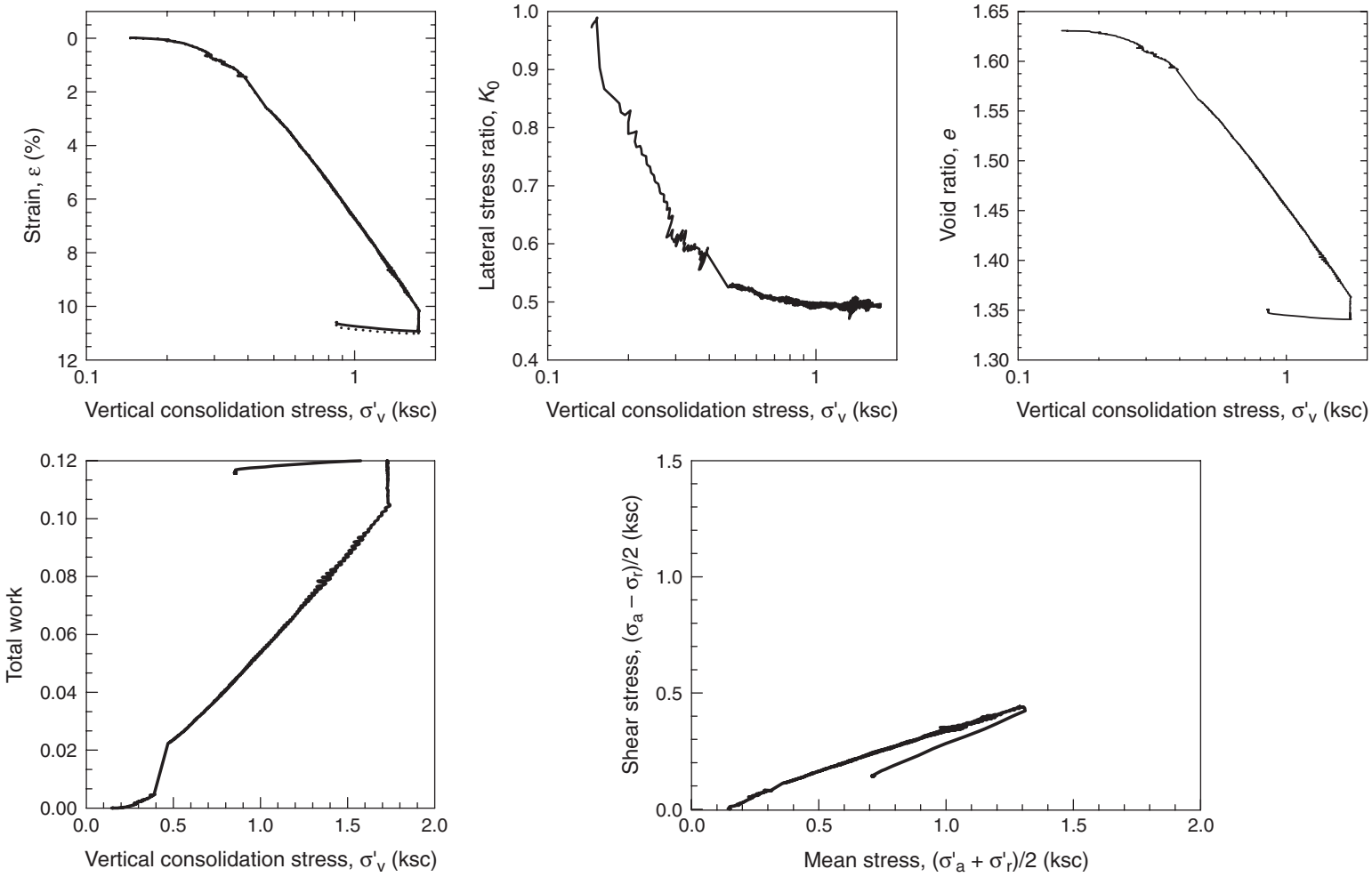
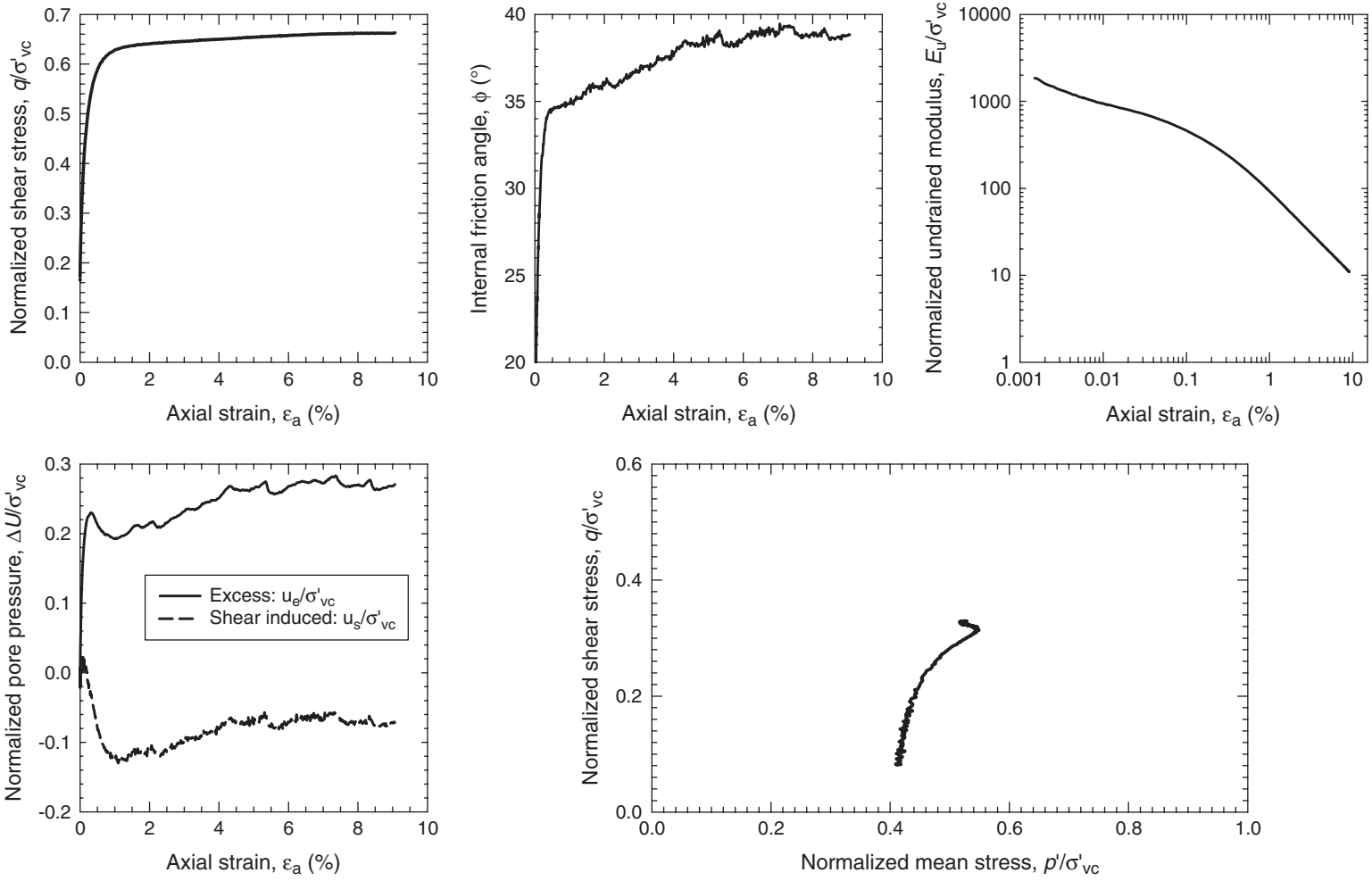


Figure F47. TX 647 undrained shearing data for resedimented sample (data from Table T55, p. 122).



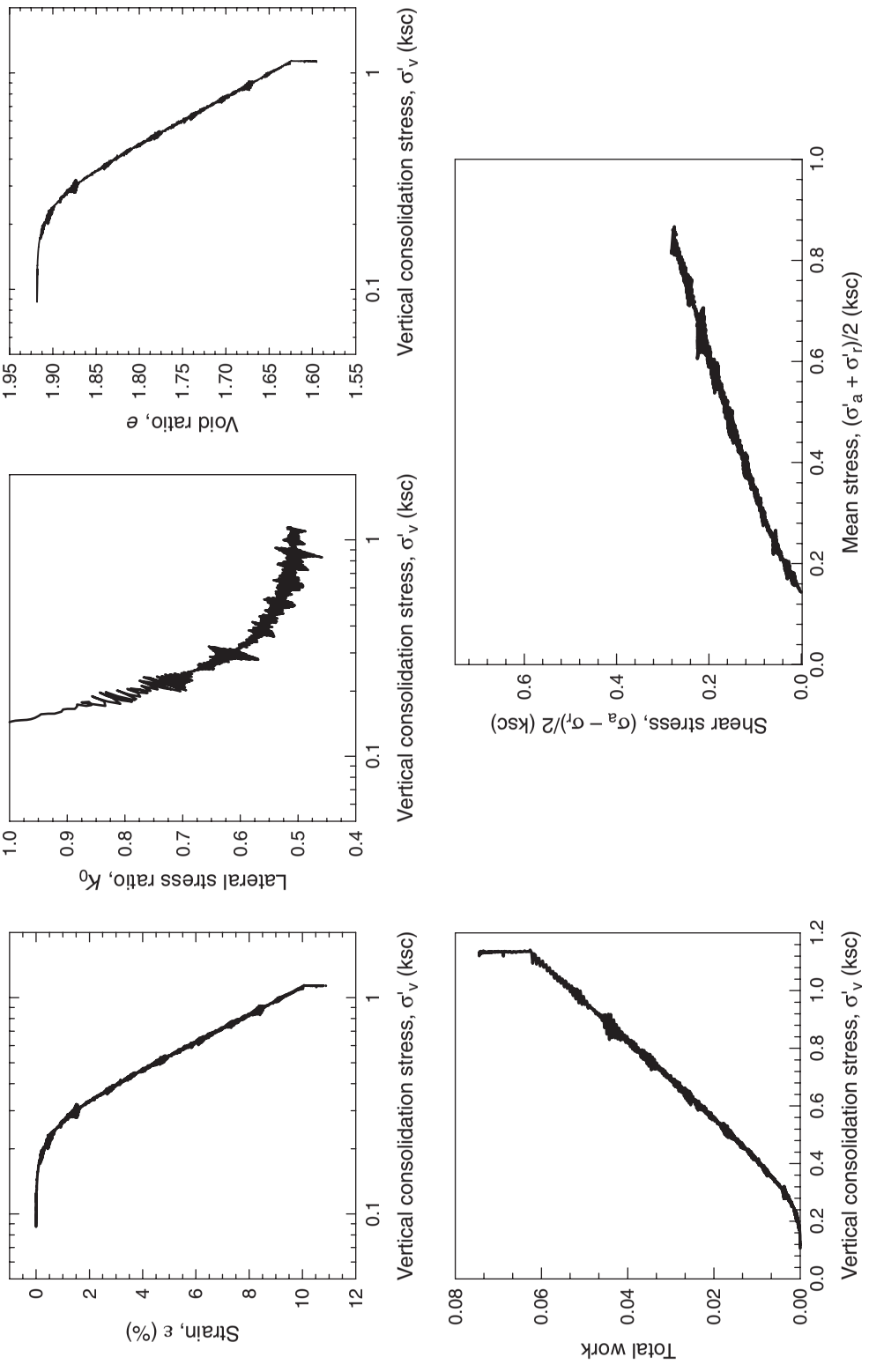


Figure F48. TX 650 consolidation data for resedimented sample (data from Table T56, p. 123).

Figure F49. TX 650 undrained shear data for resedimented sample (data from Table T57, p. 124).

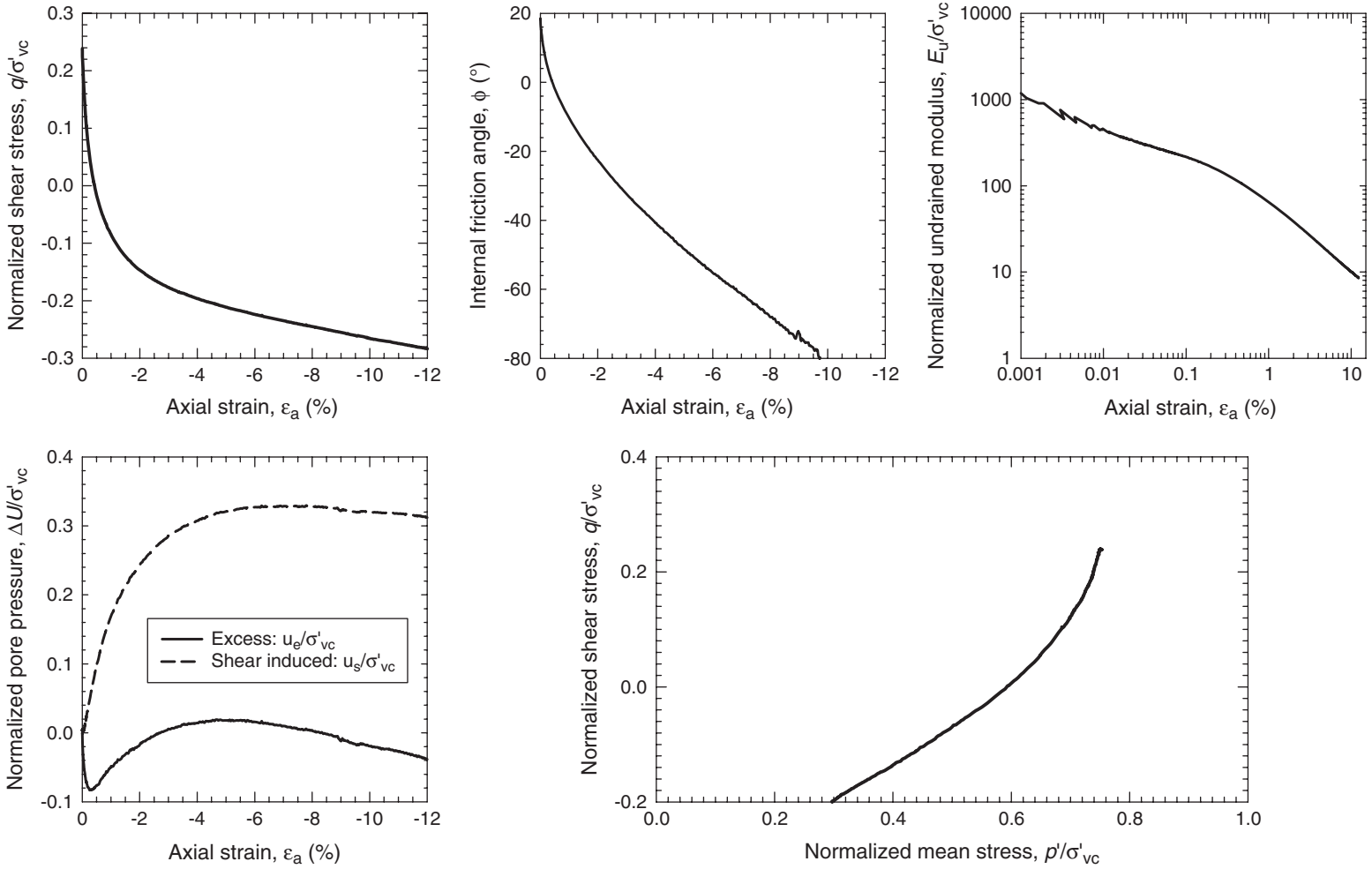


Table T1. Whole core sections provided to MIT for consolidation and strength testing.

Section	Interval (cm)	Depth to top of section (mbsf)	CRSC testing		CKoU testing		Hydrate zone
			Sample number	Interval (cm)	Sample number	Interval (cm)	
204-1244B-1H-4WR	120–150	5.7	CRS 580	125–128	TX 643	138–148	GSHZ
			CRS 608	126–129			
204-1244B-3H-3WR	120–150	20.3	CRS 497	145–148	TX 642	128–138	GSHZ
			CRS 585	120–123			
204-1244B-4H-6WR	120–150	32.98	CRS 508	120–125	TX 635	135–145	GSHZ
			CRS 563	134–137	TX 645	125–135	
204-1244B-6H-8WR	0–30	52.81	CRS 511	24–29			GSHZ
			CRS 584	6–9			
204-1244C-8H-7WR	45–75	70.88	CRS 504	71–74			GSHZ
			CRS 578	45–48			
204-1244C-9H-5WR	105–135	79.05	CRS 569	105–108	TX 646	115–125	GSHZ
204-1244C-13H-3WR	120–150	114.2	CRS 491	144–147			GSHZ
			CRS 493	139–142			
			CRS 567	120–123			
204-1244C-17H-3WR	65–109	135.55	CRS 495	97–100	TX 636	80–90	FGZ
			CRS 499				
			CRS 564	88–91			
Other			CRS 577*		TX 641‡		
					TX 644†		
					TX 647†		
					TX 650‡		

Notes: GSHZ = gas hydrate stability zone, FGZ = free gas zone. * = mixed sample, † = resedimented sample, ‡ = remolded sample.

Table T2. Summary table of all tests conducted on Hydrate Ridge soil.

Section	Depth (mbsf)	Index tests			X-ray diffraction			CRSC		Triaxial shear: NC		Triaxial shear: OC
		AL	LOI	PSA	RP	CT	CF	St	Sm	CKoUC	CKoUE	CKoUC
204-1244B-												
1H-4WR	5.70	1	1						1	1*		
3H-3WR	20.30	1	1			1		1	1	1		
4H-6WR	32.98	1	1		1	1	1	1	1	2*†		
6H-8WR	52.81	1	1			1		1	1			
204-1244C-												
8H-7WR	70.88	1	1		1	1	1	1	1			
9H-5WR	79.05	1	1						1	1*		
13H-3WR	114.20	1	1	1	1	1	1	2	1			
17H-3WR	135.55	1	1			1		1	1	1†		
Remolded		1						1		1		
Resedimented								2		1	1	1

Notes: CRSC = constant rate of strain consolidation. NC = normally consolidated, OC = overconsolidated. AL = Atterberg limits, LOI = loss on ignition, PSA = particle size analysis. RP = random powder, CT = calcite treated, CF = clay fraction. St = standard diameter, Sm = small diameter. CKoUC = Ko-consolidated undrained compression, CKoUE = Ko-consolidated undrained extension. * = compression then extension. † = high-pressure cell.

Table T3. Nomenclature.

Variable	Definition	Dimensions	SI units
A	A-parameter	Dimensionless	—
B	B-value	Dimensionless	—
C_c	Compression index	Dimensionless	—
C_r	Recompression index	Dimensionless	—
c_v	Coefficient of consolidation	L^2/T	cm^2/s
G_s	Specific gravity	Dimensionless	—
e_c	Consolidation void ratio	Dimensionless	—
e_i	Initial void ratio	Dimensionless	—
I_l	Liquidity index	Dimensionless	—
I_p	Plasticity index	Dimensionless	—
K_c	Consolidation lateral stress ratio	Dimensionless	—
K_o	In situ lateral stress ratio	Dimensionless	—
K	Lateral stress ratio	Dimensionless	—
k_o	In situ hydraulic conductivity	L/T	cm/s
k	Hydraulic conductivity	L/T	cm/s
LOI	Loss on ignition	Dimensionless	—
OCR	Overconsolidation ratio	Dimensionless	—
p′	Mean stress	M/LT^2	kgf/cm^2
q	Shear stress	M/LT^2	kgf/cm^2
S_i	Initial saturation	Dimensionless	%
t_s	Time for secondary compression	T	sec
u_b	Back pressure	M/LT^2	kgf/cm^2
w_c	Water content	Dimensionless	%
w_l	Liquid limit	Dimensionless	—
w_n	Natural water content	Dimensionless	%
w_p	Plastic limit	Dimensionless	—
Δu_e	Excess pore pressure	M/LT^2	kgf/cm^2
Δu_s	Shear induced pore pressure	M/LT^2	kgf/cm^2
$\delta\varepsilon/\delta t$	Strain rate	1/T	%/hr
ε_a	Axial strain	Dimensionless	—
ε_{vol}	Volumetric strain	Dimensionless	—
ρ_t	Total density	M/L^3	g/cm^3
f	Friction angle	Degrees	degrees
σ'_i	Initial effective stress	M/LT^2	kgf/cm^2

Table T4. Summary of atterberg limits, organic matter content, and calcite content tests.

Section	Depth (mbsf)	w_n (%)	w_l (%)	w_p (%)	I_p (%)	I_l (%)	LOI (%)	$CaCO_3$ content (wt%)
204-1244B-								
1H-4WR	5.70	59.90	71.00	32.00	39.00	72.00	5.89	
3H-3WR	20.30	63.80	82.00	37.00	45.00	60.00	4.55	1.297
4H-6WR	32.98	62.70	87.00	42.00	45.00	46.00	5.18	1.253
6H-8WR	52.81	60.05	85.00	38.00	47.00	47.00	4.93	2.357
204-1244C-								
8H-7WR	70.88	58.10	86.00	40.00	46.00	39.00	5.87	2.090
9H-5WR	79.05	54.40	83.00	38.00	45.00	36.00	7.27	
13H-3WR	114.20	47.27	81.00	39.00	42.00	20.00	5.19	5.812
13H-3WR	114.20	Oven-dried	64.00	39.00	25.00			
17H-3WR	135.55	48.85	77.00	35.00	42.00	33.00	4.68	2.928

Notes: LOI = loss on ignition. See Table T3, p. 70, for definitions of headers.

Table T5. XRD random powder sample for Section 204-1244B-4H-6WR.

2θ (°)	Intensity
6.00	837
6.02	783
6.04	783
6.06	758
6.08	842
6.10	858
6.12	762
6.14	917
6.16	1021
6.18	979
6.20	1017
6.22	1258
6.24	1296
6.26	1304
6.28	1371
6.30	1158
6.32	1029
6.34	704
6.36	758
6.38	758
6.40	579
6.42	625
6.44	662
6.46	608
6.48	600
6.50	608
6.52	667
6.54	612
6.56	604
6.58	587
6.60	692
6.62	642
6.64	554
6.66	512
6.68	587
6.70	500
6.72	646
6.74	571

Table T6. XRD random powder sample for Section 204-1244C-8H-7WR.

2θ (°)	Intensity
6.00	671
6.02	675
6.04	721
6.06	700
6.08	729
6.10	733
6.12	742
6.14	862
6.16	858
6.18	862
6.20	908
6.22	1087
6.24	1050
6.26	1242
6.28	1054
6.30	921
6.32	746
6.34	742
6.36	679
6.38	637
6.40	675
6.42	654
6.44	554
6.46	579
6.48	621
6.50	604
6.52	642
6.54	600
6.56	612
6.58	654
6.60	579
6.62	542
6.64	537
6.66	558
6.68	542
6.70	525
6.72	579
6.74	608

Table T7. XRD random powder sample for Section 204-1244C-13H-3WR.

2θ (°)	Intensity
6.00	725
6.02	750
6.04	750
6.06	883
6.08	771
6.10	892
6.12	858
6.14	1021
6.16	933
6.18	946
6.20	1129
6.22	1204
6.24	1362
6.26	1367
6.28	1308
6.30	1104
6.32	879
6.34	867
6.36	808
6.38	804
6.40	650
6.42	592
6.44	746
6.46	787
6.48	596
6.50	612
6.52	679
6.54	712
6.56	683
6.58	604
6.60	612
6.62	583
6.64	546
6.66	529
6.68	667
6.70	654
6.72	646
6.74	600

Table T8. Calcite-treated XRD random powder sample for Section 204-1244B-3H-3WR.

2θ (°)	Intensity
4.00	1112
4.02	962
4.04	1037
4.06	962
4.08	1000
4.10	883
4.12	942
4.14	992
4.16	983
4.18	967
4.20	1008
4.22	996
4.24	904
4.26	1112
4.28	896
4.30	837
4.32	962
4.34	958
4.36	925
4.38	887
4.40	925
4.42	938
4.44	975
4.46	1108
4.48	1071
4.50	958
4.52	1054
4.54	900
4.56	946
4.58	892
4.60	921
4.62	883
4.64	912
4.66	979
4.68	946
4.70	904
4.72	837
4.74	858

Table T9. Calcite-treated XRD random powder sample for Section 204-1244B-4H-6WR.

2θ (°)	Intensity
4.00	1092
4.02	1196
4.04	1083
4.06	1050
4.08	1050
4.10	1042
4.12	1075
4.14	1108
4.16	1050
4.18	1150
4.20	1042
4.22	1167
4.24	1096
4.26	1008
4.28	1167
4.30	1092
4.32	1017
4.34	1100
4.36	912
4.38	1050
4.40	1275
4.42	1067
4.44	1183
4.46	1067
4.48	1154
4.50	1050
4.52	1271
4.54	1175
4.56	1108
4.58	1146
4.60	962
4.62	1171
4.64	1017
4.66	1025
4.68	1100
4.70	1033
4.72	942
4.74	879

Table T10. Calcite-treated XRD random powder sample for Section 204-1244B-6H-8WR.

2θ (°)	Intensity
4.00	1329
4.02	1254
4.04	1287
4.06	1208
4.08	1275
4.10	1292
4.12	1304
4.14	1171
4.16	1187
4.18	1112
4.20	1154
4.22	1308
4.24	1225
4.26	1242
4.28	1208
4.30	1292
4.32	1117
4.34	1237
4.36	1225
4.38	1179
4.40	1171
4.42	1133
4.44	1196
4.46	1104
4.48	1242
4.50	1104
4.52	1308
4.54	1271
4.56	1162
4.58	1179
4.60	1271
4.62	1162
4.64	1117
4.66	1075
4.68	1121
4.70	1083
4.72	1025
4.74	1142

Table T11. Calcite-treated XRD random powder sample for Section 204-1244C-8H-7WR.

2θ (°)	Intensity
4.00	1196
4.02	1187
4.04	1117
4.06	1158
4.08	1192
4.10	1146
4.12	1137
4.14	1058
4.16	1054
4.18	1112
4.20	1050
4.22	1142
4.24	1083
4.26	1096
4.28	1142
4.30	1075
4.32	1087
4.34	1033
4.36	967
4.38	1192
4.40	1012
4.42	1179
4.44	1175
4.46	1092
4.48	1167
4.50	1187
4.52	1121
4.54	1200
4.56	1275
4.58	1237
4.60	1050
4.62	1108
4.64	1167
4.66	1133
4.68	1271
4.70	1121
4.72	871
4.74	1158

Table T12. Calcite-treated XRD random powder sample for Section 204-1244C-13H-3WR.

2θ (°)	Intensity
4.00	1104
4.02	1033
4.04	1046
4.06	1200
4.08	929
4.10	1042
4.12	1112
4.14	1092
4.16	1271
4.18	1067
4.20	1067
4.22	1062
4.24	1217
4.26	992
4.28	1012
4.30	1092
4.32	1079
4.34	1042
4.36	1092
4.38	1021
4.40	1046
4.42	1033
4.44	946
4.46	1083
4.48	908
4.50	1025
4.52	1037
4.54	1029
4.56	1087
4.58	967
4.60	1142
4.62	950
4.64	1017
4.66	854
4.68	979
4.70	987
4.72	1058
4.74	887

Table T13. Calcite-treated XRD random powder sample for Section 204-1244C-17H-3WR.

2θ (°)	Intensity
4.00	1342
4.02	1200
4.04	1267
4.06	1275
4.08	1325
4.10	1108
4.12	1242
4.14	1279
4.16	1137
4.18	1262
4.20	1087
4.22	1167
4.24	1179
4.26	1283
4.28	1158
4.30	1229
4.32	1242
4.34	1200
4.36	1129
4.38	1304
4.40	1254
4.42	1346
4.44	1292
4.46	1296
4.48	1133
4.50	1246
4.52	1321
4.54	1171
4.56	1208
4.58	1287
4.60	1083
4.62	1229
4.64	1196
4.66	1129
4.68	1062
4.70	1125
4.72	1179
4.74	1033

Table T14. Clay-fraction XRD random powder sample for Section 204-1244B-4H-6WR.

2θ (°)	Intensity
4.00	654
4.02	750
4.04	729
4.06	662
4.08	696
4.10	596
4.12	679
4.14	712
4.16	658
4.18	742
4.20	608
4.22	692
4.24	633
4.26	717
4.28	675
4.30	662
4.32	867
4.34	721
4.36	629
4.38	771
4.40	762
4.42	662
4.44	775
4.46	712
4.48	621
4.50	817
4.52	800
4.54	692
4.56	717
4.58	742
4.60	654
4.62	721
4.64	554
4.66	667
4.68	775
4.70	633
4.72	671
4.74	650

Table T15. Clay-fraction XRD random powder sample for Section 204-1244C-8H-7WR.

2θ (°)	Intensity
4.00	750
4.02	779
4.04	812
4.06	692
4.08	787
4.10	858
4.12	717
4.14	817
4.16	817
4.18	758
4.20	704
4.22	762
4.24	754
4.26	733
4.28	737
4.30	850
4.32	692
4.34	650
4.36	808
4.38	837
4.40	917
4.42	746
4.44	775
4.46	858
4.48	833
4.50	804
4.52	821
4.54	950
4.56	783
4.58	800
4.60	829
4.62	787
4.64	783
4.66	733
4.68	687
4.70	687
4.72	621
4.74	683

Table T16. Clay-fraction XRD random powder sample for Section 204-1244C-13H-3WR.

2θ (°)	Intensity
4.00	600
4.02	579
4.04	587
4.06	683
4.08	650
4.10	629
4.12	592
4.14	625
4.16	629
4.18	558
4.20	617
4.22	587
4.24	587
4.26	696
4.28	650
4.30	679
4.32	658
4.34	767
4.36	700
4.38	742
4.40	667
4.42	696
4.44	679
4.46	771
4.48	750
4.50	633
4.52	671
4.54	712
4.56	667
4.58	608
4.60	750
4.62	608
4.64	571
4.66	621
4.68	579
4.70	571
4.72	558
4.74	567

Table T17. CRSC test conditions and consolidation properties.

Test number	Index tests			Specimen data						Test conditions		Consolidation properties			Remarks
	w_c (%)	w_p (%)	w_l (%)	w_n (%)	I_p	ρ_t (g/cm^3)	e_i	S_i (%)	G_s	u_b (ksc)	δε/δt (%/hr)	C_c	C_r	k_o (cm/s)	
CRS 580	59.9	32	71	63.56	39	1.646	1.566	104.8	2.58	4.00	0.5	0.544	0.047	1.50E–07	Small diameter
CRS 608	56.1	32	71	58.00	39	1.688	1.418	105.6	2.58	4.00	0.5	0.476	0.035		Small diameter, horizontal spec
CRS 497	63.8	37	82	64.00	45	1.619	1.608	102.5	2.58	4.00	0.5	0.646	0.044	9.50E–08	
CRS 585	60.0	37	82	59.32	45	1.668	1.459	104.7	2.58	4.00	0.5	0.534	0.059	1.00E–07	Small diameter
CRS 508	63.3	42	87	63.78	45	1.615	1.659	100.8	2.62	4.00	0.5	0.693	0.053	8.50E–08	
CRS 563	62.1	42	87	66.69	45	1.609	1.715	101.9	2.62	4.00	0.5	0.704	0.063	1.00E–07	Small diameter
CRS 511		38	85		47	1.400	3.214	102.9	2.59	4.00	0.5	0.566	0.050		Resedimented
CRS 584	63.1	38	85	66.53	47	1.620	1.667	103.5	2.59	4.00	0.5	0.599	0.062	1.40E–07	Small diameter
CRS 504	58.1	40	86	58.32	46	1.632	1.532	99.4	2.61	4.00	0.5	0.633	0.043	6.50E–08	
CRS 578	57.4	40	86	61.05	46	1.634	1.573	101.3	2.61	4.00	0.5	0.672	0.049	8.50E–08	Small diameter
CRS 569	54.4	38	83	57.24	45	1.653	1.510	100.0	2.64	4.00	0.5	0.658	0.058	1.30E–07	Small diameter
CRS 491	49.9	39	81	50.75	42	1.652	1.402	95.3	2.63	4.00	0.5	0.560	0.037	7.00E–08	
CRS 493	47.8	39	81	51.34	42	1.651	1.414	95.6	2.63	4.00	0.5	0.535	0.064	1.00E–07	
CRS 567	54.4	39	81	57.24	42	1.653	1.510	100.0	2.64	4.00	0.5	0.658	0.058	1.30E–07	Small diameter
CRS 495	49.8	35	77	50.52	43	1.704	1.377	98.8	2.69	4.00	0.5	0.435	0.051	7.00E–08	
CRS 499		35	77		43	1.464	2.744	101.7	2.69	4.00	0.5	0.519	0.057		Resedimented
CRS 564	47.9	35	77	46.68	43	1.771	1.229	102.2	2.69	5.00	0.5	0.453	0.060	3.00E–08	Small diameter
CRS 577	49.2					1.724	1.364	101.6	2.69	4.00	0.5	0.340	0.041		Remolded

Notes: See Table T3, p. 70, for explanation of headings. 1 kg/cm^2 = 98.06 kPa.

Table T18. CRS 491 consolidation data for Sample 204-1244C-13H-3WR, 144–147 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
330	–0.1678	0.1259	3.9726	3.97237	0.12574	1.40613	2.33E–04			1.85E–03	2.88E–06
340	–0.1666	0.12578	3.9729	3.97328	0.12604	1.40611	–3.78E–04			–3.01E–03	4.39E–06
350	–0.1676	0.12589	3.9729	3.97315	0.12605	1.40613	–2.49E–04			–1.98E–03	3.08E–06
360	–0.1665	0.12589	3.97274	3.97279	0.12592	1.40611	–4.77E–05			–3.79E–04	4.41E–06
370	–0.1669	0.12561	3.97252	3.97263	0.12568	1.40611	–1.13E–04			–9.00E–04	3.95E–06
380	–0.1673	0.12419	3.97243	3.97237	0.12415	1.40612	6.15E–05			4.95E–04	3.46E–06
390	–0.1737	0.12554	3.97273	3.9725	0.12539	1.40628	2.31E–04			1.84E–03	–4.56E–06
400	–0.1739	0.12628	3.97311	3.97341	0.12648	1.40628	–2.94E–04			–2.33E–03	–4.78E–06
410	–0.1782	0.12549	3.97303	3.97354	0.12583	1.40638	–5.10E–04			–4.07E–03	–1.02E–05
421	–0.1824	0.12386	3.97381	3.97396	0.12396	1.40649	–1.50E–04			–1.21E–03	–1.54E–05
430	–0.1883	0.13203	3.97641	3.97344	0.13005	1.40663	2.97E–03			2.25E–02	–2.29E–05
441	–0.1927	0.14207	3.98161	3.9737	0.1368	1.40673	7.92E–03			5.57E–02	–2.87E–05
458	–0.1969	0.15793	3.99209	3.97548	0.14686	1.40683	1.66E–02			1.05E–01	–3.47E–05
578	–0.1653	0.23811	3.99377	3.98084	0.22949	1.40607	1.29E–02			5.43E–02	2.47E–05
698	–0.1326	0.23806	3.99081	3.98094	0.23148	1.40529	9.88E–03			4.15E–02	9.98E–05
818	–0.1256	0.22771	3.98335	3.97847	0.22445	1.40512	4.88E–03			2.14E–02	1.16E–04
938	–0.1237	0.2424	3.9854	3.97834	0.2377	1.40508	7.06E–03			2.91E–02	1.20E–04
1058	–0.1067	0.2688	3.98732	3.98081	0.26446	1.40467	6.51E–03			2.42E–02	1.63E–04
1178	–0.0831	0.26926	3.98715	3.98055	0.26486	1.4041	6.60E–03			2.45E–02	2.25E–04
1298	–0.0716	0.2714	3.9857	3.98055	0.26796	1.40382	5.15E–03			1.90E–02	2.56E–04
1418	–0.0603	0.28517	3.98476	3.98094	0.28263	1.40355	3.82E–03			1.34E–02	2.87E–04
1538	–0.0343	0.27616	3.98514	3.98068	0.27318	1.40293	4.46E–03			1.62E–02	3.59E–04
1658	–0.026	0.28777	3.98553	3.98068	0.28453	1.40273	4.85E–03			1.68E–02	3.82E–04
1778	–0.0126	0.30596	3.98787	3.9812	0.30151	1.40241	6.67E–03	5.17E–07	3.14E–02	2.18E–02	4.22E–04
1898	0.0042	0.31767	3.98872	3.98107	0.31257	1.402	7.66E–03	4.52E–07	2.76E–02	2.41E–02	4.73E–04
2018	0.0193	0.32486	3.98834	3.98094	0.31992	1.40164	7.40E–03	4.75E–07	2.93E–02	2.28E–02	5.21E–04
2138	0.0342	0.33423	3.98855	3.98042	0.3288	1.40128	8.13E–03	4.33E–07	2.65E–02	2.43E–02	5.69E–04
2258	0.0498	0.34539	3.98907	3.9812	0.34015	1.40091	7.87E–03	4.46E–07	2.84E–02	2.28E–02	6.22E–04
2378	0.0654	0.35619	3.98954	3.98081	0.35038	1.40053	8.73E–03	4.03E–07	2.57E–02	2.45E–02	6.76E–04

Note: See Table T3, p. 70, for definitions of headers.

Table T19. CRS 493 consolidation data for Sample 204-1244C-13H-3WR, 139–142 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
210	0.6445	0.52849	3.98065	3.97492	0.52467	1.3982	5.73E–03			1.08E–02	1.59E–05
220	0.6456	0.53465	3.98082	3.97544	0.53107	1.39817	5.38E–03			1.01E–02	2.15E–05
230	0.6455	0.53641	3.98112	3.9757	0.5328	1.39817	5.42E–03			1.01E–02	2.11E–05
232	0.6468	0.53681	3.98372	3.97596	0.53163	1.39814	7.76E–03			1.45E–02	2.80E–05
352	0.6562	0.57533	3.98693	3.98144	0.57168	1.39792	5.49E–03			9.54E–03	8.02E–05
472	0.6741	0.60815	3.98966	3.98118	0.6025	1.39748	8.48E–03			1.39E–02	1.86E–04
592	0.6915	0.62274	3.98938	3.98225	0.61799	1.39706	7.12E–03			1.14E–02	2.93E–04
712	0.7047	0.63468	3.98932	3.98209	0.62986	1.39675	7.23E–03			1.14E–02	3.76E–04
832	0.72	0.65104	3.99052	3.98235	0.6456	1.39638	8.16E–03			1.25E–02	4.74E–04
952	0.7375	0.66402	3.99098	3.9843	0.65957	1.39595	6.68E–03			1.01E–02	5.89E–04
1072	0.7528	0.67312	3.99073	3.98261	0.66771	1.39558	8.12E–03			1.21E–02	6.91E–04
1192	0.7688	0.68246	3.98996	3.98235	0.67739	1.3952	7.61E–03			1.11E–02	8.00E–04
1312	0.7839	0.69379	3.9903	3.98183	0.68815	1.39483	8.47E–03			1.22E–02	9.04E–04
1432	0.8002	0.70498	3.99073	3.98248	0.69949	1.39444	8.24E–03	4.46E–07	2.82E–02	1.17E–02	1.02E–03
1552	0.816	0.71347	3.99073	3.98222	0.7078	1.39406	8.50E–03	4.32E–07	2.54E–02	1.19E–02	1.13E–03
1672	0.8321	0.72081	3.99052	3.98222	0.71528	1.39367	8.29E–03	4.44E–07	2.50E–02	1.15E–02	1.25E–03
1792	0.8484	0.72885	3.99064	3.98209	0.72315	1.39328	8.55E–03	4.33E–07	2.33E–02	1.17E–02	1.36E–03
1912	0.8662	0.73777	3.99069	3.98248	0.7323	1.39285	8.20E–03	4.52E–07	2.33E–02	1.11E–02	1.49E–03
2032	0.8815	0.74456	3.99099	3.98209	0.73864	1.39248	8.89E–03	4.17E–07	2.08E–02	1.19E–02	1.61E–03
2152	0.8973	0.75346	3.99103	3.98261	0.74785	1.39209	8.41E–03	4.41E–07	2.14E–02	1.12E–02	1.73E–03
2272	0.9137	0.76147	3.99116	3.98209	0.75543	1.3917	9.06E–03	4.10E–07	1.93E–02	1.19E–02	1.85E–03
2392	0.9308	0.76829	3.99114	3.98193	0.76215	1.39129	9.21E–03	4.03E–07	1.84E–02	1.20E–02	1.98E–03
2512	0.9464	0.77519	3.99114	3.98206	0.76914	1.39091	9.08E–03	4.09E–07	1.83E–02	1.17E–02	2.10E–03
2632	0.9622	0.78318	3.99161	3.98167	0.77655	1.39053	9.94E–03	3.74E–07	1.64E–02	1.27E–02	2.23E–03
2752	0.9787	0.79136	3.99178	3.98245	0.78514	1.39013	9.33E–03	3.99E–07	1.71E–02	1.18E–02	2.36E–03
2872	0.996	0.79737	3.99187	3.98219	0.79092	1.38971	9.68E–03	3.84E–07	1.61E–02	1.21E–02	2.49E–03
2992	1.0108	0.80296	3.99191	3.98193	0.7963	1.38936	9.98E–03	3.73E–07	1.53E–02	1.24E–02	2.61E–03
3112	1.0267	0.81038	3.99191	3.98193	0.80373	1.38897	9.98E–03	3.73E–07	1.50E–02	1.23E–02	2.74E–03
3232	1.0437	0.8157	3.99207	3.98151	0.80867	1.38856	1.06E–02	3.53E–07	1.38E–02	1.29E–02	2.88E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T20. CRS 495 consolidation data for Sample 204-1244C-17H-3WR, 97–100 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
1895	0.1497	0.18947	4.02171	3.9873	0.16653	1.37303	3.44E–02			0.1815926	2.17E–04
2015	0.1689	0.18545	4.01895	3.98564	0.16325	1.37258	3.33E–02			0.1795801	2.48E–04
2135	0.1803	0.18548	4.01684	3.98639	0.16518	1.37231	3.04E–02			0.1641722	2.67E–04
2255	0.192	0.19826	4.01885	3.9873	0.17723	1.37203	3.15E–02			0.1591203	2.87E–04
2375	0.2097	0.20707	4.02074	3.98681	0.18445	1.37161	3.39E–02			0.163836	3.19E–04
2495	0.2274	0.20743	4.0195	3.98668	0.18555	1.37119	3.28E–02			0.1582153	3.52E–04
2615	0.2408	0.20936	4.0189	3.98694	0.18805	1.37087	3.20E–02			0.152659	3.77E–04
2735	0.2629	0.22215	4.0192	3.98707	0.20073	1.37034	3.21E–02			0.1446329	4.20E–04
2855	0.2802	0.22489	4.01959	3.98694	0.20313	1.36993	3.26E–02			0.145149	4.55E–04
2975	0.2956	0.22647	4.01869	3.98733	0.20556	1.36956	3.14E–02			0.1384646	4.87E–04
3095	0.3103	0.23162	4.01886	3.98642	0.20999	1.36922	3.24E–02			0.1400475	5.17E–04
3215	0.3269	0.23645	4.01917	3.98697	0.21499	1.36882	3.22E–02			0.1361683	5.53E–04
3335	0.3427	0.23903	4.01904	3.98684	0.21757	1.36844	3.22E–02			0.1347079	5.87E–04
3455	0.3577	0.24229	4.01887	3.98671	0.22085	1.36809	3.22E–02			0.132728	6.20E–04
3575	0.3734	0.2476	4.01917	3.98658	0.22588	1.36772	3.26E–02			0.1316134	6.55E–04
3695	0.3897	0.25095	4.01904	3.98645	0.22922	1.36733	3.26E–02			0.1298661	6.93E–04
3815	0.4067	0.2513	4.01862	3.98632	0.22978	1.36692	3.23E–02	1.14E–07	2.63E–03	0.1284971	7.32E–04
3935	0.4212	0.25438	4.0184	3.98762	0.23386	1.36658	3.08E–02	1.20E–07	2.80E–03	0.1210007	7.66E–04
4055	0.4371	0.26102	4.01917	3.9858	0.23877	1.3662	3.34E–02	1.11E–07	2.59E–03	0.1278328	8.03E–04
4175	0.4534	0.26536	4.01943	3.98658	0.24346	1.36581	3.28E–02	1.13E–07	2.58E–03	0.1237714	8.43E–04
4295	0.4698	0.26737	4.01921	3.98684	0.24579	1.36543	3.24E–02	1.14E–07	2.58E–03	0.1210674	8.83E–04
4415	0.4845	0.27027	4.01916	3.98655	0.24854	1.36508	3.26E–02	1.14E–07	2.55E–03	0.1206438	9.20E–04
4535	0.5002	0.27572	4.01967	3.98668	0.25373	1.3647	3.30E–02	1.13E–07	2.48E–03	0.119644	9.59E–04
4655	0.5163	0.281	4.02006	3.98681	0.25883	1.36432	3.32E–02	1.12E–07	2.39E–03	0.1183037	1.00E–03
4775	0.5319	0.28294	4.01984	3.98694	0.26101	1.36395	3.29E–02	1.13E–07	2.37E–03	0.1162763	1.04E–03
4895	0.5477	0.28625	4.0199	3.98606	0.2637	1.36357	3.38E–02	1.10E–07	2.28E–03	0.1181915	1.08E–03
5015	0.5631	0.29197	4.02027	3.98642	0.26941	1.36321	3.38E–02	1.10E–07	2.22E–03	0.1159205	1.12E–03
5135	0.5811	0.29351	4.0201	3.98707	0.2715	1.36278	3.30E–02	1.13E–07	2.22E–03	0.1125182	1.17E–03
5255	0.5971	0.29435	4.01959	3.98655	0.27232	1.3624	3.30E–02	1.13E–07	2.20E–03	0.1122252	1.22E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T21. CRS 497 consolidation data for Sample 204-1244B-3H-3WR, 145–148 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
1895	0.1497	0.18947	4.02171	3.9873	0.16653	1.37303	3.44E–02			0.1815926	2.17E–04
2015	0.1689	0.18545	4.01895	3.98564	0.16325	1.37258	3.33E–02			0.1795801	2.48E–04
2135	0.1803	0.18548	4.01684	3.98639	0.16518	1.37231	3.05E–02			0.1641722	2.67E–04
2255	0.192	0.19826	4.01885	3.9873	0.17723	1.37203	3.15E–02			0.1591203	2.87E–04
2375	0.2097	0.20707	4.02074	3.98681	0.18445	1.37161	3.39E–02			0.163836	3.19E–04
2495	0.2274	0.20743	4.0195	3.98668	0.18555	1.37119	3.28E–02			0.1582153	3.52E–04
2615	0.2408	0.20936	4.0189	3.98694	0.18805	1.37087	3.20E–02			0.152659	3.77E–04
2735	0.2629	0.22215	4.0192	3.98707	0.20073	1.37034	3.21E–02			0.1446329	4.20E–04
2855	0.2802	0.22489	4.01959	3.98694	0.20313	1.36993	3.26E–02			0.145149	4.55E–04
2975	0.2956	0.22647	4.01869	3.98733	0.20556	1.36956	3.14E–02			0.1384646	4.87E–04
3095	0.3103	0.23162	4.01886	3.98642	0.20999	1.36922	3.24E–02			0.1400475	5.17E–04
3215	0.3269	0.23645	4.01917	3.98697	0.21499	1.36882	3.22E–02			0.1361683	5.53E–04
3335	0.3427	0.23903	4.01904	3.98684	0.21757	1.36844	3.22E–02			0.1347079	5.87E–04
3455	0.3577	0.24229	4.01887	3.98671	0.22085	1.36809	3.22E–02			0.132728	6.20E–04
3575	0.3734	0.2476	4.01917	3.98658	0.22588	1.36772	3.26E–02			0.1316134	6.55E–04
3695	0.3897	0.25095	4.01904	3.98645	0.22922	1.36733	3.26E–02			0.1298661	6.93E–04
3815	0.4067	0.2513	4.01862	3.98632	0.22978	1.36692	3.23E–02	1.14E–07	2.63E–03	0.1284971	7.32E–04
3935	0.4212	0.25438	4.0184	3.98762	0.23386	1.36658	3.08E–02	1.20E–07	2.80E–03	0.1210007	7.66E–04
4055	0.4371	0.26102	4.01917	3.9858	0.23877	1.3662	3.34E–02	1.11E–07	2.59E–03	0.1278328	8.03E–04
4175	0.4534	0.26536	4.01943	3.98658	0.24346	1.36581	3.28E–02	1.13E–07	2.58E–03	0.1237714	8.43E–04
4295	0.4698	0.26737	4.01921	3.98684	0.24579	1.36543	3.24E–02	1.14E–07	2.58E–03	0.1210674	8.83E–04
4415	0.4845	0.27027	4.01916	3.98655	0.24854	1.36508	3.26E–02	1.14E–07	2.55E–03	0.1206438	9.20E–04
4535	0.5002	0.27572	4.01967	3.98668	0.25373	1.3647	3.30E–02	1.13E–07	2.48E–03	0.119644	9.59E–04
4655	0.5163	0.281	4.02006	3.98681	0.25883	1.36432	3.32E–02	1.12E–07	2.39E–03	0.1183037	1.00E–03
4775	0.5319	0.28294	4.01984	3.98694	0.26101	1.36395	3.29E–02	1.13E–07	2.37E–03	0.1162763	1.04E–03
4895	0.5477	0.28625	4.0199	3.98606	0.2637	1.36357	3.38E–02	1.10E–07	2.28E–03	0.1181915	1.08E–03
5015	0.5631	0.29197	4.02027	3.98642	0.26941	1.36321	3.38E–02	1.10E–07	2.22E–03	0.1159205	1.12E–03
5135	0.5811	0.29351	4.0201	3.98707	0.2715	1.36278	3.30E–02	1.13E–07	2.22E–03	0.1125182	1.17E–03
5255	0.5971	0.29435	4.01959	3.98655	0.27232	1.3624	3.30E–02	1.13E–07	2.20E–03	0.1122252	1.22E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T22. CRS 499 consolidation data run on resedimented sample.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
62893	5.1908	0.0287	3.99248	3.98326	0.0225	2.49624	9.22E–03			0.3219531	0.0004182
63073	5.2163	0.0281	3.99253	3.98261	0.0214	2.4953	9.92E–03			0.3535204	0.0004238
63253	5.2406	0.0284	3.99265	3.98339	0.0222	2.4944	9.27E–03			0.3265005	0.0004291
63433	5.2655	0.0286	3.99282	3.98378	0.0226	2.49349	9.05E–03			0.3164654	0.0004347
63613	5.2901	0.0286	3.99287	3.98274	0.02188	2.49258	1.01E–02			0.3537456	0.0004401
63793	5.3156	0.02877	3.99251	3.98336	0.0227	2.49164	9.16E–03			0.318307	0.0004458
63973	5.339	0.0286	3.99278	3.98313	0.0221	2.49077	9.65E–03			0.3377247	0.000451
64153	5.3657	0.02924	3.99281	3.98362	0.02311	2.48979	9.19E–03			0.3144151	0.0004571
64333	5.391	0.0286	3.99287	3.98378	0.02253	2.48886	9.09E–03			0.3179668	0.0004629
64513	5.4149	0.0291	3.99274	3.98274	0.0224	2.48797	1.00E–02			0.3441537	0.0004682
64693	5.4409	0.0287	3.99291	3.98339	0.0224	2.48702	9.52E–03			0.3315344	0.0004741
64873	5.4652	0.029	3.99308	3.98326	0.0224	2.48612	9.82E–03			0.3387529	0.0004795
65053	5.4913	0.0292	3.99076	3.9831	0.0241	2.48516	7.67E–03			0.2623374	0.0004856
65233	5.518	0.0283	3.99044	3.97677	0.0192	2.48417	1.37E–02			0.4833763	0.0004913
65413	5.5395	0.0293	3.99042	3.98258	0.0241	2.48338	7.85E–03			0.2678432	0.000496
65593	5.567	0.0292	3.9927	3.98274	0.0226	2.48237	9.96E–03			0.340679	0.0005024
65773	5.588	0.0299	3.99311	3.98271	0.0229	2.48159	1.04E–02			0.3482466	0.0005072
65953	5.613	0.0305	3.99324	3.98297	0.0237	2.48067	1.03E–02	3.45E–07	3.60E–04	0.3365106	0.000513
66133	5.6394	0.03	3.99367	3.98336	0.0232	2.4797	1.03E–02	3.43E–07	3.86E–04	0.3430808	0.0005192
66313	5.6622	0.03098	3.99362	3.98336	0.0241	2.47886	1.03E–02	3.44E–07	4.23E–04	0.3312962	0.0005246
66493	5.6899	0.0306	3.99392	3.98284	0.0232	2.47783	1.11E–02	3.20E–07	3.45E–04	0.361926	0.0005312
66673	5.7128	0.0308	3.99389	3.98365	0.024	2.47699	1.02E–02	3.45E–07	3.93E–04	0.3323342	0.0005366
66853	5.737	0.0319	3.99418	3.98323	0.0246	2.4761	1.09E–02	3.24E–07	3.50E–04	0.3437376	0.0005424
67033	5.7624	0.0316	3.99385	3.98339	0.0246	2.47516	1.05E–02	3.39E–07	3.53E–04	0.3307756	0.0005487
67213	5.7864	0.032	3.99388	3.98271	0.0246	2.47428	1.12E–02	3.17E–07	3.34E–04	0.3490125	0.0005546
67393	5.8127	0.032	3.99363	3.98313	0.025	2.47331	1.05E–02	3.37E–07	3.13E–04	0.3283577	0.0005611
67573	5.8357	0.03248	3.99396	3.98297	0.0252	2.47246	1.10E–02	3.22E–07	2.93E–04	0.3384947	0.0005669
67753	5.8597	0.0332	3.9938	3.98326	0.0261	2.47157	1.05E–02	3.37E–07	2.83E–04	0.3179165	0.000573
67933	5.8859	0.03304	3.99393	3.983	0.0257	2.47061	1.09E–02	3.26E–07	1.89E–04	0.3309944	0.0005798

Note: See Table T3, p. 70, for definitions of headers.

Table T23. CRS 504 consolidation data for Sample 204-1244C-8H-7WR, 71–74 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
7943	0.772	0.43772	4.0104	3.99655	0.42849	1.51286	1.38E–02			3.16E–02	0.002691
8063	0.7889	0.44286	4.01074	3.99707	0.43375	1.51244	1.37E–02			3.09E–02	0.0027643
8183	0.8036	0.44913	4.0112	3.99717	0.43977	1.51206	1.40E–02			3.12E–02	0.0028292
8303	0.8215	0.45353	4.01128	3.99743	0.44429	1.51161	1.39E–02			3.05E–02	0.002909
8423	0.8376	0.45839	4.01107	3.99678	0.44886	1.5112	1.43E–02			3.12E–02	0.0029813
8543	0.8536	0.46304	4.01086	3.99704	0.45383	1.5108	1.38E–02			2.98E–02	0.0030541
8663	0.8693	0.46793	4.01104	3.99642	0.45819	1.5104	1.46E–02			3.12E–02	0.0031264
8783	0.8854	0.47377	4.01132	3.99717	0.46434	1.50999	1.42E–02			2.99E–02	0.0032013
8903	0.9016	0.47923	4.01167	3.99652	0.46913	1.50958	1.51E–02			3.16E–02	0.0032775
9023	0.9178	0.48357	4.01171	3.9973	0.47396	1.50917	1.44E–02			2.98E–02	0.0033544
9143	0.9344	0.48808	4.01185	3.99694	0.47814	1.50875	1.49E–02			3.05E–02	0.0034342
9263	0.9499	0.4938	4.01213	3.99665	0.48348	1.50836	1.55E–02			3.13E–02	0.0035098
9383	0.9665	0.49992	4.01248	3.99613	0.48902	1.50794	1.63E–02			3.27E–02	0.0035909
9503	0.983	0.50407	4.01256	3.99704	0.49372	1.50752	1.55E–02			3.08E–02	0.0036728
9623	0.999	0.50868	4.01269	3.99704	0.49824	1.50711	1.56E–02			3.08E–02	0.0037532
9743	1.0146	0.51519	4.01294	3.99613	0.50398	1.50672	1.68E–02			3.26E–02	0.0038321
9863	1.032	0.51992	4.01329	3.99717	0.50917	1.50628	1.61E–02			3.10E–02	0.0039211
9983	1.0472	0.525	4.01367	3.99678	0.51374	1.50589	1.69E–02			3.22E–02	0.0039995
10103	1.0636	0.53057	4.01359	3.99681	0.51938	1.50548	1.68E–02	2.20E–07	7.19E–03	3.16E–02	0.0040854
10223	1.0798	0.53628	4.01368	3.99616	0.5246	1.50507	1.75E–02	2.11E–07	6.89E–03	3.27E–02	0.0041709
10343	1.0965	0.54115	4.01389	3.99616	0.52932	1.50465	1.77E–02	2.08E–07	6.82E–03	3.28E–02	0.0042597
10463	1.113	0.54656	4.0144	3.9972	0.53509	1.50423	1.72E–02	2.15E–07	7.06E–03	3.15E–02	0.0043484
10583	1.1294	0.55282	4.01483	3.99694	0.54089	1.50381	1.79E–02	2.07E–07	6.83E–03	3.24E–02	0.0044377
10703	1.1449	0.55805	4.01475	3.99668	0.54601	1.50342	1.81E–02	2.05E–07	6.81E–03	3.24E–02	0.0045228
10823	1.162	0.56155	4.01463	3.99697	0.54977	1.50299	1.77E–02	2.09E–07	7.00E–03	3.14E–02	0.0046175
10943	1.177	0.5673	4.01504	3.99707	0.55532	1.50261	1.80E–02	2.05E–07	6.92E–03	3.17E–02	0.0047019
11063	1.1943	0.57444	4.01556	3.99655	0.56177	1.50217	1.90E–02	1.94E–07	6.62E–03	3.31E–02	0.0047996
11183	1.2106	0.57888	4.01568	3.9972	0.56656	1.50176	1.85E–02	2.00E–07	6.89E–03	3.19E–02	0.0048925
11303	1.2268	0.58352	4.01573	3.99694	0.571	1.50134	1.88E–02	1.96E–07	6.83E–03	3.22E–02	0.004986

Note: See Table T3, p. 70, for definitions of headers.

Table T24. CRS 508 consolidation data for Sample 204-1244B-4H-6WR, 120–125 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
2365	0.0511	0.17141	4.01809	3.98787	0.15126	1.65718	3.02E–02			0.1762724	1.01E–04
2485	0.0694	0.1785	4.02008	3.9881	0.15718	1.65669	3.20E–02			0.1791397	1.29E–04
2605	0.0868	0.17838	4.01823	3.98765	0.15799	1.65623	3.06E–02			0.1714446	1.56E–04
2725	0.0991	0.18325	4.01719	3.98723	0.16327	1.65591	3.00E–02			0.163534	1.76E–04
2845	0.1135	0.19201	4.01783	3.98736	0.17169	1.65552	3.05E–02			0.1587251	2.00E–04
2965	0.1302	0.19782	4.01839	3.98723	0.17705	1.65508	3.12E–02			0.1575145	2.29E–04
3085	0.1452	0.20067	4.0183	3.98761	0.18021	1.65468	3.07E–02			0.1529169	2.56E–04
3205	0.1605	0.20582	4.01753	3.988	0.18614	1.65427	2.95E–02			0.1434737	2.84E–04
3325	0.1744	0.21191	4.01738	3.98531	0.19054	1.6539	3.21E–02			0.1513079	3.11E–04
3445	0.191	0.21832	4.01784	3.98453	0.19611	1.65346	3.33E–02			0.1525777	3.43E–04
3565	0.2087	0.22166	4.01834	3.98813	0.20152	1.65299	3.02E–02			0.1362921	3.78E–04
3685	0.2234	0.22462	4.01894	3.98761	0.20374	1.6526	3.13E–02			0.1394568	4.08E–04
3805	0.2377	0.22975	4.01861	3.98777	0.2092	1.65222	3.08E–02			0.1342124	4.37E–04
3925	0.2549	0.23391	4.01847	3.98761	0.21334	1.65176	3.09E–02			0.1319166	4.74E–04
4045	0.2719	0.23562	4.01792	3.98761	0.21542	1.65131	3.03E–02			0.1286103	5.10E–04
4165	0.2859	0.23998	4.01772	3.98777	0.22002	1.65094	2.99E–02			0.1247631	5.41E–04
4285	0.3015	0.24612	4.01816	3.98784	0.22591	1.65053	3.03E–02	1.19E–07	3.26E–03	0.1231862	5.76E–04
4405	0.3148	0.24915	4.01838	3.9881	0.22897	1.65017	3.03E–02	1.19E–07	3.28E–03	0.1214978	6.06E–04
4525	0.3335	0.25282	4.01856	3.98774	0.23228	1.64967	3.08E–02	1.17E–07	3.26E–03	0.1218739	6.49E–04
4645	0.3495	0.25917	4.0189	3.98736	0.23815	1.64925	3.15E–02	1.14E–07	3.26E–03	0.1217017	6.87E–04
4765	0.3651	0.26308	4.01949	3.98749	0.24174	1.64883	3.20E–02	1.13E–07	3.27E–03	0.1216683	7.25E–04
4885	0.3806	0.26712	4.01945	3.98787	0.24607	1.64842	3.16E–02	1.15E–07	3.35E–03	0.1182129	7.63E–04
5005	0.3982	0.26981	4.01944	3.98784	0.24875	1.64795	3.16E–02	1.14E–07	3.40E–03	0.1171026	8.06E–04
5125	0.413	0.27526	4.02001	3.98684	0.25315	1.64756	3.32E–02	1.09E–07	3.29E–03	0.1204988	8.44E–04
5245	0.4273	0.28229	4.02167	3.98787	0.25976	1.64718	3.38E–02	1.07E–07	3.24E–03	0.1197077	8.80E–04
5365	0.444	0.28942	4.0231	3.98784	0.26591	1.64674	3.53E–02	1.03E–07	3.11E–03	0.1218292	9.25E–04
5485	0.4618	0.29243	4.02324	3.98787	0.26885	1.64626	3.54E–02	1.03E–07	3.14E–03	0.1209466	9.72E–04
5605	0.4757	0.29627	4.02315	3.98758	0.27256	1.64589	3.56E–02	1.02E–07	3.13E–03	0.1200331	1.01E–03
5725	0.4915	0.30269	4.02356	3.98768	0.27878	1.64547	3.59E–02	1.01E–07	3.10E–03	0.1185256	1.05E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T25. CRS 511 consolidation data run on resedimented Sample 204-1244B-6H-8WR, 24–29 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
12276	2.8105	0.00189	4.00615	4.01232	0.00601	3.09535	–0.00618			–3.26825	6.46E–05
12396	2.8228	0.00198	4.0058	4.0096	0.00451	3.09482	–0.00379			–1.91524	6.53E–05
12516	2.8385	0.00193	4.00603	4.00963	0.00433	3.09416	–0.0036			–1.860423	6.60E–05
12636	2.8533	0.00205	4.00632	4.0131	0.00657	3.09354	–0.00678			–3.314717	6.68E–05
12756	2.8671	0.00207	4.00636	4.01024	0.00466	3.09296	–0.00389			–1.879087	6.76E–05
12876	2.8814	0.00221	4.00552	4.0095	0.00486	3.09236	–0.00398			–1.803604	6.83E–05
12996	2.8971	0.00223	4.0062	4.01066	0.0052	3.0917	–0.00446			–2.003351	6.91E–05
13116	2.9012	0.0025	4.00632	4.01219	0.00642	3.09152	–0.00588			–2.347542	6.94E–05
13236	2.9296	0.00226	4.0062	4.00976	0.00463	3.09033	–0.00356			–1.574566	7.10E–05
13356	2.9381	0.00239	4.00559	4.01037	0.00558	3.08997	–0.00478			–1.99909	7.14E–05
13476	2.9586	0.00237	4.00568	4.00986	0.00516	3.0891	–0.00418			–1.761022	7.26E–05
13596	2.977	0.00234	4.00539	4.00976	0.00525	3.08833	–0.00436			–1.862401	7.35E–05
13716	2.9832	0.00256	4.00653	4.00973	0.00469	3.08807	–0.0032			–1.248235	7.39E–05
13836	3.0111	0.00229	4.00744	4.01287	0.00591	3.08689	–0.00543			–2.374041	7.54E–05
13956	3.0241	0.00236	4.0088	4.013	0.00516	3.08635	–0.0042			–1.780994	7.61E–05
14076	3.0419	0.0024	4.00863	4.01404	0.006	3.08559	–0.00541			–2.256305	7.72E–05
14196	3.0535	0.00258	4.00795	4.01261	0.00569	3.0851	–0.00466			–1.808797	7.79E–05
14316	3.0711	0.00243	4.0068	4.01105	0.00527	3.08436	–0.00426			–1.748549	7.89E–05
14436	3.0933	0.00236	4.0065	4.01027	0.00488	3.08343	–0.00378			–1.598022	8.00E–05
14556	3.1051	0.00244	4.00667	4.0117	0.00579	3.08293	–0.00503	–7.19E–07	–6.27E–05	–2.065079	8.07E–05
14676	3.1349	0.00213	4.00744	4.01144	0.0048	3.08167	–0.00401	–8.95E–07	–9.68E–05	–1.881616	8.23E–05
14796	3.1434	0.00239	4.00803	4.01274	0.00553	3.08132	–0.00471	–7.62E–07	–8.24E–05	–1.968594	8.27E–05
14916	3.1529	0.00249	4.00787	4.01368	0.00636	3.08092	–0.00581	–6.24E–07	–5.21E–05	–2.33527	8.33E–05
15036	3.1726	0.0025	4.00748	4.01118	0.00497	3.08008	–0.0037	–9.72E–07	–9.67E–05	–1.480002	8.45E–05
15156	3.1779	0.00277	4.00702	4.01147	0.00573	3.07986	–0.00445	–8.08E–07	–8.04E–05	–1.609329	8.48E–05
15276	3.2023	0.00258	4.00758	4.01225	0.0057	3.07883	–0.00468	–7.59E–07	–1.13E–04	–1.811702	8.62E–05
15396	3.2222	0.00257	4.00826	4.01303	0.00575	3.078	–0.00477	–7.22E–07	–1.89E–04	–1.858186	8.74E–05
15516	3.2324	0.00267	4.00758	4.01355	0.00666	3.07757	–0.00597	–5.70E–07	–1.78E–04	–2.23524	8.80E–05
15636	3.254	0.00257	4.00685	4.0103	0.00488	3.07666	–0.00345	–9.81E–07	–3.29E–04	–1.342546	8.93E–05

Note: See Table T3, p. 70, for definitions of headers.

Table T26. CRS 563 consolidation data for Sample 204-1244B-4H-6WR, 134–137 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
1634	0.121	0.55408	4.01031	3.9988	0.5464	1.7123	1.15E–02			2.08E–02	0.0008291
1754	0.1377	0.56074	4.0106	3.99854	0.5527	1.71184	1.21E–02			2.15E–02	0.0009211
1874	0.1544	0.5696	4.01077	3.99828	0.56127	1.71139	1.25E–02			2.19E–02	0.0010145
1994	0.1686	0.57676	4.01039	3.99816	0.5686	1.71101	1.22E–02			2.12E–02	0.0010945
2114	0.1883	0.57991	4.01052	3.99854	0.57192	1.71047	1.20E–02			2.07E–02	0.0012073
2234	0.1991	0.59086	4.01048	3.99854	0.5829	1.71018	1.19E–02			2.02E–02	0.0012697
2354	0.2148	0.59533	4.01056	3.99828	0.58715	1.70975	1.23E–02			2.06E–02	0.001362
2474	0.2345	0.60021	4.01056	3.99841	0.59211	1.70921	1.21E–02			2.02E–02	0.0014782
2594	0.245	0.60998	4.01048	3.99867	0.6021	1.70893	1.18E–02			1.94E–02	0.0015409
2714	0.2657	0.61454	4.01103	3.99816	0.60596	1.70837	1.29E–02			2.09E–02	0.0016661
2834	0.2768	0.62366	4.0112	3.99867	0.61531	1.70807	1.25E–02			2.01E–02	0.0017344
2954	0.2942	0.62809	4.0112	3.99854	0.61966	1.70759	1.27E–02			2.01E–02	0.0018421
3074	0.313	0.63407	4.01124	3.99867	0.62569	1.70708	1.26E–02			1.98E–02	0.0019598
3194	0.3243	0.64402	4.0112	3.99841	0.6355	1.70678	1.28E–02			1.98E–02	0.0020311
3314	0.3441	0.64785	4.01149	3.99841	0.63913	1.70624	1.31E–02			2.02E–02	0.0021574
3434	0.3551	0.65643	4.01149	3.99893	0.64805	1.70594	1.26E–02			1.91E–02	0.0022285
3554	0.3727	0.66159	4.01124	3.99828	0.65295	1.70546	1.30E–02			1.96E–02	0.0023437
3674	0.3898	0.66583	4.01154	3.99867	0.65725	1.705	1.29E–02	8.00E–08	3.35E–03	1.93E–02	0.0024563
3794	0.4031	0.67801	4.01132	3.99828	0.66932	1.70464	1.30E–02	7.89E–08	3.31E–03	1.92E–02	0.0025446
3914	0.4229	0.68016	4.01145	3.99841	0.67147	1.7041	1.30E–02	7.91E–08	3.30E–03	1.92E–02	0.002678
4034	0.4331	0.68778	4.01137	3.99854	0.67923	1.70382	1.28E–02	8.04E–08	3.36E–03	1.86E–02	0.0027472
4154	0.4499	0.69558	4.01175	3.99816	0.68652	1.70336	1.36E–02	7.58E–08	3.17E–03	1.95E–02	0.0028624
4274	0.4698	0.70137	4.01196	3.9988	0.6926	1.70283	1.32E–02	7.84E–08	3.25E–03	1.88E–02	0.003
4394	0.4816	0.7079	4.01196	3.99893	0.69921	1.70251	1.30E–02	7.93E–08	3.30E–03	1.84E–02	0.0030824
4514	0.5016	0.71465	4.01196	3.99841	0.70562	1.70196	1.35E–02	7.63E–08	3.16E–03	1.90E–02	0.0032237
4634	0.5136	0.72182	4.012	3.99828	0.71268	1.70164	1.37E–02	7.54E–08	3.14E–03	1.90E–02	0.0033092
4754	0.5285	0.72665	4.012	3.99854	0.71768	1.70123	1.35E–02	7.68E–08	3.20E–03	1.85E–02	0.0034165
4874	0.5484	0.73437	4.01179	3.99841	0.72545	1.70069	1.34E–02	7.73E–08	3.18E–03	1.82E–02	0.0035611
4994	0.5615	0.73975	4.01187	3.99867	0.73095	1.70034	1.32E–02	7.85E–08	3.25E–03	1.78E–02	0.0036564

Note: See Table T3, p. 70, for definitions of headers.

Table T27. CRS 564 consolidation data for Sample 204-1244C-17H-3WR, 88–91 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
743	0.077	0.30344	5.01058	4.98891	0.28899	1.22691	2.17E–02			7.14E–02	1.86E–04
923	0.0994	0.31055	5.01278	4.98891	0.29463	1.22641	2.39E–02			7.69E–02	2.51E–04
1103	0.1155	0.31925	5.01443	4.98904	0.30232	1.22605	2.54E–02			7.95E–02	2.99E–04
1283	0.1429	0.32631	5.01646	4.98917	0.30811	1.22544	2.73E–02			8.36E–02	3.83E–04
1463	0.1649	0.33332	5.019	4.98942	0.31361	1.22495	2.96E–02			8.87E–02	4.52E–04
1643	0.184	0.34084	5.02188	4.98981	0.31946	1.22453	3.21E–02			9.41E–02	5.12E–04
1823	0.2116	0.34662	5.02442	4.99045	0.32398	1.22391	3.40E–02			9.80E–02	6.01E–04
2003	0.2345	0.35045	5.02645	4.99045	0.32645	1.2234	3.60E–02			1.03E–01	6.76E–04
2183	0.2579	0.35755	5.02805	4.99045	0.33249	1.22288	3.76E–02			1.05E–01	7.53E–04
2363	0.2767	0.36083	5.02996	4.99045	0.3345	1.22246	3.95E–02			1.09E–01	8.16E–04
2543	0.3062	0.36283	5.03212	4.99097	0.3354	1.2218	4.11E–02			1.13E–01	9.15E–04
2723	0.3315	0.36698	5.03406	4.99161	0.33868	1.22124	4.24E–02			1.16E–01	1.00E–03
2903	0.3481	0.37271	5.03546	4.99239	0.344	1.22087	4.31E–02			1.16E–01	1.06E–03
3083	0.3768	0.37544	5.03605	4.99239	0.34634	1.22023	4.37E–02			1.16E–01	1.16E–03
3263	0.4012	0.37999	5.03736	4.99342	0.3507	1.21969	4.39E–02			1.16E–01	1.24E–03
3443	0.421	0.3859	5.03893	4.99522	0.35676	1.21925	4.37E–02			1.13E–01	1.31E–03
3623	0.448	0.39159	5.03998	4.99612	0.36235	1.21864	4.39E–02			1.12E–01	1.41E–03
3803	0.4718	0.39387	5.04074	4.99586	0.36395	1.21811	4.49E–02	2.32E–08	4.09E–04	1.14E–01	1.50E–03
3983	0.4977	0.3976	5.04074	4.99612	0.36785	1.21754	4.46E–02	2.35E–08	4.05E–04	1.12E–01	1.59E–03
4163	0.5148	0.40221	5.04125	4.99548	0.37169	1.21715	4.58E–02	2.26E–08	4.00E–04	1.14E–01	1.66E–03
4343	0.5446	0.40462	5.04121	4.99638	0.37473	1.21649	4.48E–02	2.32E–08	4.06E–04	1.11E–01	1.77E–03
4523	0.5689	0.40922	5.0418	4.99573	0.37851	1.21595	4.61E–02	2.27E–08	3.93E–04	1.13E–01	1.86E–03
4703	0.5866	0.41569	5.04176	4.99599	0.38518	1.21555	4.58E–02	2.28E–08	4.05E–04	1.10E–01	1.93E–03
4883	0.6156	0.41738	5.0421	4.99586	0.38655	1.21491	4.62E–02	2.24E–08	4.16E–04	1.11E–01	2.04E–03
5063	0.6402	0.42235	5.04222	4.99573	0.39135	1.21436	4.65E–02	2.24E–08	4.24E–04	1.10E–01	2.14E–03
5243	0.6582	0.42827	5.0429	4.99599	0.39699	1.21396	4.69E–02	2.23E–08	4.24E–04	1.09E–01	2.21E–03
5423	0.6886	0.43195	5.04316	4.99638	0.40077	1.21328	4.68E–02	2.22E–08	4.26E–04	1.08E–01	2.33E–03
5603	0.7122	0.43587	5.04375	4.99612	0.40412	1.21276	4.76E–02	2.19E–08	4.12E–04	1.09E–016	2.43E–03
5783	0.7352	0.44234	5.04358	4.99638	0.41088	1.21224	4.72E–02	2.22E–08	4.10E–04	1.07E–01	2.52E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T28. CRS 567 consolidation data for Sample 204-1244C-13H-3WR, 120–123 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
75490	10.1836	14.2238	4.10356	3.99213	14.14951	1.0965	1.11E–01			7.83E–03	0.6030186
75790	10.225	14.29067	4.10432	3.99316	14.21656	1.09553	1.11E–01			7.78E–03	0.609564
76090	10.2656	14.37876	4.10368	4.00049	14.30997	1.09458	1.03E–01			7.18E–03	0.6160191
76390	10.3086	14.44915	4.10377	3.99483	14.37652	1.09358	1.09E–01			7.54E–03	0.6228859
76690	10.3497	14.54936	4.10385	4.00191	14.4814	1.09262	1.02E–01			7.01E–03	0.6295089
76990	10.3912	14.64494	4.10495	3.99612	14.57239	1.09165	1.09E–01			7.43E–03	0.636227
77290	10.4344	14.7348	4.10487	4.00011	14.66496	1.09064	1.04E–01			7.11E–03	0.6432763
77590	10.4743	14.79945	4.10567	4.01028	14.73586	1.08971	9.54E–02			6.45E–03	0.6498315
77890	10.5157	14.92899	4.08985	3.9047	14.80556	1.08874	1.85E–01			1.24E–02	0.6566669
78190	10.557	14.98098	4.07187	4.00114	14.93382	1.08778	7.07E–02			4.72E–03	0.663533
78490	10.5973	15.05542	4.05276	4.00088	15.02084	1.08684	5.19E–02			3.45E–03	0.6702845
78790	10.6398	15.17515	4.04853	4.00088	15.14338	1.08585	4.76E–02			3.14E–03	0.6774491
79090	10.6809	15.2248	4.04777	4.00114	15.19372	1.08489	4.66E–02			3.06E–03	0.6844239
79390	10.7222	15.33715	4.04727	4.00104	15.30633	1.08392	4.62E–02	2.09E–08	4.67E–03	3.01E–03	0.6914718
79690	10.7631	15.4432	4.0482	4.00104	15.41176	1.08297	4.72E–02	2.06E–08	4.59E–03	3.05E–03	0.6985115
79990	10.8038	15.52424	4.04724	4.00133	15.49363	1.08202	4.59E–02	2.11E–08	4.83E–03	2.96E–03	0.7055626
80290	10.8444	15.60623	4.04635	3.99682	15.57321	1.08107	4.95E–02	1.97E–08	4.34E–03	3.17E–03	0.7126451
80590	10.8896	15.71925	4.04512	3.99721	15.68731	1.08002	4.79E–02	2.04E–08	4.22E–03	3.05E–03	0.7205626
80890	10.9288	15.79842	4.04533	3.99747	15.76651	1.0791	4.79E–02	2.03E–08	4.41E–03	3.03E–03	0.7274824
81190	10.9703	15.89222	4.04449	3.99811	15.8613	1.07813	4.64E–02	2.08E–08	4.27E–03	2.92E–03	0.7348504
81490	11.0118	15.93742	4.04555	3.99708	15.90511	1.07716	4.85E–02	1.99E–08	4.19E–03	3.04E–03	0.7422683
81790	11.0529	16.08716	4.04462	3.99721	16.05556	1.07621	4.74E–02	2.05E–08	4.44E–03	2.95E–03	0.7496345
82090	11.0938	16.10334	4.04618	3.99631	16.07009	1.07525	4.99E–02	1.94E–08	4.46E–03	3.10E–03	0.7570313
82390	11.1372	16.25922	4.04614	3.9976	16.22686	1.07424	4.85E–02	1.99E–08	4.33E–03	2.99E–03	0.7649217
82690	11.178	16.33727	4.04787	3.99644	16.30298	1.07328	5.14E–02	1.87E–08	3.96E–03	3.15E–03	0.7723783
82990	11.2181	16.45469	4.04593	3.99373	16.41989	1.07235	5.22E–02	1.85E–08	4.04E–03	3.17E–03	0.7797758
83290	11.2579	16.45224	4.04529	3.99296	16.41735	1.07142	5.23E–02	1.84E–08	3.90E–03	3.18E–03	0.7871359
83590	11.3015	16.60366	4.04436	3.99296	16.56939	1.0704	5.14E–02	1.88E–08	4.21E–03	3.09E–03	0.7952376
83890	11.3426	16.67682	4.04622	3.99322	16.64149	1.06944	5.30E–02	1.83E–08	4.08E–03	3.18E–03	0.802945

Note: See Table T3, p. 70, for definitions of headers.

Table T29. CRS 569 consolidation data for Sample 204-1244C-9H-5WR, 105–108 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
570	0.0779	0.31732	4.00207	3.99467	0.31239	1.50753	7.40E–03			2.33E–02	5.67E–05
750	0.0997	0.33646	4.00164	3.99477	0.33188	1.50698	6.87E–03			2.04E–02	1.27E–04
930	0.1188	0.35286	4.00199	3.99467	0.34798	1.50651	7.31E–03			2.07E–02	1.92E–04
1110	0.1407	0.36721	4.00207	3.99429	0.36202	1.50596	7.78E–03			2.12E–02	2.70E–04
1290	0.1608	0.38183	4.00211	3.99467	0.37687	1.50545	7.44E–03			1.95E–02	3.44E–04
1470	0.1834	0.39628	4.00231	3.99413	0.39082	1.50489	8.19E–03			2.07E–02	4.31E–04
1650	0.2012	0.41154	4.00186	3.99416	0.4064	1.50444	7.70E–03			1.87E–02	5.02E–04
1830	0.2268	0.42112	4.00231	3.99348	0.41523	1.5038	8.83E–03			2.10E–02	6.07E–04
2010	0.2446	0.44201	4.0019	3.99454	0.43711	1.50335	7.36E–03			1.66E–02	6.84E–04
2190	0.2689	0.44835	4.00254	3.99364	0.44243	1.50274	8.89E–03			1.98E–02	7.91E–04
2370	0.2901	0.4678	4.00224	3.99429	0.4625	1.50221	7.95E–03			1.70E–02	8.87E–04
2550	0.3121	0.47914	4.00258	3.99467	0.47387	1.50166	7.91E–03			1.65E–02	9.90E–04
2730	0.3328	0.49414	4.00279	3.99403	0.4883	1.50114	8.76E–03			1.77E–02	1.09E–03
2910	0.3565	0.50967	4.00321	3.99493	0.50414	1.50054	8.28E–03			1.63E–02	1.21E–03
3090	0.3753	0.52438	4.00397	3.99506	0.51844	1.50007	8.91E–03			1.70E–02	1.30E–03
3270	0.3998	0.53827	4.00472	3.99606	0.5325	1.49945	8.67E–03			1.61E–02	1.43E–03
3450	0.4208	0.55275	4.00575	3.99673	0.54674	1.49893	9.02E–03			1.63E–02	1.55E–03
3630	0.4448	0.5706	4.00672	3.99725	0.56429	1.49833	9.48E–03			1.66E–02	1.68E–03
3810	0.4651	0.5839	4.00723	3.99828	0.57793	1.49782	8.95E–03	1.09E–07	7.25E–03	1.53E–02	1.80E–03
3990	0.4892	0.59556	4.00765	3.99776	0.58897	1.49721	9.89E–03	9.90E–08	6.59E–03	1.66E–02	1.94E–03
4170	0.5116	0.6147	4.00778	3.99776	0.60802	1.49665	1.00E–02	9.81E–08	6.51E–03	1.63E–02	2.07E–03
4350	0.5337	0.62673	4.00837	3.99776	0.61965	1.49609	1.06E–02	9.27E–08	6.15E–03	1.69E–02	2.21E–03
4530	0.556	0.64289	4.00867	3.99841	0.63605	1.49553	1.03E–02	9.58E–08	6.39E–03	1.60E–02	2.35E–03
4710	0.5788	0.65806	4.00913	3.99879	0.65117	1.49496	1.03E–02	9.52E–08	6.39E–03	1.57E–02	2.50E–03
4890	0.6018	0.67332	4.00939	3.99892	0.66634	1.49439	1.05E–02	9.44E–08	6.40E–03	1.55E–02	2.65E–03
5070	0.6238	0.68968	4.0093	3.99905	0.68284	1.49383	1.03E–02	9.63E–08	6.55E–03	1.49E–02	2.80E–03
5250	0.6465	0.70234	4.00935	3.99879	0.69531	1.49326	1.06E–02	9.39E–08	6.36E–03	1.50E–02	2.96E–03
5430	0.6706	0.7177	4.00943	3.99866	0.71052	1.49266	1.08E–02	9.24E–08	6.29E–03	1.50E–02	3.13E–03
5610	0.6903	0.73569	4.01019	3.99879	0.72809	1.49216	1.14E–02	8.73E–08	5.99E–03	1.55E–02	3.27E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T30. CRS 577 consolidation data run on remolded sample.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
440	0.1291	0.0811	4.0358	4.00028	0.0574	1.32483	3.55E–02			0.4380359	–3.50E–06
450	0.1303	0.0803	4.03482	3.99989	0.057	1.3248	3.49E–02			0.4350578	–2.78E–06
460	0.1318	0.0795	4.03396	3.99963	0.0566	1.32476	3.43E–02			0.4320686	–1.93E–06
463	0.1323	0.0791	4.03767	3.99937	0.0536	1.32475	3.83E–02			0.4839084	–1.65E–06
703	0.1406	0.0957	4.04548	4.00208	0.06679	1.32456	4.34E–02			0.4533932	3.35E–06
943	0.1757	0.11173	4.05499	4.00079	0.0756	1.32374	5.42E–02			0.485107	2.84E–05
1183	0.1986	0.11944	4.06348	4.00195	0.0784	1.32321	6.15E–02			0.5151413	4.60E–05
1423	0.2304	0.13422	4.06813	4.00092	0.0894	1.32247	6.72E–02			0.5007232	7.28E–05
1663	0.2594	0.13715	4.07269	4.00066	0.0891	1.32179	7.20E–02			0.5251867	9.88E–05
1903	0.2902	0.14895	4.07593	3.99731	0.0965	1.32108	7.86E–02			0.5278154	1.27E–04
2143	0.3201	0.1539	4.08092	4.00182	0.10117	1.32038	7.91E–02			0.5139831	1.57E–04
2383	0.3518	0.16294	4.08395	4.00182	0.10818	1.31964	8.21E–02			0.5040604	1.90E–04
2623	0.3827	0.16674	4.0877	3.99989	0.10819	1.31892	8.78E–02			0.5266714	2.24E–04
2863	0.4136	0.17657	4.08924	4.00195	0.11837	1.3182	8.73E–02			0.4943836	2.59E–04
3103	0.4464	0.17886	4.09248	4.00131	0.11807	1.31744	9.12E–02			0.5097782	2.98E–04
3343	0.4775	0.18694	4.09338	4.00066	0.12513	1.31672	9.27E–02			0.4959612	3.36E–04
3583	0.509	0.19022	4.09577	4.00182	0.12759	1.31598	9.39E–02	3.70E–08	6.24E–04	0.4938708	3.76E–04
3823	0.5418	0.19727	4.09692	4.00131	0.13353	1.31522	9.56E–02	3.65E–08	5.98E–04	0.4846725	4.19E–04
4063	0.5729	0.20081	4.09803	4.00169	0.13659	1.3145	9.63E–02	3.62E–08	5.82E–04	0.4797325	4.61E–04
4303	0.6058	0.20564	4.09901	4.00118	0.14042	1.31373	9.78E–02	3.58E–08	5.63E–04	0.4757345	5.07E–04
4543	0.6356	0.21157	4.10093	4.00156	0.14532	1.31304	9.94E–02	3.54E–08	5.34E–04	0.4696605	5.50E–04
4783	0.67	0.21839	4.10169	4.00156	0.15163	1.31224	1.00E–01	3.51E–08	5.30E–04	0.458505	6.01E–04
5023	0.701	0.21925	4.10323	4.00143	0.15139	1.31152	1.02E–01	3.46E–08	5.09E–04	0.4642795	6.49E–04
5263	0.7342	0.22738	4.10259	4.00195	0.16029	1.31074	1.01E–01	3.50E–08	5.21E–04	0.4426086	7.01E–04
5503	0.766	0.22798	4.10464	4.00118	0.15901	1.31	1.03E–01	3.42E–08	4.75E–04	0.4538157	7.52E–04
5743	0.7978	0.2368	4.10417	4.00156	0.1684	1.30926	1.03E–01	3.43E–08	4.91E–04	0.4332937	8.04E–04
5983	0.831	0.23808	4.10626	4.00079	0.16777	1.30849	1.05E–01	3.35E–08	4.70E–04	0.4429874	8.61E–04
6223	0.8622	0.24625	4.10587	4.00092	0.17628	1.30776	1.05E–01	3.36E–08	4.72E–04	0.426208	9.15E–04
6463	0.8957	0.24631	4.10784	4.00195	0.17572	1.30698	1.06E–01	3.34E–08	4.64E–04	0.429897	9.74E–04

Note: See Table T3, p. 70, for definitions of headers.

Table T31. CRS 578 consolidation data for Sample 204-1244C-8H-7WR, 45–48 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
1765	0.0155	0.1315	4.0126	3.99921	0.12257	1.57281	1.34E–02			0.101845	9.42E–05
2005	0.0448	0.13526	4.01299	4.00089	0.1272	1.57206	1.21E–02			8.95E–02	1.31E–04
2245	0.0747	0.13859	4.01388	4.00076	0.12984	1.57129	1.31E–02			9.47E–02	1.69E–04
2485	0.1054	0.14329	4.01431	3.99986	0.13366	1.5705	1.45E–02			1.01E–01	2.10E–04
2725	0.1343	0.14761	4.01478	4.00153	0.13878	1.56976	1.32E–02			8.98E–02	2.49E–04
2965	0.1636	0.15158	4.01482	4.00114	0.14246	1.569	1.37E–02			9.02E–02	2.90E–04
3205	0.1938	0.15491	4.01469	4.00101	0.14579	1.56823	1.37E–02			8.83E–02	3.34E–04
3445	0.2244	0.15983	4.01461	4.00101	0.15077	1.56744	1.36E–02			8.51E–02	3.79E–04
3685	0.2597	0.16092	4.01478	4.00101	0.15175	1.56653	1.38E–02			8.55E–02	4.33E–04
3925	0.2851	0.16867	4.01486	4.00076	0.15927	1.56588	1.41E–02			8.36E–02	4.72E–04
4165	0.3154	0.17122	4.01486	4.00127	0.16216	1.5651	1.36E–02			7.93E–02	5.21E–04
4405	0.3448	0.17537	4.01465	4.00037	0.16585	1.56434	1.43E–02	6.97E–08	9.13E–04	8.14E–02	5.70E–04
4645	0.3763	0.17925	4.01444	4.00024	0.16979	1.56353	1.42E–02	7.00E–08	9.55E–04	7.92E–02	6.23E–04
4885	0.4081	0.1817	4.01452	4.00101	0.1727	1.56271	1.35E–02	7.36E–08	1.02E–03	7.43E–02	6.77E–04
5125	0.4377	0.18731	4.01448	4.00063	0.17808	1.56195	1.39E–02	7.24E–08	1.02E–03	7.40E–02	7.30E–04
5365	0.4694	0.19119	4.01482	4.0005	0.18164	1.56113	1.43E–02	6.98E–08	1.01E–03	7.49E–02	7.87E–04
5605	0.4991	0.19647	4.01478	4.00101	0.18729	1.56037	1.38E–02	7.22E–08	1.10E–03	7.01E–02	8.42E–04
5845	0.5295	0.20103	4.01499	4.0005	0.19137	1.55959	1.45E–02	6.85E–08	1.06E–03	7.21E–02	9.00E–04
6085	0.5597	0.20541	4.01499	4.0005	0.19575	1.55881	1.45E–02	6.86E–08	1.05E–03	7.06E–02	9.59E–04
6325	0.5896	0.21014	4.01529	4.00101	0.20063	1.55804	1.43E–02	6.96E–08	1.12E–03	6.79E–02	1.02E–03
6565	0.6197	0.21557	4.01525	4.00114	0.20616	1.55727	1.41E–02	7.05E–08	1.15E–03	6.54E–02	1.08E–03
6805	0.6516	0.21916	4.01512	4.00179	0.21027	1.55645	1.33E–02	7.47E–08	1.25E–03	6.08E–02	1.15E–03
7045	0.6818	0.2246	4.01521	4.00037	0.21471	1.55567	1.48E–02	6.75E–08	1.14E–03	6.61E–02	1.21E–03
7285	0.7121	0.23152	4.01533	4.00089	0.22189	1.55489	1.44E–02	6.93E–08	1.20E–03	6.24E–02	1.28E–03
7525	0.742	0.23649	4.01546	4.00076	0.22668	1.55412	1.47E–02	6.79E–08	1.21E–03	6.22E–02	1.35E–03
7765	0.7735	0.24118	4.01542	4.0014	0.23183	1.55331	1.40E–02	7.09E–08	1.29E–03	5.81E–02	1.42E–03
8005	0.8052	0.24655	4.01538	4.00166	0.23741	1.55249	1.37E–02	7.26E–08	1.32E–03	5.56E–02	1.49E–03
8245	0.8346	0.25225	4.01546	4.00101	0.24262	1.55174	1.44E–02	6.91E–08	1.23E–03	5.73E–02	1.56E–03
8485	0.8641	0.25882	4.01515	4.00111	0.24946	1.55098	1.40E–02	7.12E–08	1.31E–03	5.42E–02	1.64E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T32. CRS 580 consolidation data for Sample 204-1244B-1H-4WR, 125–128 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
547	0.1584	0.169	4.00776	3.99976	0.16366	1.50461	8.01E–03			4.74E–02	2.85E–05
847	0.1896	0.18431	4.00845	3.99976	0.17852	1.50382	8.69E–03			4.71E–02	8.20E–05
1147	0.2232	0.19625	4.00896	4.00002	0.19029	1.50298	8.94E–03			4.56E–02	1.44E–04
1447	0.2591	0.20745	4.00909	4.00079	0.20192	1.50208	8.30E–03			4.00E–02	2.15E–04
1747	0.2955	0.21684	4.00921	4.00053	0.21105	1.50117	8.68E–03			4.00E–02	2.90E–04
2047	0.3334	0.22669	4.00887	4.00053	0.22112	1.50022	8.34E–03			3.68E–02	3.72E–04
2347	0.3697	0.23512	4.00845	3.99989	0.22942	1.4993	8.56E–03			3.64E–02	4.54E–04
2647	0.4108	0.23909	4.00806	3.9995	0.23338	1.49827	8.56E–03			3.58E–02	5.50E–04
2947	0.4449	0.25122	4.00764	3.99924	0.24562	1.49742	8.39E–03			3.34E–02	6.32E–04
3247	0.4842	0.25915	4.00759	3.99847	0.25307	1.49643	9.12E–03			3.52E–02	7.30E–04
3547	0.5219	0.2679	4.00708	3.99847	0.26216	1.49549	8.61E–03			3.21E–02	8.28E–04
3847	0.5605	0.27634	4.00704	3.99783	0.2702	1.49452	9.21E–03			3.33E–02	9.31E–04
4147	0.5969	0.28714	4.00734	3.99821	0.28105	1.49361	9.12E–03			3.18E–02	1.03E–03
4447	0.6351	0.29775	4.00806	3.99912	0.29178	1.49265	8.95E–03			3.01E–02	1.14E–03
4747	0.6729	0.30795	4.00845	3.99963	0.30207	1.4917	8.82E–03			2.86E–02	1.25E–03
5047	0.7106	0.31725	4.00866	3.99963	0.31123	1.49075	9.03E–03			2.85E–02	1.37E–03
5347	0.7499	0.32577	4.00875	4.00027	0.32012	1.48977	8.47E–03	1.14E–07	2.86E–03	2.60E–02	1.50E–03
5647	0.7885	0.33516	4.0093	4.00002	0.32897	1.4888	9.28E–03	1.04E–07	2.71E–03	2.77E–02	1.62E–03
5947	0.8276	0.34581	4.00994	4.00079	0.33971	1.48782	9.15E–03	1.05E–07	2.87E–03	2.65E–02	1.75E–03
6247	0.8657	0.35716	4.01032	4.00118	0.35106	1.48686	9.15E–03	1.04E–07	3.00E–03	2.56E–02	1.89E–03
6547	0.9036	0.36892	4.01062	4.0004	0.36211	1.48591	1.02E–02	9.36E–08	2.67E–03	2.77E–02	2.02E–03
6847	0.9427	0.37958	4.01062	4.00118	0.37328	1.48493	9.45E–03	1.02E–07	2.81E–03	2.49E–02	2.17E–03
7147	0.9796	0.39111	4.01071	4.00105	0.38467	1.48401	9.66E–03	1.00E–07	2.55E–03	2.47E–02	2.31E–03
7447	1.02	0.39986	4.01066	4.00105	0.39345	1.48299	9.62E–03	1.01E–07	2.44E–03	2.41E–02	2.47E–03
7747	1.0601	0.40957	4.01011	4.00143	0.40378	1.48199	8.68E–03	1.13E–07	2.62E–03	2.12E–02	2.63E–03
8047	1.0988	0.41582	4.01011	4.00079	0.4096	1.48102	9.32E–03	1.06E–07	2.43E–03	2.24E–02	2.79E–03
8347	1.1378	0.42657	4.00998	4.00131	0.42078	1.48004	8.68E–03	1.13E–07	2.76E–03	2.03E–02	2.95E–03
8647	1.1788	0.43582	4.01045	4.00143	0.42981	1.47901	9.02E–03	1.09E–07	2.80E–03	2.07E–02	3.13E–03
8947	1.2181	0.44644	4.01066	4.00079	0.43986	1.47802	9.88E–03	9.88E–08	2.73E–03	2.21E–02	3.30E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T33. CRS 584 consolidation data for Sample 204-1244B-6H-8WR, 6–9 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
300	0.161	0.33695	4.00299	3.9968	0.33283	1.61455	6.19E–03			1.84E–02	3.31E–05
310	0.1614	0.33859	4.00316	3.9968	0.33435	1.61454	6.36E–03			1.88E–02	3.46E–05
320	0.1613	0.34083	4.00334	3.99668	0.33639	1.61454	6.66E–03			1.95E–02	3.40E–05
330	0.1614	0.34297	4.00359	3.9968	0.33845	1.61454	6.79E–03			1.98E–02	3.46E–05
340	0.1622	0.34516	4.00393	3.9968	0.34041	1.61452	7.13E–03			2.07E–02	3.74E–05
350	0.1633	0.34735	4.0044	3.9968	0.34228	1.61449	7.60E–03			2.19E–02	4.11E–05
360	0.163	0.35003	4.00491	3.99693	0.34471	1.6145	7.98E–03			2.28E–02	4.00E–05
370	0.1645	0.35267	4.00551	3.99719	0.34713	1.61446	8.32E–03			2.36E–02	4.51E–05
380	0.1645	0.35536	4.00611	3.99732	0.3495	1.61446	8.79E–03			2.47E–02	4.53E–05
390	0.1658	0.3581	4.00666	3.99732	0.35187	1.61442	9.34E–03			2.61E–02	4.96E–05
400	0.1676	0.36069	4.00722	3.99771	0.35435	1.61438	9.51E–03			2.64E–02	5.61E–05
410	0.1689	0.36279	4.00781	3.99796	0.35622	1.61434	9.85E–03			2.72E–02	6.07E–05
420	0.1705	0.36488	4.00841	3.99822	0.35809	1.6143	1.02E–02			2.79E–02	6.66E–05
430	0.1719	0.36643	4.00905	3.99848	0.35938	1.61426	1.06E–02			2.89E–02	7.15E–05
443	0.1738	0.36843	4.00995	3.99899	0.36113	1.61421	1.10E–02			2.97E–02	7.83E–05
743	0.2079	0.38901	4.01076	4.00106	0.38254	1.61332	9.70E–03			2.49E–02	2.05E–04
1043	0.2459	0.4072	4.00999	4.00067	0.40099	1.61233	9.32E–03			2.29E–02	3.55E–04
1343	0.2847	0.42118	4.00868	3.99671	0.4132	1.61131	1.20E–02			2.84E–02	5.13E–04
1643	0.3221	0.43535	4.00798	3.99693	0.42799	1.61033	1.11E–02			2.54E–02	6.71E–04
1943	0.3591	0.45042	4.00914	3.99912	0.44375	1.60936	1.00E–02			2.22E–02	8.33E–04
2243	0.3986	0.46339	4.01043	4.00096	0.45708	1.60833	9.47E–03	1.01E–07	3.55E–03	2.04E–02	1.01E–03
2543	0.437	0.47716	4.01068	4.0007	0.4705	1.60732	9.98E–03	9.56E–08	3.32E–03	2.09E–02	1.19E–03
2843	0.4768	0.48911	4.01064	3.99941	0.48162	1.60628	1.12E–02	8.52E–08	2.85E–03	2.30E–02	1.38E–03
3143	0.5099	0.50324	4.0106	3.99967	0.49595	1.60541	1.09E–02	8.77E–08	2.83E–03	2.17E–02	1.54E–03
3443	0.5482	0.51394	4.01094	4.00031	0.50686	1.60441	1.06E–02	9.07E–08	2.90E–03	2.07E–02	1.74E–03
3743	0.589	0.52616	4.01131	3.9999	0.51855	1.60334	1.14E–02	8.58E–08	2.63E–03	2.17E–02	1.95E–03
4043	0.6278	0.53668	4.01128	4.00096	0.5298	1.60232	1.03E–02	9.70E–08	2.89E–03	1.92E–02	2.15E–03
4343	0.6672	0.55008	4.01175	4.00018	0.54237	1.60129	1.16E–02	8.67E–08	2.60E–03	2.10E–02	2.36E–03
4643	0.7078	0.56124	4.01081	4.00109	0.55476	1.60023	9.73E–03	1.03E–07	3.07E–03	1.73E–02	2.59E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T34. CRS 585 consolidation data for Sample 204-1244B-3H-3WR, 120–123 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
390	0.1107	0.14941	3.99723	3.99346	0.14689	1.43007	3.78E–03			2.53E–02	–4.58E–05
400	0.1067	0.15369	3.99881	3.99372	0.15029	1.43017	5.10E–03			3.32E–02	–5.18E–05
410	0.1078	0.15738	4.00026	3.9941	0.15327	1.43014	6.16E–03			3.91E–02	–5.01E–05
420	0.1063	0.1613	4.00167	3.99385	0.15608	1.43018	7.82E–03			4.85E–02	–5.23E–05
430	0.1013	0.16499	4.00316	3.99423	0.15903	1.4303	8.93E–03			5.41E–02	–6.03E–05
440	0.1086	0.16679	4.00478	3.99681	0.16147	1.43012	7.98E–03			4.78E–02	–4.85E–05
450	0.1083	0.17034	4.00641	3.99758	0.16445	1.43013	8.82E–03			5.18E–02	–4.92E–05
460	0.1079	0.17248	4.0079	3.99771	0.16569	1.43014	1.02E–02			5.91E–02	–4.97E–05
470	0.1085	0.17484	4.00926	3.99874	0.16782	1.43013	1.05E–02			6.02E–02	–4.87E–05
480	0.1109	0.17651	4.01071	4.00016	0.16948	1.43007	1.06E–02			5.98E–02	–4.48E–05
494	0.1106	0.17892	4.01276	4.00106	0.17112	1.43007	1.17E–02			6.54E–02	–4.51E–05
794	0.1347	0.20275	4.01502	4.0017	0.19387	1.42949	1.33E–02			6.57E–02	–1.11E–06
1094	0.1651	0.2234	4.01639	4.00209	0.21386	1.42875	1.43E–02			6.40E–02	6.08E–05
1394	0.1985	0.23735	4.01622	4.00132	0.22742	1.42794	1.49E–02			6.28E–02	1.35E–04
1694	0.2327	0.24831	4.01579	3.99823	0.2366	1.4271	1.76E–02			7.07E–02	2.14E–04
1994	0.2791	0.26191	4.016	4.00145	0.25221	1.42598	1.46E–02			5.56E–02	3.28E–04
2294	0.3165	0.27431	4.01673	4.00196	0.26446	1.42507	1.48E–02	6.71E–08	1.96E–03	5.38E–02	4.25E–04
2594	0.3543	0.28599	4.01707	3.9999	0.27455	1.42415	1.72E–02	5.76E–08	1.66E–03	6.00E–02	5.27E–04
2894	0.3917	0.29646	4.01711	4.00119	0.28585	1.42324	1.59E–02	6.08E–08	1.70E–03	5.37E–02	6.32E–04
3194	0.4307	0.30608	4.01651	4.00183	0.29629	1.42229	1.47E–02	6.63E–08	1.79E–03	4.80E–02	7.46E–04
3494	0.4664	0.31489	4.01651	4.00016	0.30398	1.42142	1.64E–02	5.97E–08	1.61E–03	5.19E–02	8.54E–04
3794	0.5061	0.32695	4.01639	4.00157	0.31708	1.42045	1.48E–02	6.63E–08	1.82E–03	4.53E–02	9.78E–04
4094	0.545	0.33644	4.0169	4.00106	0.32588	1.41951	1.58E–02	6.20E–08	1.70E–03	4.71E–02	1.10E–03
4394	0.5834	0.34692	4.01737	4.0008	0.33588	1.41857	1.66E–02	5.96E–08	1.62E–03	4.78E–02	1.23E–03
4694	0.6215	0.36011	4.01754	3.99913	0.34783	1.41765	1.84E–02	5.35E–08	1.41E–03	5.11E–02	1.36E–03
4994	0.6596	0.36747	4.01775	4.00145	0.3566	1.41672	1.63E–02	6.04E–08	1.60E–03	4.44E–02	1.50E–03
5294	0.6989	0.37755	4.01737	4.0008	0.36651	1.41576	1.66E–02	5.96E–08	1.56E–03	4.39E–02	1.64E–03
5594	0.7374	0.38752	4.01745	4.00196	0.37719	1.41483	1.55E–02	6.39E–08	1.64E–03	4.00E–02	1.78E–03
5894	0.7759	0.39865	4.01724	4.00145	0.38812	1.41389	1.58E–02	6.30E–08	1.64E–03	3.96E–02	1.93E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T35. CRS 608 consolidation data for Sample 204-1244B-1H-4WR, 126–129 cm.

Time (s)	ε (%)	σ_v (ksc)	u (ksc)	σ_{cell} (ksc)	σ'_v (ksc)	e	dU (ksc)	k (cm/s)	c_v (cm^2/s)	dU/σ_v	Work
160	0.122	0.0327	4.00199	3.99936	0.03094	1.41526	2.63E–03			8.05E–02	–2.64E–05
166	0.115	0.0346	4.00272	4.00013	0.0329	1.41543	2.58E–03			7.47E–02	–2.87E–05
466	0.1214	0.0449	4.00345	4.00039	0.0429	1.41527	3.05E–03			6.80E–02	–2.62E–05
766	0.1408	0.0558	4.00468	4.00052	0.053	1.4148	4.16E–03			7.46E–02	–1.69E–05
1066	0.1625	0.0667	4.00686	4.00052	0.0625	1.41428	6.34E–03			9.50E–02	–4.39E–06
1366	0.1891	0.0755	4.00899	4.00052	0.0698	1.41363	8.47E–03			1.12E–01	1.33E–05
1666	0.2184	0.08287	4.01023	4.00129	0.0769	1.41293	8.93E–03			1.08E–01	3.48E–05
1966	0.2487	0.0896	4.011	4.00091	0.08285	1.41219	1.01E–02			1.13E–01	5.90E–05
2266	0.2837	0.0949	4.01095	4.00117	0.0884	1.41135	9.79E–03			1.03E–01	8.92E–05
2566	0.3163	0.10042	4.01074	4.00117	0.094	1.41056	9.57E–03			9.53E–02	1.19E–04
2866	0.3515	0.10608	4.00848	4.00065	0.10086	1.40971	7.83E–03			7.38E–02	1.53E–04
3166	0.383	0.11432	4.00835	3.98996	0.10206	1.40894	1.84E–02			1.61E–01	1.85E–04
3466	0.423	0.11834	4.00831	4.00001	0.11281	1.40798	8.30E–03			7.01E–02	2.29E–04
3766	0.4582	0.12427	4.01027	4.00026	0.1176	1.40713	1.00E–02			8.05E–02	2.69E–04
4066	0.495	0.1296	4.0101	4.00065	0.1233	1.40624	9.45E–03	1.04E–07	1.56E–03	7.29E–02	3.14E–04
4366	0.5442	0.13461	4.01006	4.00039	0.12817	1.40505	9.66E–03	1.00E–07	1.53E–03	7.18E–02	3.76E–04
4666	0.5683	0.14113	4.00997	4.00052	0.13483	1.40446	9.45E–03	1.03E–07	1.56E–03	6.70E–02	4.08E–04
4966	0.6166	0.1461	4.01027	4.00039	0.13952	1.4033	9.88E–03	9.63E–08	1.53E–03	6.76E–02	4.75E–04
5266	0.6435	0.15253	4.01031	4.00078	0.14617	1.40265	9.53E–03	1.02E–07	1.66E–03	6.25E–02	5.13E–04
5566	0.6802	0.1579	4.01027	4.00104	0.15175	1.40176	9.23E–03	1.04E–07	1.74E–03	5.85E–02	5.68E–04
5866	0.7187	0.16411	4.01014	4.00052	0.15769	1.40083	9.62E–03	1.01E–07	1.82E–03	5.86E–02	6.28E–04
6166	0.7675	0.17053	4.01031	4.00091	0.16426	1.39965	9.41E–03	1.04E–07	1.90E–03	5.52E–02	7.07E–04
6466	0.7928	0.17883	4.01061	4.00065	0.17219	1.39903	9.96E–03	9.84E–08	1.79E–03	5.57E–02	7.50E–04
6766	0.839	0.18594	4.01083	4.00065	0.17916	1.39792	1.02E–02	9.39E–08	1.82E–03	5.47E–02	8.32E–04
7066	0.8668	0.19291	4.01061	4.00104	0.18653	1.39725	9.58E–03	1.03E–07	1.91E–03	4.96E–02	8.83E–04
7366	0.9056	0.19907	4.01044	4.00065	0.19254	1.39631	9.79E–03	9.90E–08	1.87E–03	4.92E–02	9.58E–04
7666	0.9437	0.20663	4.01014	4.00091	0.20048	1.39539	9.23E–03	1.09E–07	2.02E–03	4.47E–02	1.03E–03
7966	0.9932	0.21284	4.01031	4.00039	0.20622	1.39419	9.92E–03	9.99E–08	1.96E–03	4.66E–02	1.13E–03
8266	1.0202	0.2209	4.0107	4.00078	0.21429	1.39354	9.92E–03	9.88E–08	2.00E–03	4.49E–02	1.19E–03

Note: See Table T3, p. 70, for definitions of headers.

Table T36. CKoU test conditions and results for consolidation stage.

Test number	Index tests			Specimen data						Conditions				
	w_c (%)	w_p (%)	w_l (%)	w_n	I_p	ρ_t	e_i	S_i (%)	G_s	σ'_i	ε_a (%)	u_b	B (%)	ε_{vol} (%)
TX 643	58.0	32	71	58.99	39	1.671	1.458	104.52	2.58	0.19	0.32	3.32	99	–1.12
TX 642	63.6	37	82	64.52	45	1.633	1.595	104.19	2.58	0.18	0.23	3.5	98	–1
TX 635	64.5	42	87	65.22	45	1.651	1.624	105.3	2.62	1.17	0.33	7	103	–6.08
TX 645	61.8	42	87	63.8	45	1.598	1.686	99.17	2.62	0.21	0.45	3.3	99	–3.01
TX 646	49.7	38	83	54.18	45	1.642	1.477	96.76	2.64	0.25	0.42	2.96	98	–4.78
TX 636	49.1	35	77	49.34	43	1.814	1.181	110.71	2.65	1.29	–3.4	7.84	98	–0.92
TX 641	34.0			34.0		1.855	0.914	98.54	2.65	0.32	0.33	3.18	99	–3.35
TX 644	70.1			70.2		1.605	1.853	101.94	2.69	0.09	0.44	3.5	98	–1.15
TX 647	58.1			58.81		1.625	1.631	97.06	2.69	0.14	0.58	2.86	105	–0.5
TX 650	71.2			70.56		1.573	1.918	99	2.69	0.12	0.26	3.31	98	–0.26

Notes: See Table T3, p. 70, for explanation of headings. Marker = location in tube. 1 kg/cm^2 = 98.06 kPa.

Table T36 (continued).

Test number	Consolidation results												
	General			At maximum stress					At preshear				
	σ'_p	$\delta\varepsilon/\delta t$	C_c	ε_a (%)	ε_{vol} (%)	σ'_{vm}	K_c	t_s	ε_a (%)	ε_{vol} (%)	K_c	σ'_{vc}	OCR	t_s
TX 643	1.73	0.20	0.496	10.45	10.50	3.34	0.464	~24	10.45	10.50	0.464	3.34	1.00	~24
TX 642	2.78	0.20	0.601	11.72	11.90	4.61	0.454	~34	11.72	11.90	0.454	4.61	1.00	~34
TX 635	5.02	0.20	0.691	22.63	22.79	22.95	0.566	~51	22.63	22.79	0.566	22.95	1.00	~51
TX 645	4.35	0.20	0.712	15.91	16.12	8.56	0.503	~23	15.91	16.12	0.503	8.56	1.00	~23
TX 646	8.04	0.20	0.698	16.95	17.13	16.3	0.506	~28	16.95	17.13	0.506	16.3	1.00	~28
TX 636	—	0.20	0.448	23.12	23.55	42.2	0.52	~31	23.12	23.55	0.52	42.2	1.00	~31
TX 641	—	0.20	0.2	8.88	9.07	10.4	0.454	~37	8.88	9.07	0.454	10.4	1.00	~37
TX 644	—	0.20	0.462	10.81	10.86	1.11	0.457	~24	10.81	10.86	0.457	1.11	1.00	~24
TX 647	—	0.20	0.384	10.93	11.00	1.73	0.491	~25	10.54	10.64	0.666	0.86	2.00	~24
TX 650	—	0.20	0.469	10.93	11.06	0.58	0.514	~40	10.93	11.06	0.514	0.58	1.00	~40

Table T37. CKoU test conditions and results for undrained shearing stage.

Test number	Specimen data						Conditions				
	w_n	I_p	ρ_t	e_i	S_i (%)	G_s	$\delta\varepsilon/\delta t$	e_c	K_c	σ'_{vc}	OCR
TX 643	58.99	39	1.671	1.458	104.5	2.58	0.5	1.20	0.464	3.34	1.00
TX 643	58.99	39	1.671	1.458	104.5	2.58	0.5	1.20	0.464	3.34	1.00
TX 642	64.52	45	1.633	1.595	104.2	2.58	0.5	1.29	0.454	4.61	1.00
TX 635	65.22	45	1.651	1.624	105.3	2.62	0.5	1.02	0.566	22.95	1.00
TX 645	63.80	45	1.598	1.686	99.2	2.62	0.5	1.25	0.503	8.56	1.00
TX 645	63.80	45	1.598	1.686	99.2	2.62	0.5	1.25	0.503	8.56	1.00
TX 646	54.18	45	1.642	1.477	96.8	2.64	0.5	1.05	0.506	16.3	1.00

Note: See Table T3, p. 70, for explanation of headings.

Table T37 (continued).

Test number	Consolidation results															
	At maximum shear								At maximum obliquity							
	ε_a	q_f/σ'_{vc}	$\Delta u_e/\sigma'_{vc}$	$\Delta u_s/\sigma'_{vc}$	p'_f/σ'_{vc}	q/p' (%)	f′	A	ε_a	q_f/σ'_{vc}	$\Delta u_e/\sigma'_{vc}$	$\Delta u_s/\sigma'_{vc}$	p'_f/σ'_{vc}	q/p'	f′	A
TX 643	1.63	0.343	0.160	0.111	0.647	0.530	32.0	1.091	7.44	0.325	0.226	0.190	0.563	0.577	35.3	2.03
TX 643	–6.44	–0.201	0.010	0.325	0.252	–0.798	–53.1		–6.44	–0.201	0.010	0.325	0.252	–0.798	–53.1	
TX 642	0.86	0.347	0.124	0.075	0.676	0.513	30.9	0.837	7.18	0.314	0.234	0.207	0.533	0.589	36.1	2.85
TX 635	1.56	0.314	0.201	0.137	0.673	0.467	27.8	1.060	10.39	0.282	0.333	0.290	0.509	0.554	33.6	2.63
TX 645	1.25	0.319	0.171	0.123	0.000	0.490	29.4	1.190	4.03	0.307	0.254	0.215	0.555	0.553	33.6	2.15
TX 645	–12.15	0.232	–0.052	0.267	0.324	–0.716	–45.3		–12.15	–0.232	–0.052	0.267	0.324	–0.716	–45.3	
TX 646	0.97	0.309	0.132	0.091	0.681	0.454	27.0	1.070	8.88	0.267	0.273	0.260	0.498	0.536	32.4	6.72

Table T38. TX 635 consolidation data for Sample 204-1244B-4H-6WR, 135–145 cm.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	0.010	1.175	1.011	1.093	0.082	0.001	1.624	0.860	0.000	10.191	7.074	0.000	0.000	0.000
300	0.019	1.152	0.980	1.066	0.086	0.004	1.623	0.851	0.000	10.192	7.069	0.000	0.000	0.000
600	0.032	1.205	1.012	1.109	0.097	0.011	1.623	0.839	0.000	10.192	7.085	0.001	0.000	0.000
900	0.044	1.230	1.024	1.127	0.103	0.027	1.623	0.833	0.000	10.192	7.081	0.001	0.000	0.000
1200	0.057	1.250	1.031	1.140	0.110	0.040	1.622	0.824	0.000	10.192	7.076	0.002	0.000	0.000
1463	0.069	1.266	1.034	1.150	0.116	0.051	1.622	0.817	0.001	10.192	7.077	0.002	0.000	0.000
1943	0.089	1.290	1.041	1.165	0.125	0.071	1.622	0.807	0.001	10.192	7.078	0.003	0.000	0.000
2423	0.110	1.314	1.049	1.182	0.132	0.093	1.621	0.798	0.001	10.192	7.073	0.003	0.001	0.000
2903	0.131	1.334	1.054	1.194	0.140	0.113	1.621	0.790	0.001	10.192	7.077	0.004	0.001	0.000
3383	0.151	1.357	1.064	1.211	0.146	0.134	1.620	0.785	0.002	10.192	7.080	0.005	0.001	0.000
3863	0.172	1.373	1.067	1.220	0.153	0.154	1.619	0.777	0.002	10.192	7.079	0.005	0.001	0.000
4343	0.192	1.392	1.073	1.233	0.160	0.174	1.619	0.771	0.002	10.192	7.077	0.006	0.001	0.000
4823	0.213	1.415	1.084	1.249	0.165	0.194	1.618	0.767	0.003	10.192	7.080	0.007	0.001	0.000
5303	0.233	1.432	1.088	1.260	0.172	0.216	1.618	0.760	0.003	10.192	7.076	0.007	0.001	0.000
5783	0.254	1.453	1.094	1.273	0.179	0.237	1.617	0.753	0.003	10.192	7.073	0.008	0.002	0.000
6263	0.275	1.470	1.093	1.281	0.189	0.257	1.617	0.743	0.003	10.192	7.078	0.009	0.002	0.000
6743	0.295	1.493	1.097	1.295	0.198	0.277	1.616	0.734	0.004	10.192	7.076	0.009	0.002	0.000
7223	0.315	1.511	1.099	1.305	0.206	0.298	1.616	0.727	0.004	10.192	7.076	0.010	0.002	0.000
7703	0.335	1.529	1.101	1.315	0.214	0.318	1.615	0.720	0.004	10.192	7.073	0.011	0.002	0.000
8183	0.355	1.543	1.101	1.322	0.221	0.338	1.615	0.714	0.005	10.192	7.077	0.011	0.002	0.000
8663	0.375	1.563	1.104	1.333	0.230	0.358	1.614	0.706	0.005	10.192	7.079	0.012	0.002	0.000
9143	0.394	1.580	1.109	1.344	0.236	0.378	1.614	0.702	0.005	10.192	7.077	0.013	0.002	0.000
9623	0.416	1.593	1.105	1.349	0.244	0.398	1.613	0.693	0.006	10.192	7.078	0.013	0.003	0.000
10103	0.436	1.613	1.113	1.363	0.250	0.419	1.613	0.690	0.006	10.192	7.077	0.014	0.003	0.000
10583	0.457	1.630	1.117	1.374	0.257	0.440	1.612	0.685	0.006	10.192	7.080	0.015	0.003	0.000
11063	0.477	1.644	1.116	1.380	0.264	0.460	1.611	0.679	0.007	10.192	7.076	0.015	0.003	0.000
11543	0.496	1.662	1.121	1.391	0.271	0.480	1.611	0.674	0.007	10.192	7.076	0.016	0.003	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T39. TX 635 undrained shearing data for Sample 204-1244B-4H-6WR, 135–145 cm.

Time (s)	ε_a (%)	q/σ_{vc}	p'/σ_{vc}	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	E'/σ_{vc}	A	ϕ (°)	Area (cm^2)	Axial membrane correction	Radial membrane correction	Axial drain correction
30	0	0.219	0.778	0	0	0	0	0	16.322	10.152	0.732	0.148	0.000
32	9.75E–04	0.219	0.778	1.19E–04	–1.32E–04	3.73E–03	72.666	0.147	16.344	10.152	0.732	0.148	0.000
34	1.36E–03	0.219	0.778	3.88E–04	1.41E–04	5.02E–03	70.264	0.481	16.359	10.152	0.732	0.148	0.000
36	2.13E–03	0.219	0.778	5.57E–04	1.52E–04	7.52E–03	66.96	0.44	16.375	10.152	0.732	0.148	0.000
38	5.79E–04	0.22	0.778	7.26E–04	1.59E–04	1.01E–02	330.068	0.416	16.392	10.152	0.732	0.148	0.000
40	2.51E–03	0.22	0.778	8.83E–04	2.66E–04	1.13E–02	85.536	0.457	16.403	10.152	0.732	0.148	0.000
42	1.94E–03	0.22	0.778	1.00E–03	2.15E–04	1.29E–02	126.412	0.421	16.412	10.152	0.732	0.148	0.000
44	2.51E–03	0.22	0.778	1.11E–03	2.37E–04	1.45E–02	109.299	0.419	16.423	10.152	0.732	0.148	0.000
46	–3.94E–04	0.22	0.778	1.28E–03	2.98E–04	1.52E–02	–730.144	0.437	16.429	10.152	0.732	0.148	0.000
48	4.65E–03	0.22	0.779	1.38E–03	1.59E–04	1.85E–02	75.687	0.378	16.448	10.152	0.732	0.148	0.000
50	3.67E–03	0.22	0.778	1.60E–03	3.34E–04	1.86E–02	95.955	0.428	16.452	10.152	0.732	0.148	0.000
52	2.90E–03	0.221	0.779	1.66E–03	2.50E–04	2.08E–02	136.253	0.397	16.465	10.152	0.732	0.148	0.000
54	2.70E–03	0.221	0.778	1.82E–03	3.11E–04	2.18E–02	153.054	0.409	16.473	10.152	0.732	0.148	0.000
56	2.32E–03	0.221	0.778	1.95E–03	4.40E–04	2.30E–02	188.312	0.434	16.484	10.152	0.732	0.148	0.000
58	2.90E–03	0.221	0.778	2.00E–03	5.00E–04	2.39E–02	156.871	0.443	16.491	10.152	0.732	0.148	0.000
60	3.48E–03	0.221	0.779	2.05E–03	3.70E–04	2.61E–02	142.778	0.408	16.503	10.152	0.732	0.148	0.000
62	3.48E–03	0.221	0.778	2.16E–03	4.42E–04	2.68E–02	146.215	0.42	16.509	10.152	0.732	0.148	0.000
64	3.28E–03	0.221	0.778	2.21E–03	4.82E–04	2.81E–02	162.467	0.424	16.518	10.152	0.732	0.148	0.000
66	4.83E–03	0.221	0.778	2.27E–03	6.52E–04	2.80E–02	110.107	0.456	16.521	10.152	0.732	0.148	0.000
68	2.70E–03	0.221	0.779	2.33E–03	4.71E–04	2.90E–02	203.95	0.419	16.524	10.152	0.732	0.148	0.000
70	3.28E–03	0.222	0.779	2.43E–03	4.92E–04	3.06E–02	177.042	0.418	16.535	10.152	0.732	0.148	0.000
72	5.03E–03	0.222	0.778	2.55E–03	6.16E–04	3.11E–02	117.56	0.438	16.541	10.152	0.732	0.148	0.000
74	3.48E–03	0.222	0.779	2.61E–03	5.74E–04	3.18E–02	173.703	0.428	16.545	10.152	0.732	0.148	0.000
76	3.86E–03	0.222	0.778	2.71E–03	6.43E–04	3.28E–02	161.314	0.437	16.553	10.152	0.732	0.148	0.000
78	3.66E–03	0.222	0.779	2.70E–03	5.35E–04	3.38E–02	175.055	0.417	16.557	10.152	0.732	0.148	0.000
80	3.46E–03	0.222	0.779	2.87E–03	6.31E–04	3.50E–02	192.097	0.428	16.567	10.152	0.732	0.148	0.000
82	5.59E–03	0.222	0.779	2.92E–03	5.82E–04	3.59E–02	121.974	0.419	16.572	10.152	0.732	0.148	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T40. TX 636 consolidation data for Sample 204-1244C-17H-3WR, 80–90 cm.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drain correction
0	–0.007	1.289	0.79	1.039	0.249	–0.011	1.193	0.613	0.000	10.243	7.838	0.000	0.000	0.000
10	–0.047	1.289	0.791	1.04	0.249	–0.011	1.193	0.614	0.000	10.239	7.836	–0.001	0.000	0.000
20	–0.047	1.298	0.802	1.05	0.248	–0.01	1.193	0.618	0.000	10.239	7.826	–0.001	0.000	0.000
30	–0.048	1.301	0.806	1.053	0.248	–0.009	1.193	0.619	0.000	10.239	7.818	–0.001	0.000	0.000
40	–0.048	1.309	0.813	1.061	0.248	–0.008	1.193	0.622	0.000	10.239	7.805	–0.001	0.000	0.000
50	–0.047	1.312	0.819	1.065	0.247	–0.007	1.193	0.624	0.000	10.239	7.796	–0.001	0.000	0.000
60	–0.048	1.309	0.814	1.061	0.248	–0.007	1.193	0.622	0.000	10.239	7.794	–0.001	0.000	0.000
70	–0.047	1.305	0.808	1.057	0.248	–0.007	1.193	0.62	0.000	10.239	7.792	–0.001	0.000	0.000
80	–0.048	1.287	0.793	1.04	0.247	–0.007	1.193	0.616	0.000	10.239	7.801	–0.001	0.000	0.000
90	–0.047	1.27	0.776	1.023	0.247	–0.008	1.193	0.611	0.000	10.239	7.813	–0.001	0.000	0.000
104	–0.047	1.264	0.77	1.017	0.247	–0.009	1.193	0.609	0.000	10.239	7.812	–0.001	0.000	0.000
404	–0.007	1.221	0.724	0.973	0.249	–0.021	1.193	0.592	0.000	10.244	7.827	0.000	0.000	0.000
704	–0.008	1.237	0.736	0.987	0.25	–0.024	1.193	0.596	0.000	10.245	7.831	0.000	0.000	0.000
1004	–0.007	1.239	0.739	0.989	0.25	–0.024	1.193	0.596	0.000	10.245	7.834	0.000	0.000	0.000
1304	0.001	1.261	0.761	1.011	0.25	–0.023	1.193	0.603	0.000	10.245	7.849	0.000	0.000	0.000
1604	0.001	1.294	0.796	1.045	0.249	–0.013	1.193	0.615	0.000	10.244	7.84	0.000	0.000	0.000
1904	0.008	1.284	0.784	1.034	0.25	–0.009	1.193	0.61	0.000	10.245	7.84	0.000	0.000	0.000
2204	0.02	1.327	0.824	1.076	0.251	0.001	1.192	0.621	0.000	10.245	7.851	0.000	0.000	0.000
2504	0.033	1.364	0.86	1.112	0.252	0.016	1.192	0.631	0.000	10.245	7.85	0.001	0.000	0.000
2804	0.046	1.365	0.863	1.114	0.251	0.031	1.192	0.632	0.001	10.245	7.848	0.001	0.000	0.000
3104	0.059	1.375	0.874	1.125	0.251	0.044	1.192	0.636	0.001	10.244	7.847	0.002	0.000	0.000
3404	0.071	1.381	0.883	1.132	0.249	0.058	1.191	0.639	0.001	10.244	7.848	0.002	0.000	0.000
3704	0.083	1.394	0.889	1.142	0.252	0.071	1.191	0.638	0.001	10.244	7.843	0.003	0.000	0.000
0	–0.007	1.289	0.79	1.039	0.249	–0.011	1.193	0.613	0.000	10.243	7.838	0.000	0.000	0.000
10	–0.047	1.289	0.791	1.04	0.249	–0.011	1.193	0.614	0.000	10.239	7.836	–0.001	0.000	0.000
20	–0.047	1.298	0.802	1.05	0.248	–0.01	1.193	0.618	0.000	10.239	7.826	–0.001	0.000	0.000
30	–0.048	1.301	0.806	1.053	0.248	–0.009	1.193	0.619	0.000	10.239	7.818	–0.001	0.000	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T41. TX 636 undrained shear data for Sample 204-1244C-17H-3WR, 80–90 cm.

Time (s)	ε_a (%)	q/σ_{vc}	p'/σ_{vc}	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	E'/σ_{vc}	A	ϕ (°)	Area (cm²)	Axial membrane correction	Radial membrane correction	Axial drain correction
134	8.11E–02	0.215	0.773	6.20E–03	1.84E–02	5.86E–02	11.265	2.345	16.189	10.251	0.002	0.000	0.000
136	9.43E–02	0.215	0.776	7.74E–03	1.42E–02	4.81E–02	7.955	2.225	16.042	10.253	0.002	0.000	0.000
138	5.59E–02	0.214	0.775	7.50E–03	1.53E–02	3.66E–02	10.211	3.009	16.002	10.249	0.001	0.000	0.000
140	5.10E–02	0.213	0.777	6.16E–03	1.28E–02	2.71E–02	8.281	3.351	15.898	10.248	0.001	0.000	0.000
142	7.29E–02	0.212	0.779	8.23E–03	1.04E–02	1.45E–02	3.097	4.923	15.78	10.251	0.001	0.000	0.000
144	6.67E–02	0.211	0.781	8.99E–03	8.72E–03	8.35E–03	1.952	7.029	15.712	10.25	0.001	0.000	0.000
146	3.65E–02	0.211	0.78	9.88E–03	9.46E–03	1.24E–03	0.529	49.353	15.689	10.247	0.001	0.000	0.000
148	5.12E–02	0.211	0.779	1.07E–02	1.00E–02	–7.43E–04	–0.226	–86.136	15.69	10.248	0.001	0.000	0.000
150	1.63E–01	0.21	0.781	3.42E–03	8.62E–03	–9.37E–03	–0.895	–5.569	15.614	10.26	0.003	0.000	0.000
152	7.67E–02	0.208	0.794	–1.39E–03	–4.98E–03	–3.28E–02	–6.682	1.306	15.215	10.251	0.001	0.000	0.000
154	5.27E–02	0.21	0.779	1.28E–02	1.01E–02	–8.14E–03	–2.408	–7.631	15.652	10.248	0.001	0.000	0.000
156	6.78E–02	0.211	0.779	1.34E–02	1.07E–02	–3.76E–03	–0.865	–17.977	15.688	10.25	0.001	0.000	0.000
158	5.67E–02	0.211	0.777	1.23E–02	1.22E–02	1.58E–03	0.434	49.691	15.747	10.249	0.001	0.000	0.000
160	4.44E–02	0.211	0.778	1.19E–02	1.19E–02	3.01E–03	1.058	25.55	15.748	10.248	0.001	0.000	0.000
162	4.28E–02	0.211	0.776	1.30E–02	1.34E–02	2.33E–03	0.851	37.184	15.777	10.247	0.001	0.000	0.000
164	7.60E–02	0.211	0.777	1.34E–02	1.25E–02	2.94E–03	0.604	27.669	15.762	10.251	0.001	0.000	0.000
166	8.36E–02	0.211	0.776	1.32E–02	1.37E–02	4.66E–03	0.869	19.214	15.796	10.252	0.002	0.000	0.000
168	8.53E–02	0.212	0.777	1.26E–02	1.26E–02	1.08E–02	1.973	7.787	15.805	10.252	0.002	0.000	0.000
170	7.07E–02	0.212	0.776	1.17E–02	1.34E–02	1.15E–02	2.542	7.772	15.826	10.25	0.001	0.000	0.000
172	9.61E–02	0.212	0.777	1.24E–02	1.27E–02	9.92E–03	1.609	8.522	15.803	10.253	0.002	0.000	0.000
174	5.45E–02	0.211	0.775	1.37E–02	1.42E–02	8.09E–03	2.316	11.576	15.824	10.249	0.001	0.000	0.000
176	1.26E–01	0.211	0.778	1.35E–02	1.13E–02	3.28E–03	0.404	22.384	15.738	10.256	0.002	0.000	0.000
178	7.83E–02	0.211	0.776	1.28E–02	1.31E–02	1.27E–03	0.253	66.784	15.766	10.251	0.002	0.000	0.000
180	6.66E–02	0.211	0.777	1.38E–02	1.24E–02	3.05E–03	0.714	26.495	15.761	10.25	0.001	0.000	0.000
182	5.79E–02	0.211	0.776	1.32E–02	1.34E–02	6.94E–03	1.867	12.761	15.803	10.249	0.001	0.000	0.000
184	6.27E–02	0.211	0.776	1.34E–02	1.39E–02	5.56E–03	1.383	16.302	15.804	10.249	0.001	0.000	0.000
186	5.00E–02	0.211	0.777	1.33E–02	1.26E–02	5.73E–03	1.785	14.483	15.779	10.248	0.001	0.000	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T42. TX 641 consolidation data for remolded sample.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	0.023	0.326	0.337	0.332	–0.005	–0.022	0.915	1.033	0.000	9.876	3.175	0.000	0.000	0.000
10	0.023	0.328	0.338	0.333	–0.005	–0.022	0.915	1.032	0.000	9.876	3.173	0.000	0.000	0.000
20	0.023	0.328	0.338	0.333	–0.005	–0.022	0.915	1.031	0.000	9.876	3.174	0.000	0.000	0.000
30	0.023	0.331	0.342	0.336	–0.005	–0.021	0.915	1.033	0.000	9.876	3.170	0.000	0.000	0.000
40	0.023	0.333	0.345	0.339	–0.006	–0.021	0.915	1.035	0.000	9.876	3.166	0.000	0.000	0.000
50	0.023	0.335	0.347	0.341	–0.006	–0.021	0.915	1.037	0.000	9.876	3.163	0.000	0.000	0.000
60	0.023	0.339	0.352	0.345	–0.007	–0.02	0.915	1.041	0.000	9.876	3.158	0.000	0.000	0.000
70	0.023	0.342	0.357	0.349	–0.008	–0.02	0.915	1.044	0.000	9.876	3.153	0.000	0.000	0.000
80	0.023	0.347	0.364	0.355	–0.008	–0.019	0.915	1.049	0.000	9.876	3.146	0.000	0.000	0.000
90	0.023	0.350	0.368	0.359	–0.009	–0.018	0.915	1.053	0.000	9.876	3.141	0.000	0.000	0.000
100	0.023	0.337	0.347	0.342	–0.005	–0.019	0.915	1.032	0.000	9.876	3.162	0.000	0.000	0.000
110	0.024	0.334	0.340	0.337	–0.003	–0.02	0.915	1.016	0.000	9.876	3.169	0.000	0.000	0.000
120	0.024	0.337	0.337	0.337	0.000	–0.02	0.915	1.000	0.000	9.876	3.172	0.000	0.000	0.000
130	0.025	0.340	0.335	0.338	0.002	–0.02	0.915	0.985	0.000	9.876	3.173	0.000	0.000	0.000
140	0.025	0.344	0.334	0.339	0.005	–0.02	0.915	0.972	0.000	9.876	3.174	0.000	0.000	0.000
150	0.025	0.346	0.333	0.340	0.006	–0.02	0.915	0.963	0.000	9.876	3.175	0.000	0.000	0.000
160	0.026	0.349	0.334	0.341	0.007	–0.02	0.915	0.957	0.000	9.877	3.175	0.000	0.000	0.000
166	0.026	0.349	0.333	0.341	0.008	–0.02	0.915	0.953	0.000	9.877	3.175	0.000	0.000	0.000
526	0.039	0.420	0.331	0.376	0.044	–0.015	0.915	0.789	0.000	9.877	3.180	0.001	0.000	0.000
886	0.052	0.472	0.347	0.409	0.062	–0.007	0.914	0.736	0.000	9.878	3.180	0.001	0.000	0.000
1246	0.065	0.517	0.371	0.444	0.073	0.004	0.914	0.718	0.000	9.878	3.181	0.001	0.000	0.000
1606	0.078	0.558	0.396	0.477	0.081	0.018	0.914	0.711	0.000	9.878	3.181	0.002	0.000	0.000
1966	0.093	0.591	0.417	0.504	0.087	0.033	0.914	0.705	0.000	9.878	3.182	0.002	0.000	0.000
2326	0.107	0.619	0.434	0.527	0.092	0.048	0.913	0.702	0.000	9.878	3.182	0.003	0.000	0.000
2686	0.121	0.642	0.449	0.545	0.096	0.063	0.913	0.700	0.000	9.878	3.181	0.003	0.000	0.000
3046	0.134	0.662	0.461	0.561	0.100	0.078	0.913	0.697	0.001	9.878	3.181	0.004	0.001	0.000
3406	0.148	0.678	0.470	0.574	0.104	0.092	0.913	0.693	0.001	9.878	3.182	0.004	0.001	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T43. TX 641 undrained shearing data for remolded sample.

Time (s)	ε_a (%)	q/σ_{vc}	p'/σ_{vc}	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	E'/σ_{vc}	A	ϕ (°)	Area (cm²)	Axial membrane correction	Radial membrane correction	Axial drain correction
26	5.55E–05	0.241	0.756	1.24E–04	2.93E–05	5.61E–04	376.388	0.474	18.566	9.857	0.291	0.059	0.000
28	5.55E–05	0.241	0.756	1.36E–04	1.99E–05	7.37E–04	494.273	0.406	18.568	9.857	0.291	0.059	0.000
30	0	0.241	0.756	1.61E–04	1.40E–05	9.84E–04	0.000	0.372	18.571	9.857	0.291	0.059	0.000
32	5.55E–05	0.241	0.756	1.98E–04	1.64E–05	1.26E–03	847.762	0.368	18.575	9.857	0.291	0.059	0.000
34	0	0.241	0.756	2.60E–04	3.38E–05	1.72E–03	0.000	0.386	18.581	9.857	0.291	0.059	0.000
36	0	0.241	0.756	3.34E–04	2.08E–05	2.43E–03	0.000	0.356	18.59	9.857	0.291	0.059	0.000
38	1.11E–04	0.241	0.756	4.33E–04	–6.33E–06	3.44E–03	1154.296	0.328	18.603	9.857	0.291	0.059	0.000
40	2.23E–04	0.241	0.756	5.32E–04	–1.17E–05	4.28E–03	715.449	0.326	18.614	9.857	0.291	0.059	0.000
42	2.79E–04	0.242	0.756	6.31E–04	2.49E–05	4.99E–03	664.613	0.347	18.624	9.857	0.291	0.059	0.000
44	2.79E–04	0.242	0.756	7.17E–04	2.07E–05	5.62E–03	748.945	0.343	18.633	9.857	0.291	0.059	0.000
46	3.91E–04	0.242	0.756	8.04E–04	4.21E–05	6.14E–03	584.695	0.352	18.64	9.857	0.291	0.059	0.000
48	4.46E–04	0.242	0.756	8.78E–04	5.03E–05	6.77E–03	564.673	0.353	18.649	9.857	0.291	0.059	0.000
50	3.91E–04	0.242	0.756	9.40E–04	4.67E–05	7.30E–03	695.085	0.351	18.656	9.857	0.291	0.059	0.000
52	4.46E–04	0.242	0.757	1.01E–03	4.33E–05	7.83E–03	652.569	0.348	18.663	9.857	0.291	0.059	0.000
54	5.02E–04	0.242	0.757	1.08E–03	4.42E–05	8.32E–03	616.83	0.348	18.669	9.857	0.291	0.059	0.000
56	5.58E–04	0.242	0.757	1.14E–03	4.52E–05	8.81E–03	587.298	0.347	18.676	9.857	0.291	0.059	0.000
58	5.02E–04	0.242	0.757	1.22E–03	6.19E–05	9.37E–03	695.000	0.351	18.684	9.857	0.291	0.059	0.000
60	5.58E–04	0.242	0.757	1.31E–03	8.76E–05	9.87E–03	657.58	0.357	18.691	9.857	0.291	0.059	0.000
62	7.25E–04	0.243	0.757	1.36E–03	6.77E–05	1.04E–02	534.625	0.351	18.698	9.857	0.291	0.059	0.000
64	7.81E–04	0.243	0.757	1.42E–03	6.87E–05	1.09E–02	520.037	0.35	18.704	9.857	0.291	0.059	0.000
66	8.37E–04	0.243	0.757	1.48E–03	4.85E–05	1.15E–02	509.983	0.345	18.711	9.857	0.291	0.059	0.000
68	8.37E–04	0.243	0.757	1.55E–03	3.70E–05	1.20E–02	531.855	0.342	18.718	9.857	0.291	0.059	0.000
70	9.49E–04	0.243	0.757	1.61E–03	2.94E–05	1.25E–02	491.152	0.34	18.725	9.857	0.291	0.059	0.000
72	9.49E–04	0.243	0.757	1.67E–03	3.82E–05	1.31E–02	511.824	0.341	18.732	9.857	0.291	0.059	0.000
74	1.00E–03	0.243	0.757	1.74E–03	3.48E–05	1.36E–02	503.044	0.34	18.739	9.857	0.291	0.059	0.000
76	1.06E–03	0.243	0.757	1.79E–03	1.90E–05	1.41E–02	494.788	0.337	18.745	9.857	0.291	0.059	0.000
78	1.12E–03	0.243	0.757	1.88E–03	5.71E–05	1.46E–02	486.559	0.344	18.753	9.857	0.291	0.059	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T44. TX 642 consolidation data for Sample 204-1244B-3H-3WR, 128–138 cm.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	–0.005	0.178	0.181	0.18	–0.002	–0.004	1.595	1.018	0.000	9.866	3.333	0.000	0.000	0.000
10	–0.005	0.179	0.182	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.333	0.000	0.000	0.000
20	–0.005	0.179	0.182	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.332	0.000	0.000	0.000
30	–0.005	0.179	0.182	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.332	0.000	0.000	0.000
40	–0.005	0.178	0.181	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.333	0.000	0.000	0.000
50	–0.005	0.178	0.181	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.332	0.000	0.000	0.000
60	–0.005	0.178	0.181	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.332	0.000	0.000	0.000
70	–0.005	0.178	0.181	0.18	–0.001	–0.004	1.595	1.016	0.000	9.866	3.332	0.000	0.000	0.000
80	–0.005	0.178	0.181	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.332	0.000	0.000	0.000
90	–0.005	0.178	0.181	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.332	0.000	0.000	0.000
100	–0.005	0.178	0.181	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.331	0.000	0.000	0.000
110	–0.005	0.179	0.181	0.18	–0.001	–0.004	1.595	1.016	0.000	9.866	3.331	0.000	0.000	0.000
120	–0.006	0.179	0.182	0.18	–0.002	–0.004	1.595	1.017	0.000	9.866	3.33	0.000	0.000	0.000
130	–0.006	0.179	0.182	0.18	–0.002	–0.004	1.595	1.018	0.000	9.866	3.329	0.000	0.000	0.000
140	–0.005	0.179	0.182	0.18	–0.002	–0.004	1.595	1.018	0.000	9.866	3.329	0.000	0.000	0.000
150	–0.006	0.179	0.182	0.181	–0.002	–0.004	1.595	1.017	0.000	9.866	3.329	0.000	0.000	0.000
160	–0.005	0.179	0.182	0.18	–0.002	–0.003	1.595	1.018	0.000	9.866	3.329	0.000	0.000	0.000
170	–0.006	0.179	0.182	0.181	–0.002	–0.003	1.595	1.018	0.000	9.866	3.328	0.000	0.000	0.000
180	–0.005	0.179	0.182	0.181	–0.002	–0.003	1.595	1.017	0.000	9.866	3.328	0.000	0.000	0.000
190	–0.006	0.179	0.182	0.181	–0.001	–0.003	1.595	1.015	0.000	9.866	3.328	0.000	0.000	0.000
200	–0.006	0.179	0.182	0.181	–0.001	–0.003	1.595	1.012	0.000	9.866	3.328	0.000	0.000	0.000
210	–0.005	0.18	0.181	0.181	–0.001	–0.003	1.595	1.008	0.000	9.866	3.328	0.000	0.000	0.000
220	–0.005	0.18	0.181	0.181	0	–0.003	1.595	1.003	0.000	9.866	3.328	0.000	0.000	0.000
230	–0.005	0.181	0.181	0.181	0	–0.003	1.595	0.999	0.000	9.866	3.328	0.000	0.000	0.000
240	–0.004	0.182	0.181	0.181	0.001	–0.003	1.595	0.992	0.000	9.866	3.328	0.000	0.000	0.000
250	–0.003	0.183	0.18	0.181	0.001	–0.003	1.595	0.987	0.000	9.866	3.328	0.000	0.000	0.000
260	–0.003	0.183	0.18	0.181	0.002	–0.003	1.595	0.982	0.000	9.866	3.328	0.000	0.000	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T45. TX 642 undrained shearing data for Sample 204-1244B-3H-3WR, 128–138 cm.

Time (s)	ε_a (%)	q/σ_{vc}	p'/σ_{vc}	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	E'/σ_{vc}	A	ϕ (°)	Area (cm^2)	Axial membrane correction	Radial membrane correction	Axial drain correction
22	3.88E–04	0.274	0.725	1.42E–03	1.04E–03	9.53E–03	363.526	1.068	22.16	9.847	0.382	0.077	0.000
24	5.18E–04	0.274	0.725	1.56E–03	1.15E–03	1.01E–02	289.705	1.099	22.167	9.847	0.382	0.077	0.000
26	5.83E–04	0.274	0.725	1.65E–03	1.17E–03	1.09E–02	278.251	1.053	22.172	9.847	0.382	0.077	0.000
28	7.12E–04	0.274	0.725	1.82E–03	1.28E–03	1.22E–02	252.76	1.043	22.182	9.847	0.382	0.077	0.000
30	5.83E–04	0.274	0.725	1.91E–03	1.32E–03	1.30E–02	329.952	1.021	22.188	9.847	0.382	0.077	0.000
32	6.48E–04	0.274	0.725	2.02E–03	1.38E–03	1.42E–02	324.438	0.988	22.197	9.847	0.382	0.077	0.000
34	6.48E–04	0.274	0.725	2.13E–03	1.43E–03	1.54E–02	352.328	0.96	22.205	9.847	0.382	0.077	0.000
36	7.12E–04	0.274	0.725	2.30E–03	1.54E–03	1.66E–02	345.756	0.959	22.216	9.847	0.382	0.077	0.000
38	8.42E–04	0.274	0.725	2.42E–03	1.60E–03	1.76E–02	310.214	0.947	22.223	9.847	0.382	0.077	0.000
40	7.12E–04	0.274	0.725	2.50E–03	1.69E–03	1.89E–02	392.258	0.937	22.233	9.847	0.382	0.077	0.000
42	7.77E–04	0.274	0.725	2.65E–03	1.74E–03	2.01E–02	382.92	0.918	22.241	9.847	0.382	0.077	0.000
44	7.77E–04	0.274	0.725	2.70E–03	1.76E–03	2.13E–02	406.192	0.893	22.249	9.847	0.382	0.077	0.000
46	9.72E–04	0.275	0.725	2.84E–03	1.84E–03	2.27E–02	346.13	0.879	22.259	9.847	0.382	0.077	0.000
48	9.72E–04	0.275	0.725	2.96E–03	1.88E–03	2.41E–02	367.806	0.859	22.268	9.847	0.382	0.077	0.000
50	1.10E–03	0.275	0.725	3.13E–03	2.01E–03	2.55E–02	343.513	0.864	22.28	9.847	0.382	0.077	0.000
52	1.04E–03	0.275	0.725	3.21E–03	2.04E–03	2.68E–02	382.676	0.847	22.288	9.847	0.382	0.077	0.000
54	1.17E–03	0.275	0.725	3.30E–03	2.06E–03	2.80E–02	355.477	0.83	22.295	9.847	0.382	0.077	0.000
56	1.29E–03	0.275	0.725	3.44E–03	2.14E–03	2.92E–02	333.986	0.829	22.305	9.847	0.382	0.077	0.000
58	1.23E–03	0.275	0.725	3.56E–03	2.21E–03	3.02E–02	363.454	0.826	22.312	9.847	0.382	0.077	0.000
60	1.36E–03	0.275	0.725	3.64E–03	2.24E–03	3.12E–02	340.022	0.818	22.319	9.847	0.382	0.077	0.000
62	1.49E–03	0.275	0.725	3.78E–03	2.34E–03	3.20E–02	318.417	0.827	22.327	9.847	0.382	0.077	0.000
64	1.42E–03	0.275	0.725	3.84E–03	2.31E–03	3.32E–02	345.756	0.803	22.333	9.847	0.382	0.077	0.000
66	1.55E–03	0.275	0.725	3.93E–03	2.38E–03	3.43E–02	326.498	0.802	22.34	9.847	0.382	0.077	0.000
68	1.68E–03	0.275	0.724	4.07E–03	2.50E–03	3.53E–02	310.21	0.811	22.35	9.847	0.382	0.077	0.000
70	1.68E–03	0.276	0.724	4.13E–03	2.50E–03	3.63E–02	319.152	0.799	22.356	9.847	0.382	0.077	0.000
72	1.75E–03	0.276	0.724	4.21E–03	2.55E–03	3.71E–02	314.077	0.797	22.361	9.847	0.382	0.077	0.000
74	1.81E–03	0.276	0.725	4.24E–03	2.54E–03	3.79E–02	309.533	0.785	22.366	9.847	0.382	0.077	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T46. TX 643 consolidation data for Sample 204-1244B-1H-4WR, 138–148 cm.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	–0.007	0.186	0.18	0.183	0.003	–0.007	1.458	0.971	0.000	10.07	3.326	0.000	0.000	0.000
10	–0.008	0.187	0.181	0.184	0.003	–0.007	1.458	0.97	0.000	10.07	3.325	0.000	0.000	0.000
20	–0.008	0.187	0.181	0.184	0.003	–0.007	1.458	0.97	0.000	10.07	3.324	0.000	0.000	0.000
30	–0.008	0.187	0.181	0.184	0.003	–0.007	1.458	0.97	0.000	10.07	3.324	0.000	0.000	0.000
40	–0.008	0.186	0.181	0.184	0.003	–0.007	1.458	0.973	0.000	10.07	3.323	0.000	0.000	0.000
50	–0.008	0.186	0.181	0.184	0.002	–0.007	1.458	0.973	0.000	10.07	3.322	0.000	0.000	0.000
60	–0.008	0.186	0.181	0.184	0.003	–0.007	1.458	0.973	0.000	10.07	3.322	0.000	0.000	0.000
70	–0.008	0.186	0.181	0.184	0.003	–0.007	1.458	0.973	0.000	10.07	3.32	0.000	0.000	0.000
80	–0.008	0.186	0.181	0.184	0.003	–0.007	1.458	0.972	0.000	10.07	3.319	0.000	0.000	0.000
90	–0.008	0.187	0.181	0.184	0.003	–0.007	1.458	0.971	0.000	10.07	3.319	0.000	0.000	0.000
100	–0.008	0.187	0.181	0.184	0.003	–0.007	1.458	0.968	0.000	10.07	3.319	0.000	0.000	0.000
110	–0.008	0.187	0.18	0.184	0.003	–0.007	1.458	0.963	0.000	10.07	3.318	0.000	0.000	0.000
120	–0.007	0.188	0.18	0.184	0.004	–0.007	1.458	0.957	0.000	10.07	3.319	0.000	0.000	0.000
130	–0.007	0.189	0.179	0.184	0.005	–0.007	1.458	0.95	0.000	10.07	3.319	0.000	0.000	0.000
140	–0.006	0.19	0.179	0.184	0.005	–0.007	1.458	0.943	0.000	10.07	3.319	0.000	0.000	0.000
150	–0.006	0.19	0.179	0.184	0.006	–0.007	1.458	0.94	0.000	10.07	3.319	0.000	0.000	0.000
160	–0.005	0.191	0.178	0.184	0.006	–0.007	1.458	0.936	0.000	10.07	3.319	0.000	0.000	0.000
170	–0.005	0.191	0.178	0.184	0.007	–0.007	1.458	0.931	0.000	10.07	3.319	0.000	0.000	0.000
180	–0.005	0.191	0.178	0.185	0.007	–0.007	1.458	0.928	0.000	10.07	3.32	0.000	0.000	0.000
186	–0.004	0.192	0.178	0.185	0.007	–0.007	1.458	0.925	0.000	10.07	3.32	0.000	0.000	0.000
546	0.011	0.208	0.174	0.191	0.017	–0.007	1.458	0.836	0.000	10.072	3.339	0.000	0.000	0.000
906	0.024	0.237	0.199	0.218	0.019	0.009	1.458	0.842	0.000	10.071	3.347	0.001	0.000	0.000
1266	0.038	0.251	0.211	0.231	0.02	0.031	1.457	0.843	0.000	10.071	3.345	0.001	0.000	0.000
1626	0.051	0.253	0.208	0.23	0.023	0.047	1.457	0.821	0.000	10.07	3.34	0.002	0.000	0.000
1986	0.065	0.256	0.203	0.229	0.026	0.057	1.456	0.794	0.000	10.071	3.34	0.002	0.000	0.000
2346	0.078	0.258	0.199	0.229	0.03	0.066	1.456	0.772	0.000	10.071	3.349	0.002	0.000	0.000
2706	0.092	0.271	0.211	0.241	0.03	0.083	1.456	0.776	0.000	10.071	3.343	0.003	0.001	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T47. TX 643 undrained shearing data for Sample 204-1244B-1H-4WR, 138–148 cm.

Time (s)	ε_a (%)	q/σ_{vc}	p'/σ_{vc}	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	E'/σ_{vc}	A	ϕ (°)	Area (cm^2)	Axial membrane correction	Radial membrane correction	Axial drain correction
18	0	0.269	0.734	0	0	0	0	0	21.539	10.065	0.339	0.068	0.000
20	1.11E–03	0.27	0.734	1.27E–03	6.49E–04	1.27E–02	167.982	0.682	21.627	10.065	0.339	0.068	0.000
22	1.55E–03	0.271	0.734	1.39E–03	5.67E–04	1.68E–02	158.566	0.564	21.647	10.065	0.339	0.068	0.000
24	2.16E–03	0.271	0.734	1.66E–03	5.97E–04	2.25E–02	152.04	0.515	21.678	10.065	0.339	0.068	0.000
26	6.19E–04	0.271	0.734	1.77E–03	6.15E–04	2.45E–02	578.983	0.505	21.69	10.065	0.339	0.068	0.000
28	8.48E–04	0.271	0.734	1.89E–03	5.85E–04	2.75E–02	473.922	0.479	21.705	10.065	0.339	0.068	0.000
30	1.10E–03	0.272	0.734	1.96E–03	6.48E–04	2.85E–02	378.088	0.489	21.712	10.065	0.339	0.068	0.000
32	2.29E–03	0.272	0.734	2.04E–03	6.75E–04	2.95E–02	189.23	0.489	21.719	10.065	0.339	0.068	0.000
34	1.58E–03	0.272	0.734	2.12E–03	6.97E–04	3.07E–02	283.603	0.489	21.726	10.065	0.339	0.068	0.000
36	1.22E–03	0.272	0.734	2.16E–03	7.20E–04	3.18E–02	382.903	0.488	21.732	10.065	0.339	0.068	0.000
38	1.23E–03	0.272	0.734	2.27E–03	7.56E–04	3.34E–02	397.004	0.488	21.742	10.065	0.339	0.068	0.000
40	1.43E–03	0.272	0.734	2.35E–03	7.67E–04	3.48E–02	356.566	0.484	21.75	10.065	0.339	0.068	0.000
42	2.04E–03	0.272	0.734	2.43E–03	7.79E–04	3.61E–02	258.881	0.481	21.757	10.065	0.339	0.068	0.000
44	2.05E–03	0.272	0.734	2.54E–03	8.15E–04	3.77E–02	269.13	0.481	21.767	10.065	0.339	0.068	0.000
46	1.46E–03	0.272	0.734	2.62E–03	8.24E–04	3.91E–02	393.477	0.477	21.775	10.065	0.339	0.068	0.000
48	1.67E–03	0.272	0.734	2.70E–03	8.35E–04	4.05E–02	355.436	0.474	21.783	10.065	0.339	0.068	0.000
50	1.54E–03	0.272	0.734	2.81E–03	8.32E–04	4.21E–02	399.239	0.468	21.791	10.065	0.339	0.068	0.000
52	2.01E–03	0.273	0.734	2.89E–03	8.96E–04	4.32E–02	314.927	0.475	21.799	10.065	0.339	0.068	0.000
54	3.23E–03	0.273	0.734	3.00E–03	9.48E–04	4.45E–02	201.264	0.479	21.808	10.065	0.339	0.068	0.000
56	2.27E–03	0.273	0.734	3.04E–03	9.56E–04	4.59E–02	295.301	0.476	21.816	10.065	0.339	0.068	0.000
58	2.08E–03	0.273	0.734	3.16E–03	9.91E–04	4.75E–02	334.599	0.476	21.826	10.065	0.339	0.068	0.000
60	1.58E–03	0.273	0.734	3.20E–03	1.00E–03	4.89E–02	453.738	0.473	21.833	10.065	0.339	0.068	0.000
62	2.54E–03	0.273	0.734	3.35E–03	1.08E–03	5.05E–02	291.367	0.479	21.844	10.065	0.339	0.068	0.000
64	2.83E–03	0.273	0.734	3.47E–03	1.09E–03	5.27E–02	272.116	0.474	21.856	10.065	0.339	0.068	0.000
66	2.90E–03	0.273	0.734	3.58E–03	1.16E–03	5.43E–02	274.107	0.48	21.867	10.065	0.339	0.068	0.000
68	2.67E–03	0.274	0.734	3.66E–03	1.09E–03	5.65E–02	309.558	0.466	21.877	10.065	0.339	0.068	0.000
70	2.00E–03	0.274	0.734	3.81E–03	1.15E–03	5.84E–02	428.521	0.468	21.889	10.065	0.339	0.068	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T48. TX 644 consolidation data for resedimented sample.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	–0.009	0.088	0.086	0.087	0.001	0.000	1.853	0.977	0.000	9.758	3.519	0.000	0.000	0.000
10	–0.009	0.088	0.086	0.087	0.001	0.000	1.853	0.977	0.000	9.758	3.519	0.000	0.000	0.000
20	–0.009	0.088	0.086	0.087	0.001	0.000	1.853	0.976	0.000	9.758	3.519	0.000	0.000	0.000
30	–0.009	0.088	0.086	0.087	0.001	0.000	1.853	0.978	0.000	9.758	3.519	0.000	0.000	0.000
40	–0.009	0.088	0.086	0.087	0.001	0.000	1.853	0.976	0.000	9.758	3.518	0.000	0.000	0.000
50	–0.009	0.087	0.085	0.086	0.001	0.000	1.853	0.978	0.000	9.758	3.518	0.000	0.000	0.000
60	–0.009	0.088	0.085	0.087	0.001	0.000	1.853	0.976	0.000	9.758	3.518	0.000	0.000	0.000
70	–0.009	0.087	0.085	0.086	0.001	0.000	1.853	0.978	0.000	9.758	3.517	0.000	0.000	0.000
80	–0.009	0.087	0.085	0.086	0.001	0.000	1.853	0.978	0.000	9.758	3.517	0.000	0.000	0.000
90	–0.009	0.087	0.085	0.086	0.001	0.000	1.853	0.978	0.000	9.758	3.516	0.000	0.000	0.000
100	–0.009	0.087	0.085	0.086	0.001	0.000	1.853	0.978	0.000	9.758	3.515	0.000	0.000	0.000
110	–0.009	0.087	0.085	0.086	0.001	0.000	1.853	0.979	0.000	9.758	3.514	0.000	0.000	0.000
120	–0.009	0.087	0.085	0.086	0.001	0.000	1.853	0.978	0.000	9.758	3.514	0.000	0.000	0.000
128	–0.009	0.088	0.086	0.087	0.001	0.000	1.853	0.976	0.000	9.758	3.514	0.000	0.000	0.000
428	–0.004	0.09	0.082	0.086	0.004	–0.004	1.853	0.907	0.000	9.759	3.509	0.000	0.000	0.000
728	0.004	0.099	0.081	0.09	0.009	–0.005	1.853	0.821	0.000	9.76	3.517	0.000	0.000	0.000
1028	0.015	0.11	0.086	0.098	0.012	0.005	1.853	0.78	0.000	9.76	3.538	0.000	0.000	0.000
1328	0.026	0.119	0.092	0.106	0.013	0.027	1.852	0.778	0.000	9.759	3.535	0.001	0.000	0.000
1628	0.038	0.123	0.092	0.108	0.015	0.04	1.852	0.749	0.000	9.759	3.529	0.001	0.000	0.000
1928	0.049	0.127	0.091	0.109	0.018	0.045	1.852	0.712	0.000	9.759	3.528	0.002	0.000	0.000
2228	0.061	0.134	0.093	0.114	0.02	0.056	1.851	0.699	0.000	9.76	3.533	0.002	0.000	0.000
2528	0.072	0.138	0.096	0.117	0.021	0.07	1.851	0.692	0.000	9.759	3.533	0.002	0.000	0.000
2828	0.083	0.142	0.097	0.119	0.022	0.084	1.851	0.684	0.000	9.759	3.53	0.003	0.001	0.000
3128	0.095	0.143	0.095	0.119	0.024	0.09	1.85	0.663	0.000	9.759	3.528	0.003	0.001	0.000
3428	0.106	0.148	0.098	0.123	0.025	0.1	1.85	0.66	0.000	9.76	3.533	0.003	0.001	0.000
3728	0.117	0.152	0.101	0.126	0.026	0.116	1.85	0.662	0.000	9.759	3.535	0.004	0.001	0.000
4028	0.129	0.154	0.1	0.127	0.027	0.127	1.849	0.65	0.000	9.759	3.53	0.004	0.001	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T49. TX 644 undrained shearing data for resedimented sample.

Time (s)	ε_a (%)	q/σ_{vc}	$p'\sigma/_{vc}$	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	E'/σ_{vc}	A	ϕ (°)	Area (cm²)	Axial membrane correction	Radial membrane correction	Axial drain correction
0	0	0.266	0.731	0	0	0	0	0	21.327	9.929	0.389	0.072	0.000
2	1.74E–04	0.266	0.731	1.16E–04	8.05E–07	–1.04E–05	–0.987	–0.125	21.327	9.929	0.389	0.072	0.000
4	1.74E–04	0.266	0.731	3.48E–04	4.15E–05	–7.48E–04	–70.83	–0.003	21.324	9.929	0.389	0.072	0.000
6	2.33E–04	0.266	0.731	3.48E–04	1.17E–04	–1.37E–05	–0.969	–51.429	21.33	9.929	0.389	0.072	0.000
8	2.33E–04	0.266	0.731	3.48E–04	1.18E–06	–1.37E–05	–0.969	–0.19	21.327	9.929	0.389	0.072	0.000
10	3.48E–04	0.266	0.731	5.79E–04	2.33E–04	–2.02E–05	–0.956	–69.742	21.334	9.929	0.389	0.072	0.000
12	2.33E–04	0.266	0.731	5.79E–04	2.73E–04	–7.51E–04	–53.218	–1.875	21.331	9.929	0.389	0.072	0.000
14	2.90E–04	0.266	0.731	5.79E–04	2.74E–04	–7.55E–04	–42.824	–1.867	21.331	9.929	0.389	0.072	0.000
16	2.33E–04	0.266	0.731	8.11E–04	5.05E–04	–7.51E–04	–53.218	–3.747	21.338	9.929	0.389	0.072	0.000
18	2.33E–04	0.266	0.731	8.11E–04	5.05E–04	–7.51E–04	–53.218	–3.747	21.338	9.929	0.389	0.072	0.000
20	2.90E–04	0.266	0.731	8.11E–04	5.46E–04	–1.49E–03	–84.687	–1.886	21.334	9.929	0.389	0.072	0.000
22	2.90E–04	0.266	0.731	9.27E–04	6.21E–04	–7.55E–04	–42.824	–4.661	21.341	9.929	0.389	0.072	0.000
24	2.90E–04	0.266	0.731	9.27E–04	6.62E–04	–1.49E–03	–84.687	–2.357	21.338	9.929	0.389	0.072	0.000
26	2.90E–04	0.266	0.731	9.27E–04	6.62E–04	–1.49E–03	–84.687	–2.357	21.338	9.929	0.389	0.072	0.000
28	3.48E–04	0.266	0.731	9.27E–04	6.62E–04	–1.50E–03	–70.799	–2.352	21.338	9.929	0.389	0.072	0.000
30	–1.74E–03	0.266	0.729	2.20E–03	1.85E–03	1.00E–04	–0.949	112.117	21.384	9.929	0.389	0.072	0.000
32	3.48E–04	0.266	0.73	2.32E–03	1.80E–03	5.14E–03	243.585	2.459	21.414	9.929	0.389	0.072	0.000
34	3.48E–04	0.266	0.73	2.32E–03	1.76E–03	5.88E–03	278.506	2.151	21.417	9.929	0.389	0.072	0.000
36	3.48E–04	0.267	0.73	2.43E–03	1.76E–03	8.10E–03	383.3	1.65	21.43	9.929	0.389	0.072	0.000
38	3.48E–04	0.267	0.73	2.55E–03	1.87E–03	1.03E–02	488.095	1.432	21.447	9.929	0.389	0.072	0.000
40	4.07E–04	0.267	0.73	2.90E–03	2.05E–03	1.33E–02	537.208	1.273	21.471	9.929	0.389	0.072	0.000
42	5.23E–04	0.267	0.73	3.01E–03	1.97E–03	1.69E–02	533.748	1.038	21.491	9.929	0.389	0.072	0.000
44	6.97E–04	0.268	0.73	3.24E–03	2.11E–03	2.06E–02	487.473	0.955	21.518	9.929	0.389	0.072	0.000
46	8.13E–04	0.268	0.73	3.36E–03	1.98E–03	2.50E–02	507.319	0.814	21.541	9.929	0.389	0.072	0.000
48	9.30E–04	0.268	0.73	3.82E–03	2.20E–03	2.95E–02	522.199	0.787	21.574	9.929	0.389	0.072	0.000
50	1.10E–03	0.269	0.73	3.94E–03	2.08E–03	3.39E–02	505.798	0.705	21.597	9.929	0.389	0.072	0.000
52	1.39E–03	0.269	0.73	4.29E–03	2.14E–03	3.90E–02	461.3	0.666	21.631	9.929	0.389	0.072	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T50. TX 645 consolidation data for Sample 204-1244B-3H-3WR, 125–135 cm.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	–0.006	0.214	0.213	0.213	0.001	–0.001	1.686	0.993	0.000	10.273	3.305	0.000	0.000	0.000
10	–0.006	0.214	0.213	0.213	0.001	–0.001	1.686	0.993	0.000	10.273	3.303	0.000	0.000	0.000
20	–0.006	0.215	0.213	0.214	0.001	–0.001	1.686	0.992	0.000	10.273	3.303	0.000	0.000	0.000
30	–0.006	0.215	0.213	0.214	0.001	–0.001	1.686	0.993	0.000	10.273	3.303	0.000	0.000	0.000
40	–0.006	0.215	0.212	0.214	0.001	–0.001	1.686	0.989	0.000	10.273	3.302	0.000	0.000	0.000
50	–0.005	0.215	0.212	0.214	0.002	–0.001	1.686	0.984	0.000	10.273	3.301	0.000	0.000	0.000
60	–0.005	0.216	0.211	0.213	0.002	–0.001	1.686	0.978	0.000	10.273	3.301	0.000	0.000	0.000
70	–0.005	0.216	0.211	0.213	0.003	–0.001	1.686	0.974	0.000	10.273	3.3	0.000	0.000	0.000
80	–0.004	0.217	0.210	0.213	0.003	–0.001	1.686	0.969	0.000	10.273	3.3	0.000	0.000	0.000
90	–0.004	0.217	0.209	0.213	0.004	–0.001	1.686	0.964	0.000	10.273	3.299	0.000	0.000	0.000
100	–0.003	0.218	0.209	0.213	0.004	–0.001	1.686	0.959	0.000	10.273	3.299	0.000	0.000	0.000
110	–0.003	0.218	0.208	0.213	0.005	–0.001	1.686	0.954	0.000	10.273	3.298	0.000	0.000	0.000
120	–0.002	0.218	0.207	0.213	0.005	–0.001	1.686	0.95	0.000	10.273	3.298	0.000	0.000	0.000
122	–0.002	0.219	0.208	0.213	0.006	–0.001	1.686	0.949	0.000	10.273	3.298	0.000	0.000	0.000
422	0.010	0.228	0.196	0.212	0.016	–0.001	1.686	0.86	0.000	10.274	3.304	0.000	0.000	0.000
722	0.022	0.234	0.190	0.212	0.022	–0.001	1.686	0.812	0.000	10.276	3.306	0.000	0.000	0.000
1022	0.034	0.257	0.216	0.236	0.021	0.012	1.686	0.838	0.000	10.275	3.323	0.001	0.000	0.000
1322	0.045	0.269	0.233	0.251	0.018	0.032	1.685	0.869	0.000	10.275	3.318	0.001	0.000	0.000
1622	0.057	0.269	0.229	0.249	0.020	0.044	1.685	0.849	0.000	10.275	3.311	0.002	0.000	0.000
1922	0.069	0.273	0.226	0.249	0.023	0.053	1.685	0.83	0.000	10.275	3.313	0.002	0.000	0.000
2222	0.080	0.281	0.234	0.258	0.023	0.066	1.684	0.834	0.000	10.275	3.316	0.002	0.000	0.000
2522	0.092	0.284	0.237	0.26	0.024	0.079	1.684	0.833	0.000	10.274	3.313	0.003	0.001	0.000
2822	0.104	0.289	0.238	0.263	0.026	0.09	1.684	0.824	0.000	10.275	3.315	0.003	0.001	0.000
3122	0.115	0.293	0.241	0.267	0.026	0.102	1.683	0.822	0.000	10.275	3.312	0.004	0.001	0.000
3422	0.127	0.295	0.240	0.268	0.028	0.112	1.683	0.812	0.000	10.275	3.312	0.004	0.001	0.000
3722	0.139	0.3	0.242	0.271	0.029	0.123	1.683	0.808	0.000	10.275	3.313	0.004	0.001	0.000
4022	0.151	0.308	0.253	0.281	0.028	0.138	1.682	0.821	0.000	10.275	3.317	0.005	0.001	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T51. TX 645 undrained shearing data for Sample 204-1244B-3H-3WR, 125–135 cm.

Time (s)	ε_a (%)	q/σ_{vc}	p'/σ_{vc}	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	E'/σ_{vc}	A	ϕ (°)	Area (cm²)	Axial membrane correction	Radial membrane correction	Axial drain correction
0	0	0.248	0.751	0	0	0	0.000	0.000	19.254	10.270	0.516	0.103	0.000
2	5.96E–04	0.248	0.751	–9.01E–05	–1.19E–04	2.87E–04	6.914	–2.551	19.252	10.270	0.516	0.103	0.000
4	5.96E–04	0.248	0.751	–1.80E–04	–1.99E–04	3.94E–04	9.474	–3.191	19.250	10.270	0.516	0.103	0.000
6	5.96E–04	0.248	0.751	–3.00E–04	–3.29E–04	6.05E–04	14.576	–3.458	19.248	10.270	0.516	0.103	0.000
8	5.96E–04	0.248	0.751	–4.06E–04	–4.24E–04	3.94E–04	9.474	–7.181	19.244	10.270	0.516	0.103	0.000
10	5.96E–04	0.248	0.751	–5.11E–04	–5.09E–04	–3.10E–05	–0.747	114.625	19.240	10.270	0.516	0.103	0.000
12	5.96E–04	0.248	0.751	–6.01E–04	–5.59E–04	–5.62E–04	–13.539	7.260	19.236	10.270	0.516	0.103	0.000
14	5.96E–04	0.248	0.751	–7.06E–04	–6.74E–04	–9.87E–04	–23.77	5.089	19.231	10.270	0.516	0.103	0.000
16	5.96E–04	0.247	0.752	–7.96E–04	–7.34E–04	–1.62E–03	–39.111	3.479	19.226	10.270	0.516	0.103	0.000
18	5.96E–04	0.247	0.752	–8.86E–04	–8.08E–04	–2.26E–03	–54.462	2.822	19.220	10.270	0.516	0.103	0.000
20	5.96E–04	0.247	0.752	–9.62E–04	–8.58E–04	–2.79E–03	–67.253	2.473	19.216	10.270	0.516	0.103	0.000
22	5.96E–04	0.247	0.752	–1.07E–03	–9.38E–04	–3.32E–03	–80.035	2.298	19.211	10.270	0.516	0.103	0.000
24	5.96E–04	0.247	0.752	–1.16E–03	–9.82E–04	–3.96E–03	–95.368	2.061	19.207	10.270	0.516	0.103	0.000
26	5.96E–04	0.247	0.752	–1.25E–03	–1.07E–03	–4.39E–03	–105.599	2.028	19.203	10.270	0.516	0.103	0.000
28	5.96E–04	0.247	0.752	–1.35E–03	–1.14E–03	–5.02E–03	–120.959	1.917	19.197	10.270	0.516	0.103	0.000
30	1.19E–03	0.248	0.751	–3.91E–04	–5.09E–04	1.53E–03	18.416	–1.984	19.248	10.270	0.516	0.103	0.000
32	2.38E–03	0.248	0.752	–7.51E–04	–1.14E–03	6.56E–03	39.513	–0.877	19.257	10.270	0.516	0.103	0.000
34	2.38E–03	0.248	0.752	–2.25E–04	–6.14E–04	6.56E–03	39.513	–0.319	19.271	10.270	0.516	0.103	0.000
36	2.38E–03	0.248	0.751	1.65E–04	–2.59E–04	6.99E–03	42.073	0.075	19.283	10.270	0.516	0.103	0.000
38	2.38E–03	0.248	0.751	4.81E–04	5.68E–06	7.73E–03	46.546	0.338	19.294	10.270	0.516	0.103	0.000
40	2.38E–03	0.248	0.751	7.51E–04	2.61E–04	8.37E–03	50.382	0.550	19.304	10.270	0.516	0.103	0.000
42	2.38E–03	0.248	0.751	9.77E–04	4.35E–04	9.11E–03	54.86	0.666	19.312	10.270	0.516	0.103	0.000
44	2.38E–03	0.248	0.75	1.22E–03	6.45E–04	9.75E–03	58.693	0.794	19.321	10.270	0.516	0.103	0.000
46	2.38E–03	0.248	0.75	1.43E–03	8.20E–04	1.05E–02	63.168	0.878	19.330	10.270	0.516	0.103	0.000
48	2.98E–03	0.248	0.75	1.65E–03	1.03E–03	1.12E–02	53.96	0.971	19.339	10.270	0.516	0.103	0.000
50	2.98E–03	0.248	0.75	1.82E–03	1.16E–03	1.23E–02	59.076	0.990	19.348	10.270	0.516	0.103	0.000
52	2.38E–03	0.249	0.75	2.01E–03	1.31E–03	1.35E–02	81.072	1.010	19.358	10.270	0.516	0.103	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T52. TX 646 consolidation data for Sample 204-1244C-9H-5WR, 115–125 cm.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	–0.004	0.247	0.245	0.246	0.001	0.001	1.477	0.991	0.000	9.892	2.958	0.000	0.000	0.000
10	–0.004	0.247	0.245	0.246	0.001	0	1.477	0.993	0.000	9.892	2.958	0.000	0.000	0.000
20	–0.004	0.248	0.247	0.247	0.000	0.001	1.477	0.996	0.000	9.892	2.956	0.000	0.000	0.000
30	–0.004	0.248	0.248	0.248	0.000	0.001	1.477	0.999	0.000	9.892	2.954	0.000	0.000	0.000
40	–0.004	0.248	0.248	0.248	0.000	0.001	1.477	1.002	0.000	9.892	2.952	0.000	0.000	0.000
50	–0.004	0.247	0.247	0.247	0.000	0.001	1.477	1.002	0.000	9.892	2.951	0.000	0.000	0.000
60	–0.004	0.247	0.247	0.247	0.000	0.001	1.477	0.998	0.000	9.892	2.950	0.000	0.000	0.000
70	–0.004	0.248	0.246	0.247	0.001	0.001	1.477	0.993	0.000	9.892	2.950	0.000	0.000	0.000
80	–0.004	0.249	0.245	0.247	0.002	0.001	1.477	0.986	0.000	9.892	2.949	0.000	0.000	0.000
90	–0.003	0.249	0.244	0.247	0.003	0.001	1.477	0.979	0.000	9.892	2.948	0.000	0.000	0.000
100	–0.003	0.250	0.243	0.247	0.004	0.001	1.477	0.972	0.000	9.892	2.947	0.000	0.000	0.000
110	–0.002	0.251	0.242	0.247	0.004	0.001	1.477	0.965	0.000	9.892	2.947	0.000	0.000	0.000
120	–0.002	0.252	0.241	0.246	0.005	0.002	1.477	0.959	0.000	9.892	2.946	0.000	0.000	0.000
130	–0.002	0.252	0.240	0.246	0.006	0.002	1.477	0.952	0.000	9.892	2.945	0.000	0.000	0.000
140	–0.002	0.253	0.239	0.246	0.007	0.002	1.477	0.946	0.000	9.892	2.945	0.000	0.000	0.000
149	–0.001	0.254	0.239	0.246	0.008	0.002	1.477	0.940	0.000	9.892	2.944	0.000	0.000	0.000
449	0.009	0.276	0.224	0.250	0.026	0.002	1.477	0.811	0.000	9.893	2.949	0.000	0.000	0.000
749	0.021	0.322	0.266	0.294	0.028	0.011	1.477	0.824	0.000	9.893	2.954	0.001	0.000	0.000
1049	0.032	0.326	0.269	0.298	0.029	0.027	1.477	0.824	0.000	9.893	2.970	0.001	0.000	0.000
1349	0.044	0.335	0.269	0.302	0.033	0.037	1.476	0.803	0.000	9.893	2.970	0.001	0.000	0.000
1649	0.056	0.344	0.273	0.308	0.035	0.049	1.476	0.795	0.000	9.893	2.967	0.002	0.000	0.000
1949	0.067	0.352	0.278	0.315	0.037	0.06	1.476	0.791	0.000	9.893	2.968	0.002	0.000	0.000
2249	0.078	0.359	0.283	0.321	0.038	0.071	1.475	0.787	0.000	9.893	2.968	0.002	0.000	0.000
2549	0.089	0.367	0.289	0.328	0.039	0.084	1.475	0.788	0.000	9.893	2.968	0.003	0.001	0.000
2849	0.101	0.372	0.290	0.331	0.041	0.094	1.475	0.779	0.000	9.893	2.968	0.003	0.001	0.000
3149	0.113	0.384	0.301	0.342	0.041	0.107	1.475	0.785	0.000	9.893	2.972	0.004	0.001	0.000
3449	0.125	0.386	0.301	0.343	0.042	0.12	1.474	0.780	0.000	9.893	2.966	0.004	0.001	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T53. TX 646 undrained shearing data for Sample 204-1244C-9H-5WR, 115–125 cm.

Time (s)	ε_a (%)	q/σ_{vc}	p'/σ_{vc}	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	E'/σ_{vc}	A	ϕ (°)	Area (cm^2)	Axial membrane correction	Radial membrane correction	Axial drain correction
98	0	0.247	0.751	7.97E–04	7.28E–04	7.40E–03	0.000	1.128	19.231	9.874	0.551	0.111	0.000
100	0	0.248	0.751	9.31E–04	7.07E–04	1.12E–02	0.000	0.844	19.247	9.874	0.551	0.111	0.000
102	0	0.248	0.751	1.10E–03	6.74E–04	1.52E–02	0.000	0.692	19.265	9.874	0.551	0.111	0.000
104	0	0.248	0.752	1.25E–03	6.50E–04	1.92E–02	0.000	0.606	19.282	9.874	0.551	0.111	0.000
106	0	0.248	0.752	1.43E–03	6.44E–04	2.32E–02	0.000	0.557	19.299	9.874	0.551	0.111	0.000
108	6.16E–04	0.249	0.752	1.60E–03	7.03E–04	2.67E–02	537.412	0.546	19.317	9.874	0.551	0.111	0.000
110	6.16E–04	0.249	0.752	1.78E–03	7.50E–04	3.08E–02	618.549	0.530	19.336	9.874	0.551	0.111	0.000
112	6.16E–04	0.249	0.752	1.96E–03	8.04E–04	3.48E–02	699.685	0.520	19.355	9.874	0.551	0.111	0.000
114	1.23E–03	0.249	0.752	2.13E–03	8.15E–04	3.87E–02	389.352	0.503	19.373	9.874	0.551	0.111	0.000
116	1.23E–03	0.250	0.752	2.32E–03	8.52E–04	4.26E–02	428.571	0.495	19.391	9.874	0.551	0.111	0.000
118	1.23E–03	0.250	0.752	2.51E–03	8.48E–04	4.65E–02	467.785	0.481	19.409	9.874	0.551	0.111	0.000
120	1.85E–03	0.250	0.752	2.70E–03	8.96E–04	5.05E–02	338.646	0.477	19.428	9.874	0.551	0.111	0.000
122	1.85E–03	0.250	0.752	2.89E–03	9.43E–04	5.46E–02	365.685	0.473	19.447	9.874	0.551	0.111	0.000
124	1.85E–03	0.251	0.752	3.08E–03	9.50E–04	5.86E–02	392.728	0.464	19.465	9.874	0.551	0.111	0.000
126	1.85E–03	0.251	0.752	3.27E–03	9.17E–04	6.28E–02	421.129	0.451	19.483	9.874	0.551	0.111	0.000
128	2.46E–03	0.251	0.752	3.46E–03	9.85E–04	6.73E–02	338.302	0.452	19.505	9.874	0.551	0.111	0.000
130	2.46E–03	0.251	0.752	3.66E–03	1.02E–03	7.16E–02	359.935	0.448	19.525	9.874	0.551	0.111	0.000
132	3.08E–03	0.252	0.752	3.87E–03	1.01E–03	7.59E–02	305.189	0.440	19.544	9.874	0.551	0.111	0.000
134	3.08E–03	0.252	0.752	4.06E–03	9.95E–04	8.04E–02	323.294	0.433	19.563	9.874	0.551	0.111	0.000
136	3.08E–03	0.252	0.753	4.26E–03	9.86E–04	8.47E–02	340.323	0.427	19.582	9.874	0.551	0.111	0.000
138	3.70E–03	0.252	0.753	4.46E–03	1.04E–03	8.86E–02	296.793	0.428	19.601	9.874	0.551	0.111	0.000
140	3.70E–03	0.253	0.753	4.65E–03	1.13E–03	9.26E–02	310.081	0.432	19.621	9.874	0.551	0.111	0.000
142	3.70E–03	0.253	0.753	4.84E–03	1.17E–03	9.66E–02	323.597	0.431	19.640	9.874	0.551	0.111	0.000
144	4.31E–03	0.253	0.753	5.03E–03	1.23E–03	1.00E–01	288.604	0.432	19.659	9.875	0.551	0.111	0.000
146	4.31E–03	0.253	0.753	5.21E–03	1.17E–03	1.04E–01	299.808	0.424	19.675	9.875	0.551	0.111	0.000
148	4.93E–03	0.254	0.753	5.39E–03	1.13E–03	1.08E–01	271.933	0.417	19.690	9.875	0.551	0.111	0.000
150	4.93E–03	0.254	0.753	5.57E–03	1.13E–03	1.12E–01	281.058	0.415	19.707	9.875	0.551	0.111	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T54. TX 647 consolidation data for resedimented sample.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	–0.019	0.145	0.140	0.143	0.002	–0.001	1.631	0.970	0.000	9.724	2.858	0.000	0.000	0.000
10	–0.019	0.145	0.141	0.143	0.002	–0.001	1.631	0.971	0.000	9.724	2.857	0.000	0.000	0.000
20	–0.019	0.146	0.142	0.144	0.002	0.000	1.631	0.973	0.000	9.724	2.856	0.000	0.000	0.000
30	–0.019	0.146	0.143	0.145	0.002	0.000	1.631	0.974	0.000	9.724	2.855	0.000	0.000	0.000
40	–0.019	0.146	0.143	0.144	0.002	0.000	1.631	0.975	0.000	9.724	2.855	0.000	0.000	0.000
50	–0.019	0.146	0.143	0.144	0.002	0.000	1.631	0.976	0.000	9.724	2.855	0.000	0.000	0.000
60	–0.019	0.146	0.142	0.144	0.002	0.000	1.631	0.977	0.000	9.724	2.855	0.000	0.000	0.000
70	–0.019	0.148	0.145	0.147	0.001	0.001	1.631	0.980	0.000	9.724	2.851	0.000	0.000	0.000
80	–0.019	0.152	0.150	0.151	0.001	0.002	1.631	0.985	0.000	9.724	2.846	0.000	0.000	0.000
90	–0.019	0.154	0.152	0.153	0.001	0.003	1.631	0.988	0.000	9.724	2.843	0.000	0.000	0.000
100	–0.019	0.154	0.152	0.153	0.001	0.000	1.631	0.989	0.000	9.724	2.843	0.000	0.000	0.000
110	–0.019	0.153	0.151	0.152	0.001	0.003	1.631	0.991	0.000	9.724	2.843	0.000	0.000	0.000
120	–0.019	0.153	0.151	0.152	0.001	0.003	1.631	0.991	0.000	9.724	2.842	0.000	0.000	0.000
130	–0.02	0.152	0.150	0.151	0.001	0.004	1.631	0.990	0.000	9.724	2.843	0.000	0.000	0.000
140	–0.019	0.153	0.151	0.152	0.001	0.004	1.631	0.988	0.000	9.724	2.842	0.000	0.000	0.000
150	–0.019	0.152	0.150	0.151	0.001	0.004	1.631	0.985	0.000	9.724	2.842	0.000	0.000	0.000
160	–0.019	0.152	0.149	0.151	0.001	0.004	1.631	0.983	0.000	9.724	2.843	0.000	0.000	0.000
169	–0.019	0.152	0.149	0.151	0.001	0.005	1.631	0.981	0.000	9.724	2.843	0.000	0.000	0.000
469	–0.007	0.157	0.142	0.149	0.008	0.009	1.630	0.903	0.000	9.724	2.843	0.000	0.000	0.000
769	0.005	0.16	0.135	0.147	0.012	0.012	1.630	0.848	0.000	9.725	2.842	0.000	0.000	0.000
1069	0.017	0.161	0.129	0.145	0.016	0.014	1.630	0.800	0.000	9.726	2.841	0.001	0.000	0.000
1369	0.029	0.183	0.147	0.165	0.018	0.020	1.630	0.802	0.000	9.727	2.847	0.001	0.000	0.000
1669	0.042	0.224	0.201	0.213	0.011	0.058	1.629	0.900	0.000	9.724	2.848	0.002	0.000	0.000
1969	0.054	0.197	0.169	0.183	0.014	0.072	1.629	0.858	0.000	9.724	2.841	0.002	0.000	0.000
2269	0.065	0.173	0.133	0.153	0.020	0.070	1.629	0.772	0.000	9.725	2.841	0.002	0.000	0.000
2569	0.077	0.195	0.151	0.173	0.022	0.073	1.629	0.775	0.000	9.726	2.846	0.002	0.000	0.000
2869	0.089	0.228	0.192	0.21	0.018	0.102	1.628	0.842	0.000	9.725	2.845	0.003	0.001	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T55. TX 647 undrained shearing data for resedimented sample.

Time (s)	ε_a (%)	q/σ_{vc}	$p'/_{vc}$	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	$E'/_{vc}$	A	ϕ (°)	Area (cm²)	Axial membrane correction	Radial membrane correction	Axial drain correction
38	0	0.166	0.82	0	0	0	0.000	0.000	11.651	9.715	0.342	0.069	0.000
40	–5.81E–05	0.166	0.818	1.49E–04	1.59E–03	1.62E–04	–276.761	10.213	11.679	9.715	0.342	0.069	0.000
42	0	0.166	0.817	1.49E–04	2.78E–03	1.61E–04	0.000	17.685	11.697	9.715	0.342	0.069	0.000
44	0	0.166	0.816	2.99E–04	3.53E–03	1.61E–04	0.000	22.340	11.707	9.715	0.342	0.069	0.000
46	–5.81E–05	0.166	0.819	1.49E–04	6.40E–04	3.23E–04	–552.688	2.325	11.671	9.715	0.342	0.069	0.000
48		0.166	0.826	1.49E–04	–6.62E–03	1.61E–04	0.000	–40.95	11.562	9.715	0.342	0.069	0.000
50		0.166	0.832	0	–1.26E–02	1.61E–04	0.000	–78.181	11.477	9.715	0.342	0.069	0.000
52	5.72E–05	0.166	0.836	0	–1.66E–02	1.61E–04	279.566	–103.577	11.421	9.715	0.342	0.069	0.000
54	5.72E–05	0.166	0.84	0	–2.01E–02	1.61E–04	279.566	–125.039	11.374	9.715	0.342	0.069	0.000
56	0	0.166	0.841	0	–2.13E–02	1.61E–04	0.000	–132.161	11.358	9.715	0.342	0.069	0.000
58	5.72E–05	0.166	0.839	0	–1.99E–02	1.61E–04	279.566	–124.107	11.376	9.715	0.342	0.069	0.000
60	–1.15E–04	0.166	0.836	–1.50E–04	–1.59E–02	3.23E–04	–278.814	–49.212	11.436	9.715	0.342	0.069	0.000
62	–5.81E–05	0.166	0.832	0	–1.26E–02	1.62E–04	–276.761	–77.978	11.477	9.715	0.342	0.069	0.000
64	–5.81E–05	0.166	0.829	–1.50E–04	–9.46E–03	1.62E–04	–276.761	–58.487	11.521	9.715	0.342	0.069	0.000
66	5.72E–05	0.166	0.827	–1.50E–04	–7.82E–03	1.61E–04	279.566	–48.525	11.545	9.715	0.342	0.069	0.000
68	0	0.166	0.828	–1.50E–04	–8.62E–03	3.22E–04	0.000	–26.532	11.539	9.715	0.342	0.069	0.000
70	5.72E–05	0.166	0.83	–1.50E–04	–1.04E–02	1.61E–04	279.566	–64.388	11.509	9.715	0.342	0.069	0.000
72	0	0.166	0.831	–2.99E–04	–1.18E–02	0	0.000	0.000	11.483	9.715	0.342	0.069	0.000
74	5.72E–05	0.166	0.832	–2.99E–04	–1.21E–02	1.61E–04	279.566	–75.588	11.484	9.715	0.342	0.069	0.000
76	0	0.166	0.831	–2.99E–04	–1.19E–02	1.61E–04	0.000	–73.529	11.488	9.715	0.342	0.069	0.000
78	0	0.166	0.829	–2.99E–04	–9.76E–03	1.61E–04	0.000	–60.499	11.517	9.715	0.342	0.069	0.000
80	0	0.166	0.826	–2.99E–04	–6.57E–03	0	0.000	0.000	11.557	9.715	0.342	0.069	0.000
82	–5.81E–05	0.166	0.824	–2.99E–04	–4.33E–03	4.18E–07	–0.715	–10414.67	11.589	9.715	0.342	0.069	0.000
84	0	0.166	0.824	–4.49E–04	–4.59E–03	3.22E–04	0.000	–13.965	11.596	9.715	0.342	0.069	0.000
86	–5.81E–05	0.166	0.824	–2.99E–04	–4.41E–03	1.13E–03	–1932.439	–3.59	11.625	9.715	0.342	0.069	0.000
88	0	0.167	0.824	–1.50E–04	–4.33E–03	2.26E–03	0.000	–1.596	11.663	9.715	0.342	0.069	0.000
90	–1.15E–04	0.167	0.825	1.49E–04	–4.60E–03	3.06E–03	–2642.392	–1.176	11.686	9.715	0.342	0.069	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T56. TX 650 consolidation data for resedimented sample.

Time (s)	ε_a (%)	σ'_v (ksc)	σ'_h (ksc)	p′ (ksc)	q (ksc)	ε_v (%)	e	K	Work	Area (cm^2)	u_b (ksc)	Axial membrane correction	Radial membrane correction	Axial drainage correction
0	–0.003	0.116	0.135	0.126	–0.009	0.005	1.918	1.159	0.000	9.836	3.313	0.000	0.000	0.000
10	–0.003	0.117	0.135	0.126	–0.009	0.005	1.918	1.159	0.000	9.836	3.313	0.000	0.000	0.000
20	–0.003	0.122	0.142	0.132	–0.01	0.007	1.918	1.160	0.000	9.836	3.305	0.000	0.000	0.000
30	–0.003	0.124	0.143	0.134	–0.01	0.008	1.918	1.156	0.000	9.836	3.302	0.000	0.000	0.000
40	–0.003	0.116	0.136	0.126	–0.01	0.007	1.918	1.169	0.000	9.836	3.309	0.000	0.000	0.000
50	–0.003	0.113	0.132	0.122	–0.01	0.006	1.918	1.171	0.000	9.836	3.311	0.000	0.000	0.000
60	–0.003	0.112	0.131	0.121	–0.009	0.006	1.918	1.170	0.000	9.836	3.310	0.000	0.000	0.000
70	–0.002	0.110	0.129	0.119	–0.009	0.006	1.918	1.167	0.000	9.836	3.310	0.000	0.000	0.000
80	–0.002	0.107	0.125	0.116	–0.009	0.005	1.918	1.169	0.000	9.836	3.310	0.000	0.000	0.000
260	0.001	0.087	0.096	0.092	–0.004	–0.012	1.918	1.097	0.000	9.838	3.306	0.000	0.000	0.000
440	0.004	0.107	0.115	0.111	–0.004	–0.013	1.918	1.075	0.000	9.839	3.317	0.000	0.000	0.000
620	0.009	0.129	0.139	0.134	–0.005	0.001	1.918	1.078	0.000	9.838	3.316	0.000	0.000	0.000
800	0.014	0.129	0.136	0.132	–0.003	0.007	1.918	1.052	0.000	9.838	3.314	0.000	0.000	0.000
980	0.020	0.129	0.132	0.130	–0.002	0.010	1.918	1.025	0.000	9.838	3.317	0.001	0.000	0.000
1160	0.026	0.139	0.141	0.140	–0.001	0.016	1.917	1.012	0.000	9.838	3.315	0.001	0.000	0.000
1340	0.032	0.145	0.144	0.144	0.000	0.023	1.917	0.997	0.000	9.838	3.315	0.001	0.000	0.000
1520	0.038	0.147	0.143	0.145	0.002	0.029	1.917	0.976	0.000	9.838	3.315	0.001	0.000	0.000
1700	0.043	0.147	0.143	0.145	0.002	0.034	1.917	0.969	0.000	9.838	3.315	0.001	0.000	0.000
1880	0.049	0.152	0.145	0.148	0.004	0.040	1.917	0.953	0.000	9.838	3.315	0.001	0.000	0.000
2060	0.056	0.156	0.148	0.152	0.004	0.048	1.917	0.946	0.000	9.838	3.316	0.002	0.000	0.000
2240	0.062	0.157	0.147	0.152	0.005	0.054	1.916	0.933	0.000	9.838	3.315	0.002	0.000	0.000
2420	0.068	0.157	0.145	0.151	0.006	0.060	1.916	0.922	0.000	9.838	3.315	0.002	0.000	0.000
2600	0.075	0.160	0.146	0.153	0.007	0.065	1.916	0.910	0.000	9.838	3.315	0.002	0.000	0.000
2780	0.081	0.165	0.149	0.157	0.008	0.073	1.916	0.907	0.000	9.838	3.316	0.003	0.000	0.000
2960	0.088	0.165	0.149	0.157	0.008	0.080	1.916	0.900	0.000	9.838	3.316	0.003	0.001	0.000
3140	0.095	0.166	0.147	0.156	0.009	0.085	1.915	0.887	0.000	9.838	3.315	0.003	0.001	0.000
3320	0.102	0.170	0.150	0.160	0.010	0.092	1.915	0.883	0.000	9.838	3.316	0.003	0.001	0.000

Note: See Table T3, p. 70, for explanation of headings.

Table T57. TX 650 undrained shearing data for resedimented sample.

Time (s)	ε_a (%)	q/σ_{vc}	$p'/_{vc}$	$\Delta u_e/\sigma_{vc}$	$\Delta u_s/\sigma_{vc}$	$\Delta q/q_{max}$	$E'/_{vc}$	A	ϕ (°)	Area (cm²)	Axial membrane correction	Radial membrane correction	Axial drain correction
0	0	0.238	0.754	0	0	0	0	0	18.439	9.822	0.356	0.072	0.000
2	1.01E–03	0.238	0.754	–1.13E–04	–7.02E–05	1.23E–04	–12.861	0.876	18.432	9.822	0.356	0.072	0.000
4	1.02E–03	0.238	0.754	0	1.57E–04	1.23E–04	–12.731	–0.879	18.438	9.822	0.356	0.072	0.000
6	2.45E–04	0.239	0.754	2.27E–04	1.41E–04	–5.73E–04	244.9	0.568	18.464	9.822	0.356	0.072	0.000
8	5.48E–04	0.239	0.754	2.27E–04	2.80E–05	–5.70E–04	109.17	0.38	18.461	9.822	0.356	0.072	0.000
10	1.60E–03	0.239	0.754	3.41E–04	2.99E–04	–4.47E–04	29.307	0.971	18.463	9.822	0.356	0.072	0.000
12	8.38E–04	0.239	0.754	3.41E–04	2.56E–04	–5.68E–04	71.032	0.764	18.467	9.822	0.356	0.072	0.000
14	1.95E–04	0.239	0.753	3.41E–04	6.35E–04	–4.58E–04	246.64	1.655	18.472	9.822	0.356	0.072	0.000
16	–1.71E–05	0.239	0.753	3.41E–04	1.13E–03	–3.45E–04	–2117.092	3.452	18.48	9.822	0.356	0.072	0.000
18	1.28E–03	0.239	0.752	2.27E–04	1.46E–03	–6.79E–04	55.671	2.391	18.501	9.822	0.356	0.072	0.000
20	1.04E–03	0.239	0.752	3.41E–04	2.15E–03	–6.81E–04	68.346	3.337	18.519	9.822	0.356	0.072	0.000
22	3.96E–04	0.239	0.751	3.41E–04	2.86E–03	–5.71E–04	151.16	5.113	18.533	9.822	0.356	0.072	0.000
24	6.66E–05	0.239	0.751	3.41E–04	3.28E–03	–3.44E–04	541.738	9.43	18.535	9.822	0.356	0.072	0.000
26	1.10E–03	0.239	0.75	3.41E–04	3.55E–03	–2.21E–04	21.144	15.68	18.538	9.822	0.356	0.072	0.000
28	1.92E–03	0.239	0.751	–2.27E–04	3.10E–03	–2.14E–04	11.711	14.154	18.526	9.822	0.356	0.072	0.000
30	9.66E–04	0.239	0.751	5.68E–04	3.49E–03	–1.37E–03	148.813	2.762	18.579	9.822	0.356	0.072	0.000
32	3.84E–05	0.239	0.751	6.82E–04	3.49E–03	–1.38E–03	3761.253	2.747	18.58	9.822	0.356	0.072	0.000
34	9.16E–04	0.239	0.751	6.82E–04	3.23E–03	–1.49E–03	170.215	2.402	18.577	9.822	0.356	0.072	0.000
36	1.61E–03	0.239	0.751	6.82E–04	3.15E–03	–1.37E–03	89.036	2.535	18.571	9.822	0.356	0.072	0.000
38	1.21E–03	0.239	0.751	6.82E–04	3.01E–03	–1.14E–03	99.04	2.85	18.558	9.822	0.356	0.072	0.000
40	4.69E–04	0.239	0.751	6.82E–04	2.96E–03	–1.26E–03	281.805	2.576	18.562	9.822	0.356	0.072	0.000
42	8.27E–04	0.239	0.751	6.82E–04	2.85E–03	–1.26E–03	159.443	2.496	18.559	9.822	0.356	0.072	0.000
44	1.24E–03	0.239	0.751	6.82E–04	2.81E–03	–1.37E–03	115.719	2.293	18.562	9.822	0.356	0.072	0.000
46	1.84E–03	0.239	0.751	7.95E–04	3.04E–03	–1.36E–03	77.575	2.46	18.568	9.822	0.356	0.072	0.000
48	8.27E–04	0.239	0.751	5.68E–04	2.74E–03	–1.26E–03	159.443	2.41	18.556	9.822	0.356	0.072	0.000
50	3.13E–04	0.239	0.751	6.82E–04	2.58E–03	–1.38E–03	461.675	2.123	18.556	9.822	0.356	0.072	0.000
52	1.36E–03	0.239	0.751	6.82E–04	2.70E–03	–1.37E–03	105.664	2.215	18.559	9.822	0.356	0.072	0.000

Note: See Table T3, p. 70, for explanation of headings.

Figure AF1. Tube radiograph, Sample 204-1244B-1H-4WR, 120–150 cm, print 1.

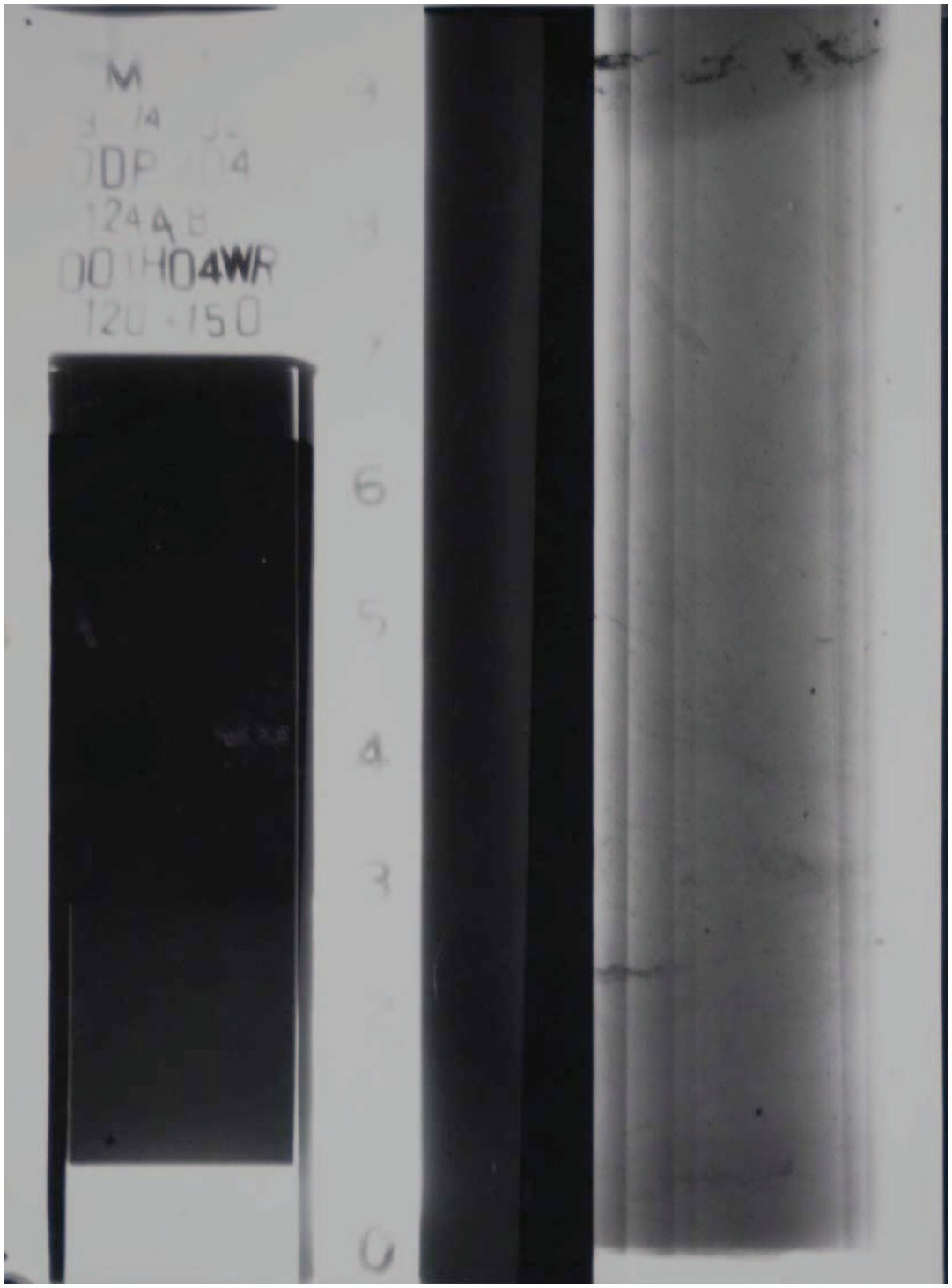


Figure AF2. Tube radiograph, Sample 204-1244B-1H-4WR, 120–150 cm, print 2.

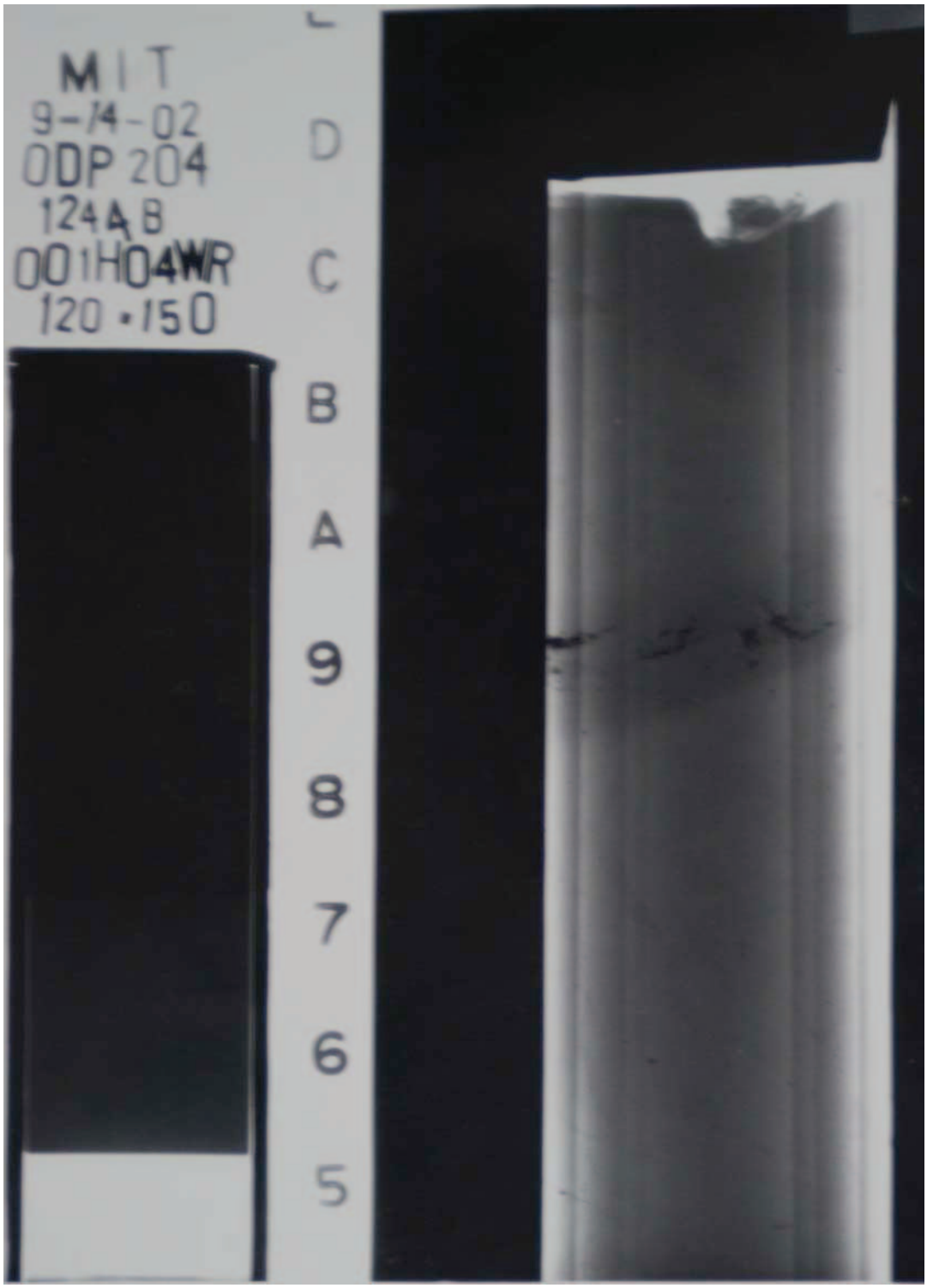


Figure AF3. Tube radiograph, Sample 204-1244B-3H-3WR, 120–160 cm, print 1.

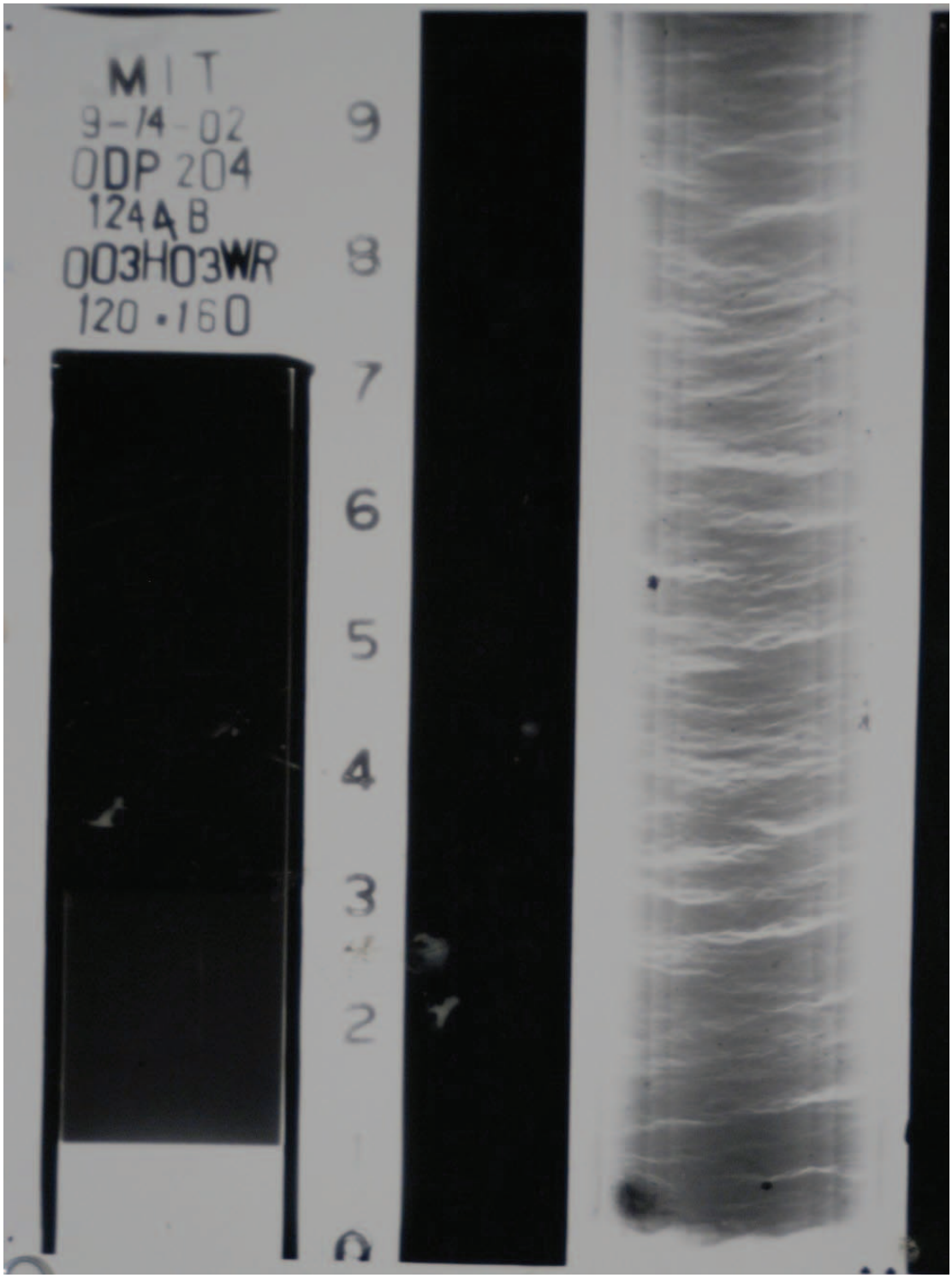


Figure AF4. Tube radiograph, Sample 204-1244B-3H-3WR, 120–160 cm, print 2.

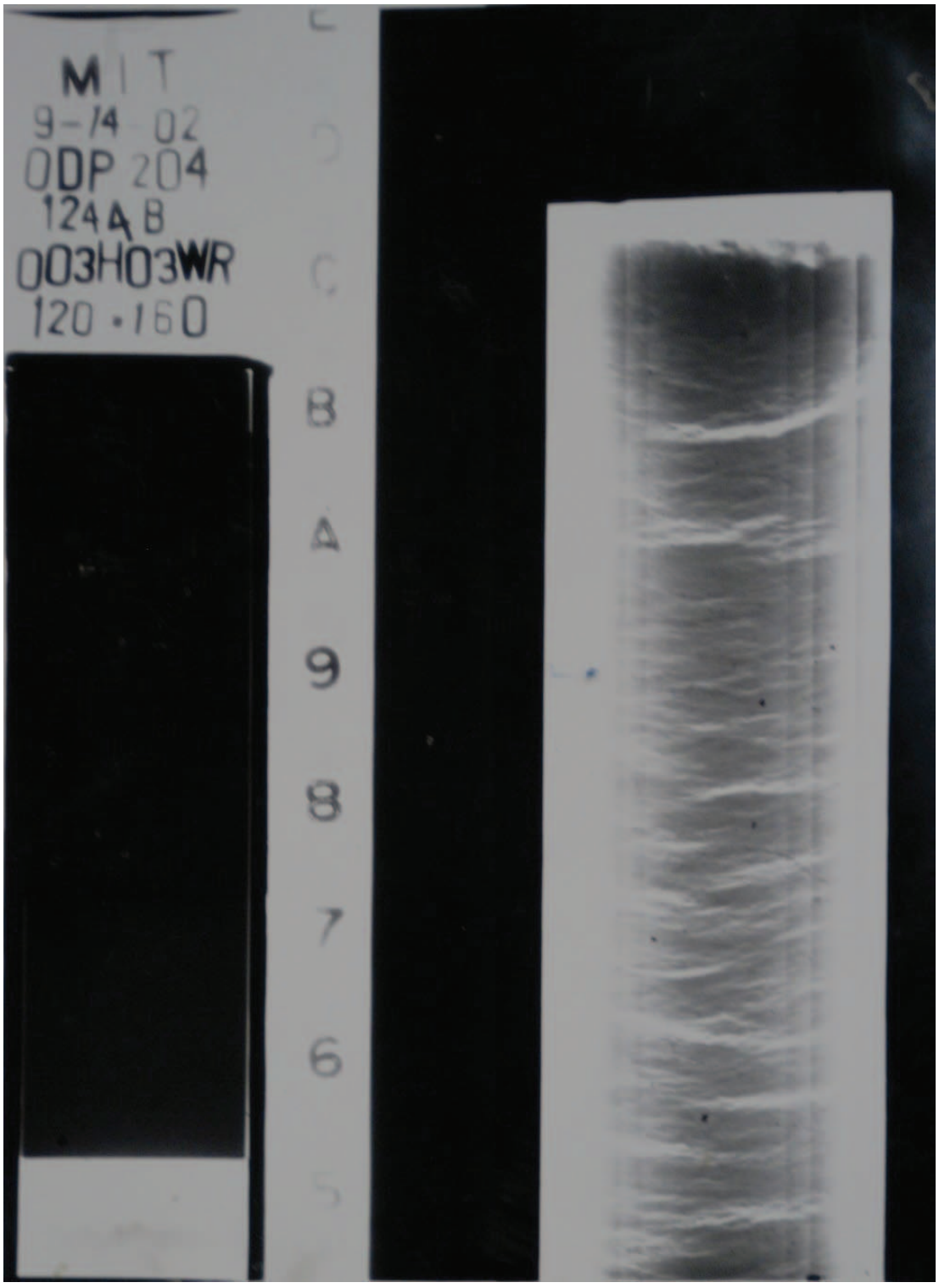


Figure AF5. Tube radiograph, Sample 204-1244B-4H-6WR, 120–150 cm, print 1.

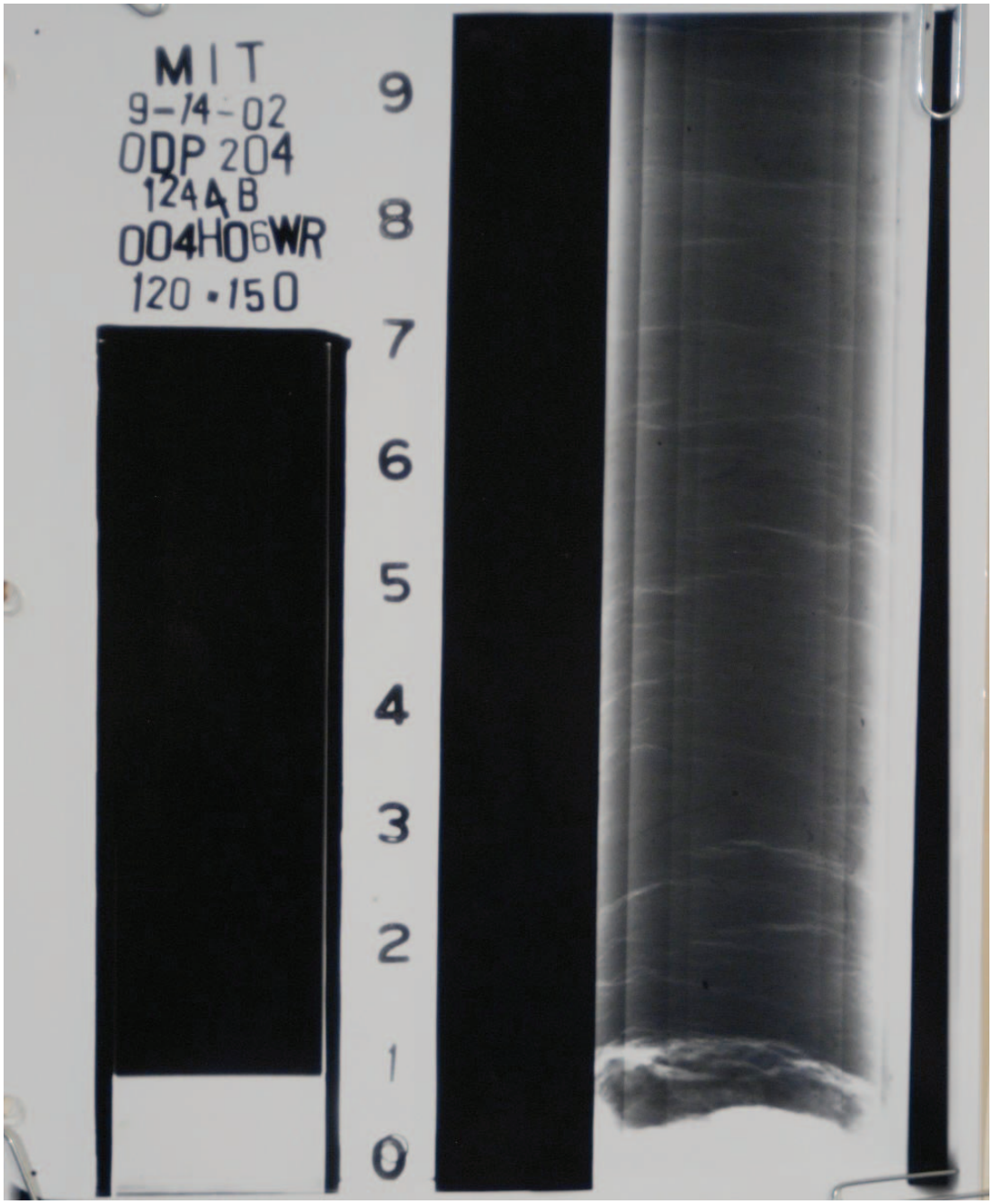


Figure AF6. Tube radiograph, Sample 204-1244B-4H-6WR, 120–150 cm, print 2.

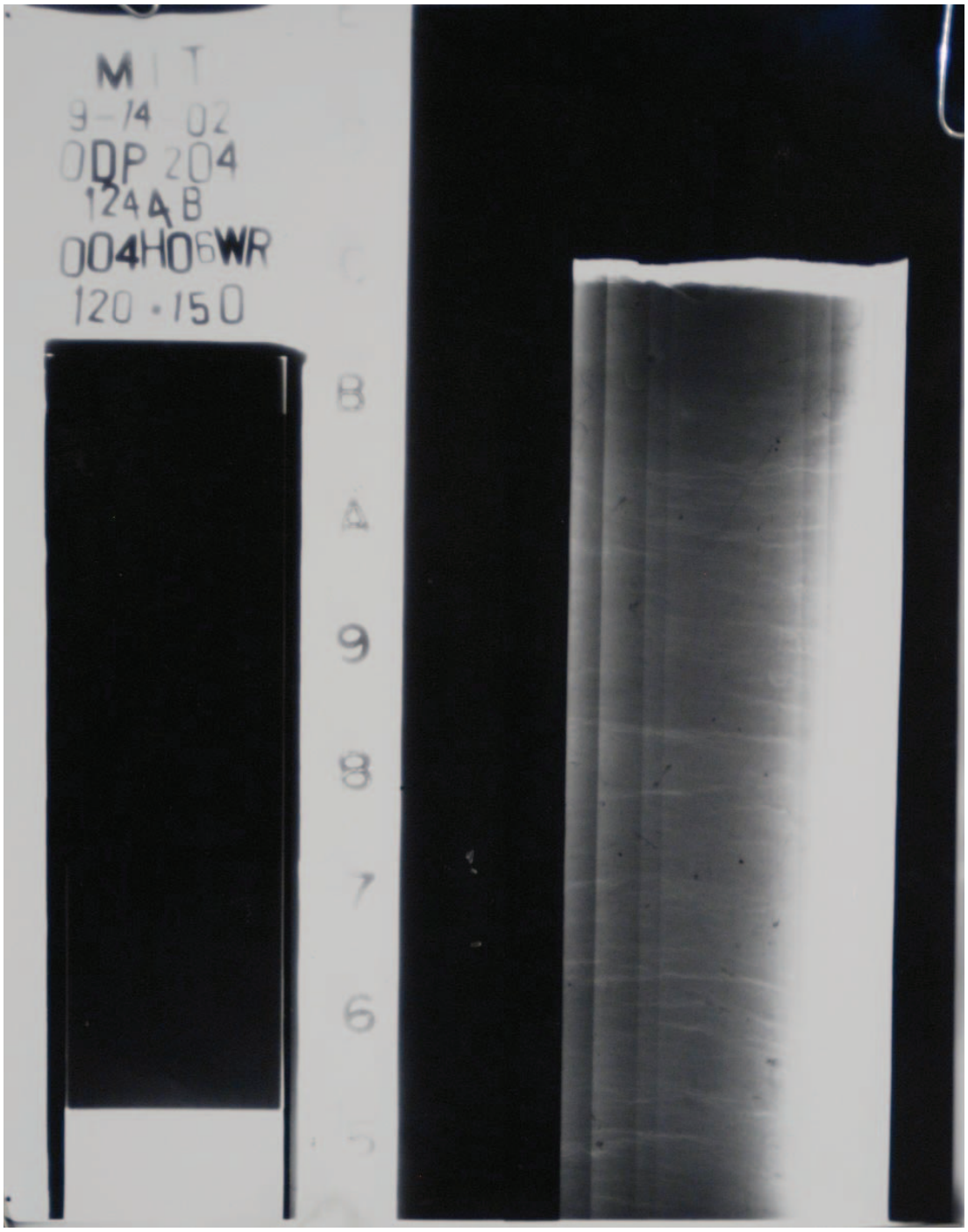


Figure AF7. Tube radiograph, Sample 204-1244B-6H-8WR, 0–30 cm, print 1.

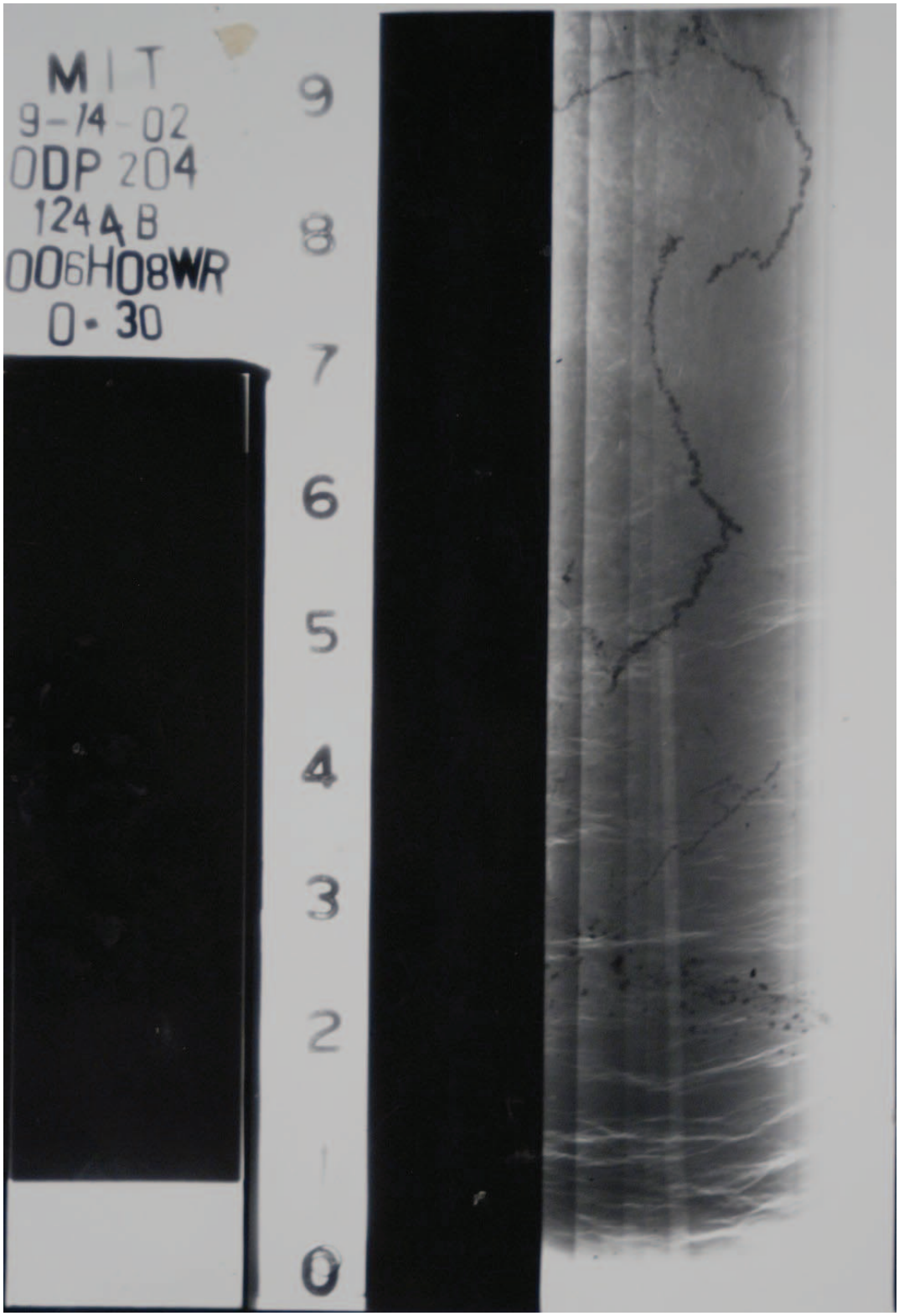


Figure AF8. Tube radiograph, Sample 204-1244B-6H-8WR, 0–30 cm, print 2.

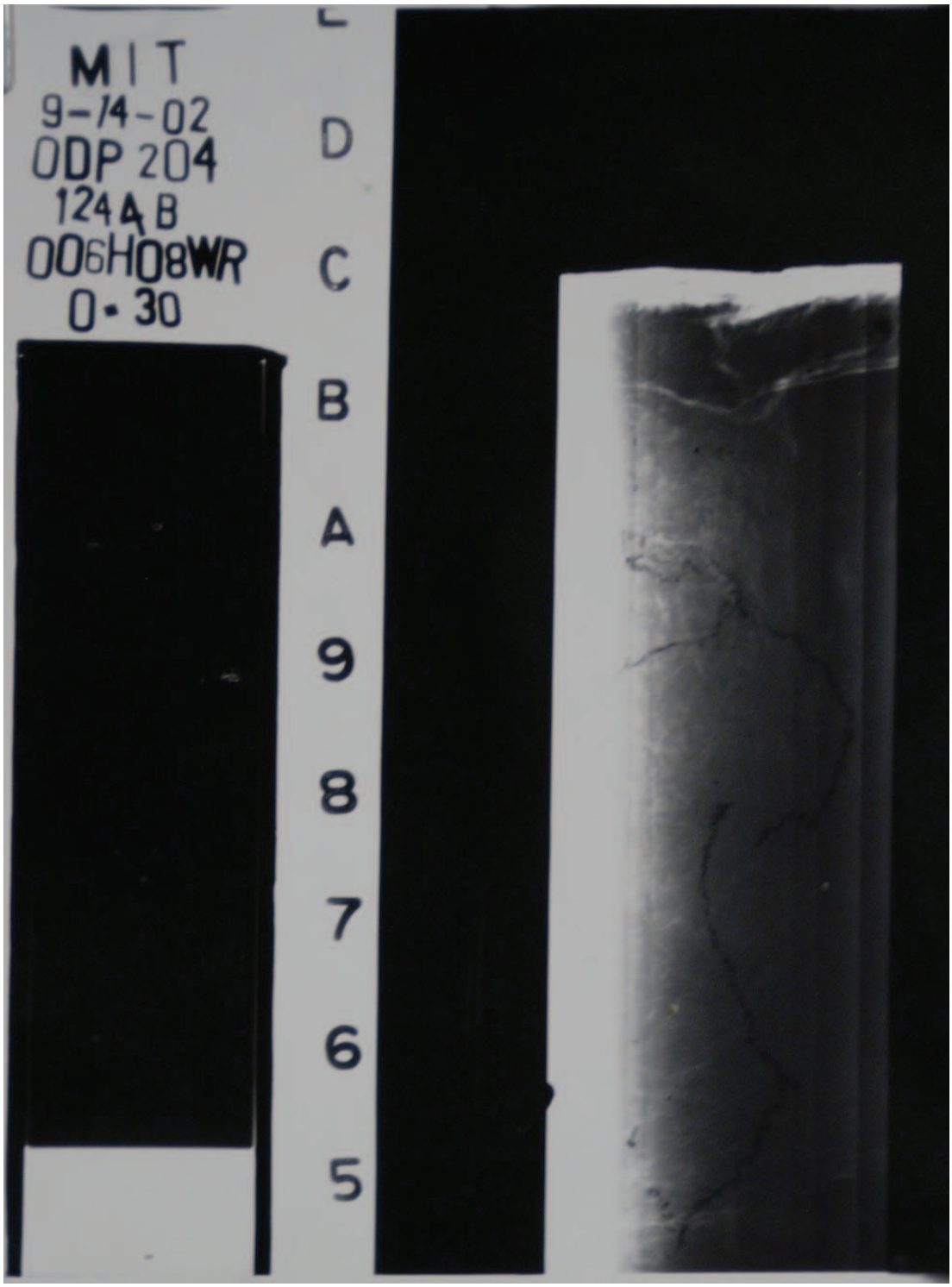


Figure AF9. Tube radiograph, Sample 204-1244C-8H-7WR, 66 cm, print 1.

Figure AF10. Tube radiograph, Sample 204-1244C-8H-7WR, 66 cm, print 2.

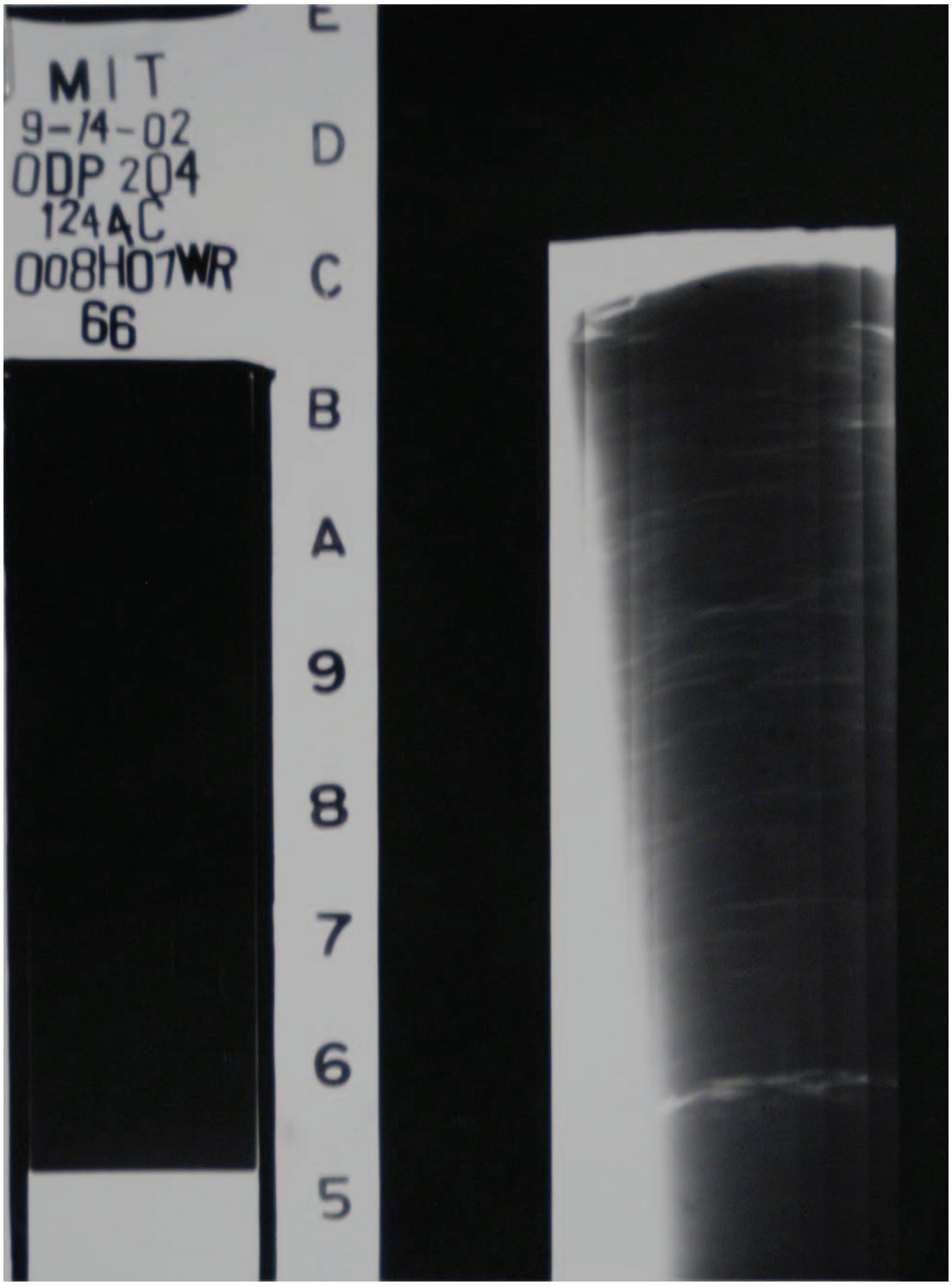


Figure AF11. Tube radiograph, Sample 204-1244C-9H-5WR, 105 cm, print 1.

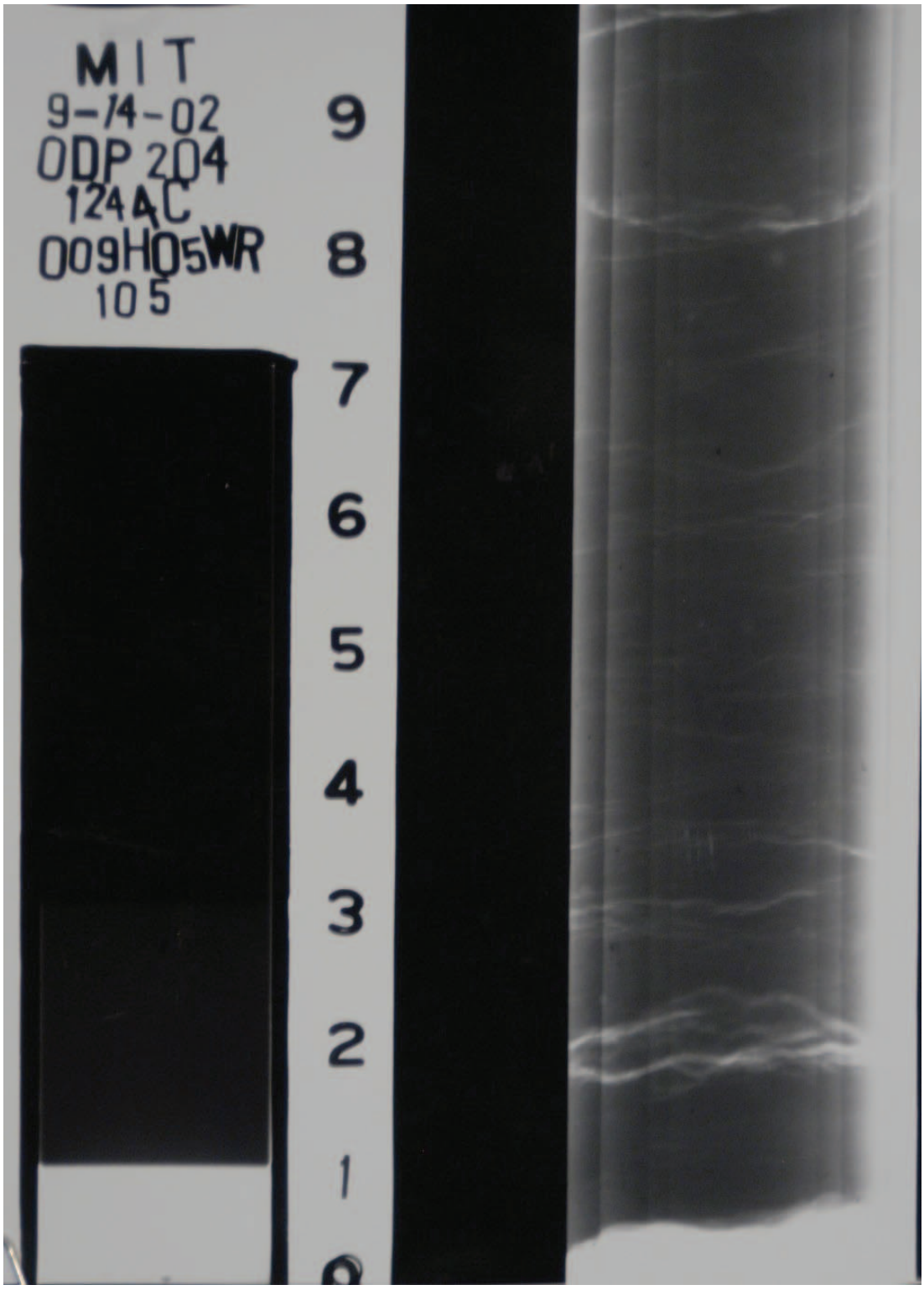


Figure AF12. Tube radiograph, Sample 204-1244C-9H-5WR, 105 cm, print 2.

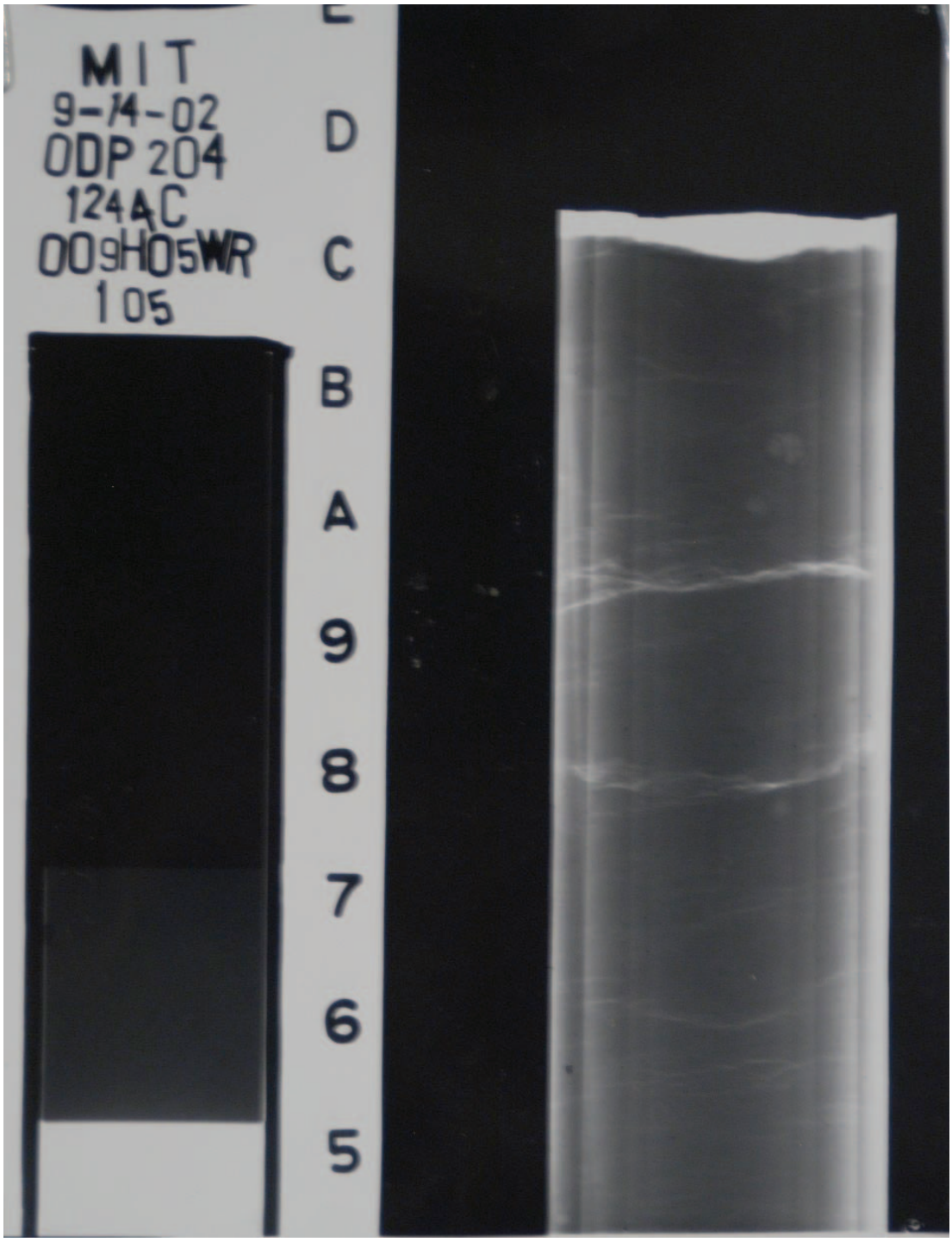


Figure AF13. Tube radiograph, Sample 204-1244B-13H-3WR, 120 cm, print 1.

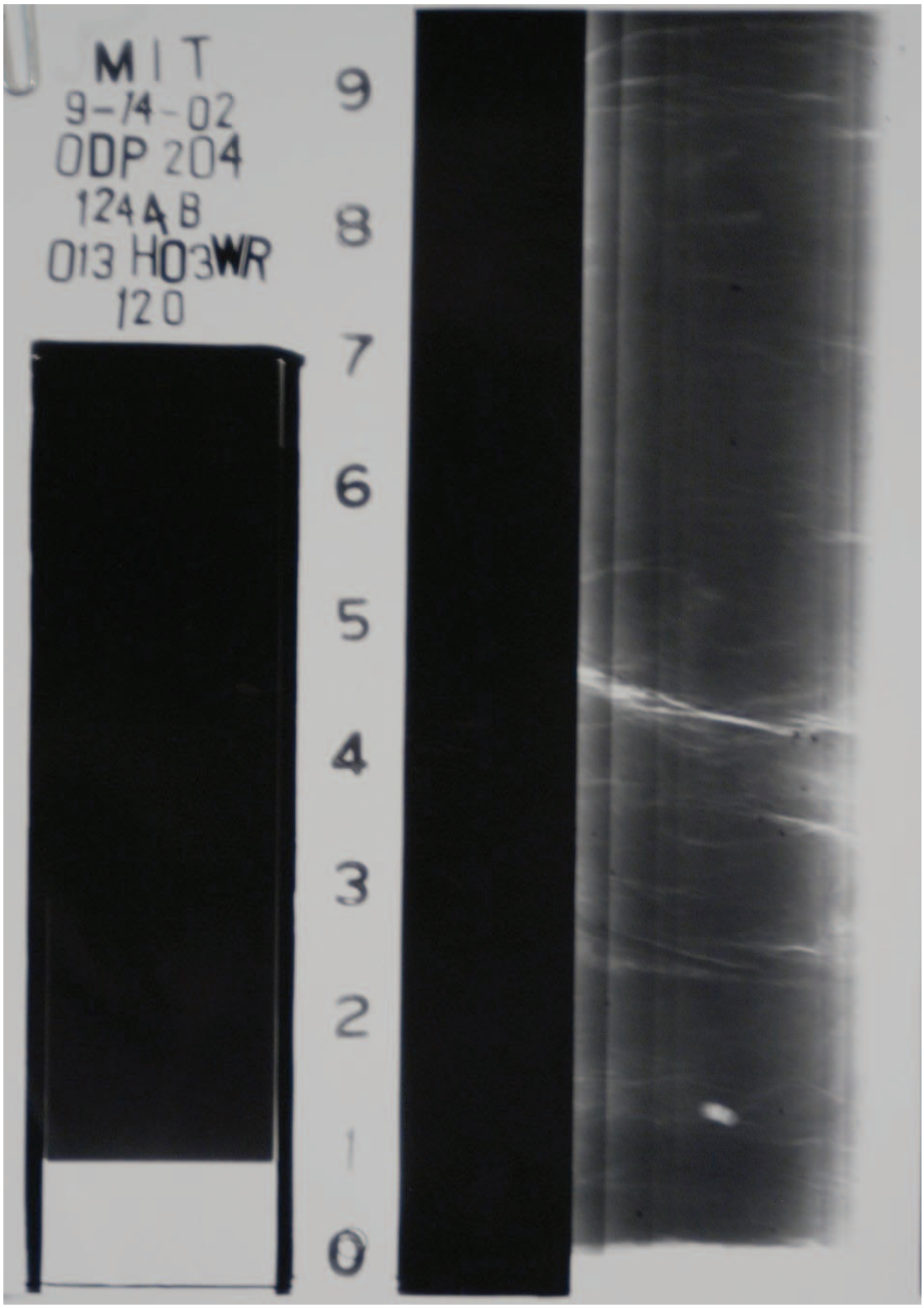


Figure AF14. Tube radiograph, Sample 204-1244B-13H-3WR, 120 cm, print 2.

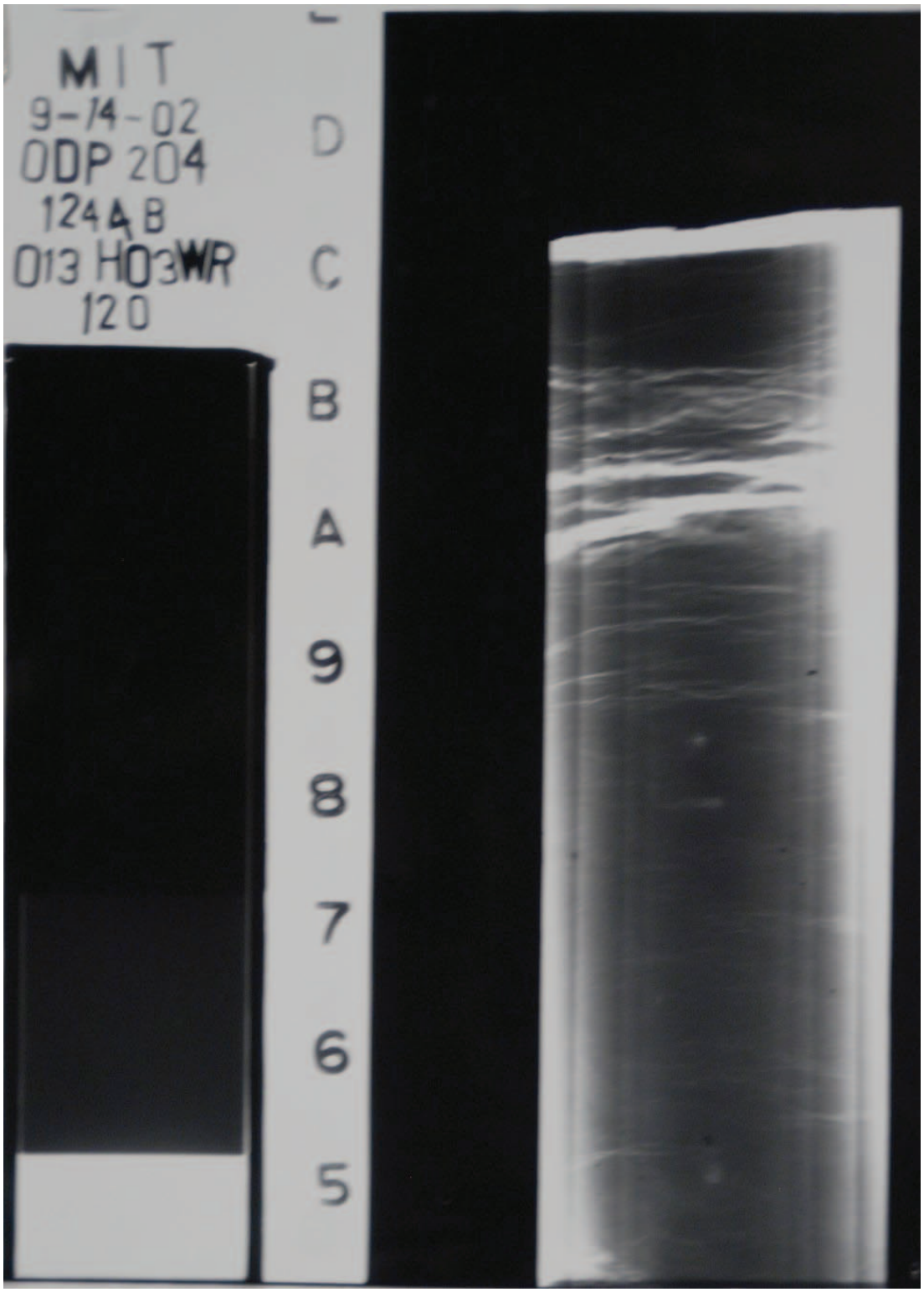


Figure AF15. Tube radiograph, Sample 204-1244C-17H-3WR, 65 cm, print 1.

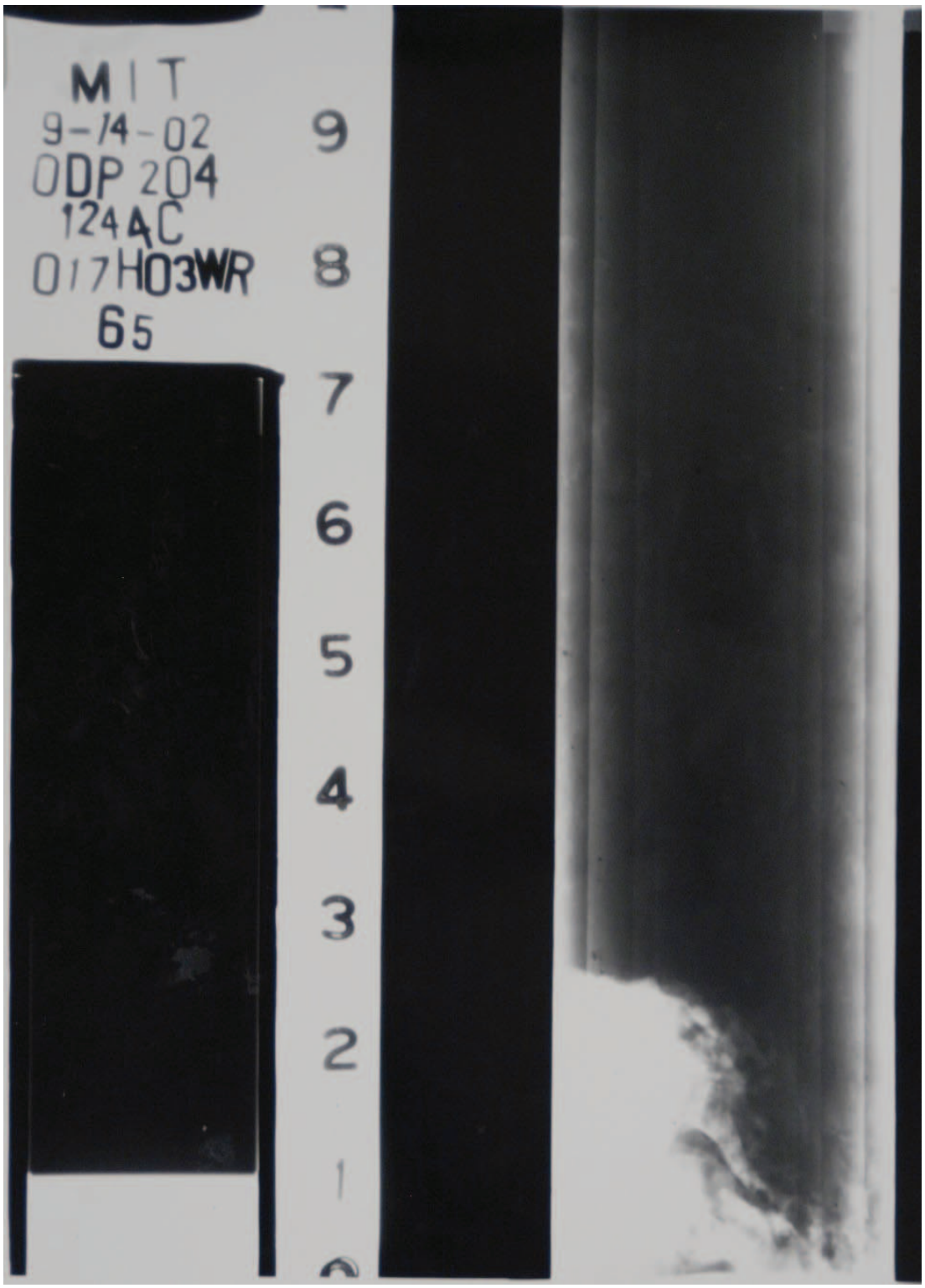


Figure AF16. Tube radiograph, Sample 204-1244C-17H-3WR, 65 cm, print 2.

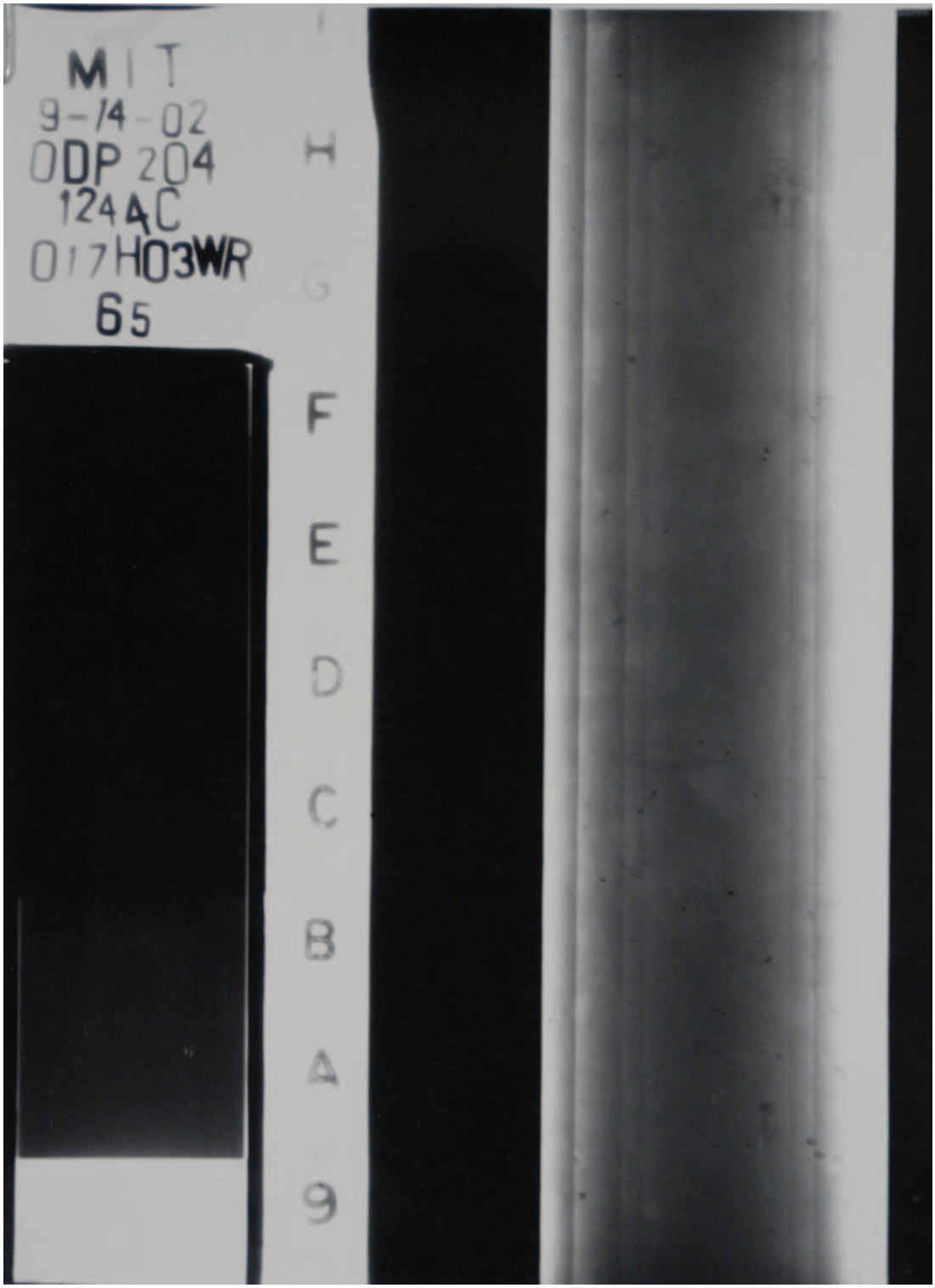


Figure AF17. Radiography log, Sample 204-1244B-1H-4WR, 120–150 cm.

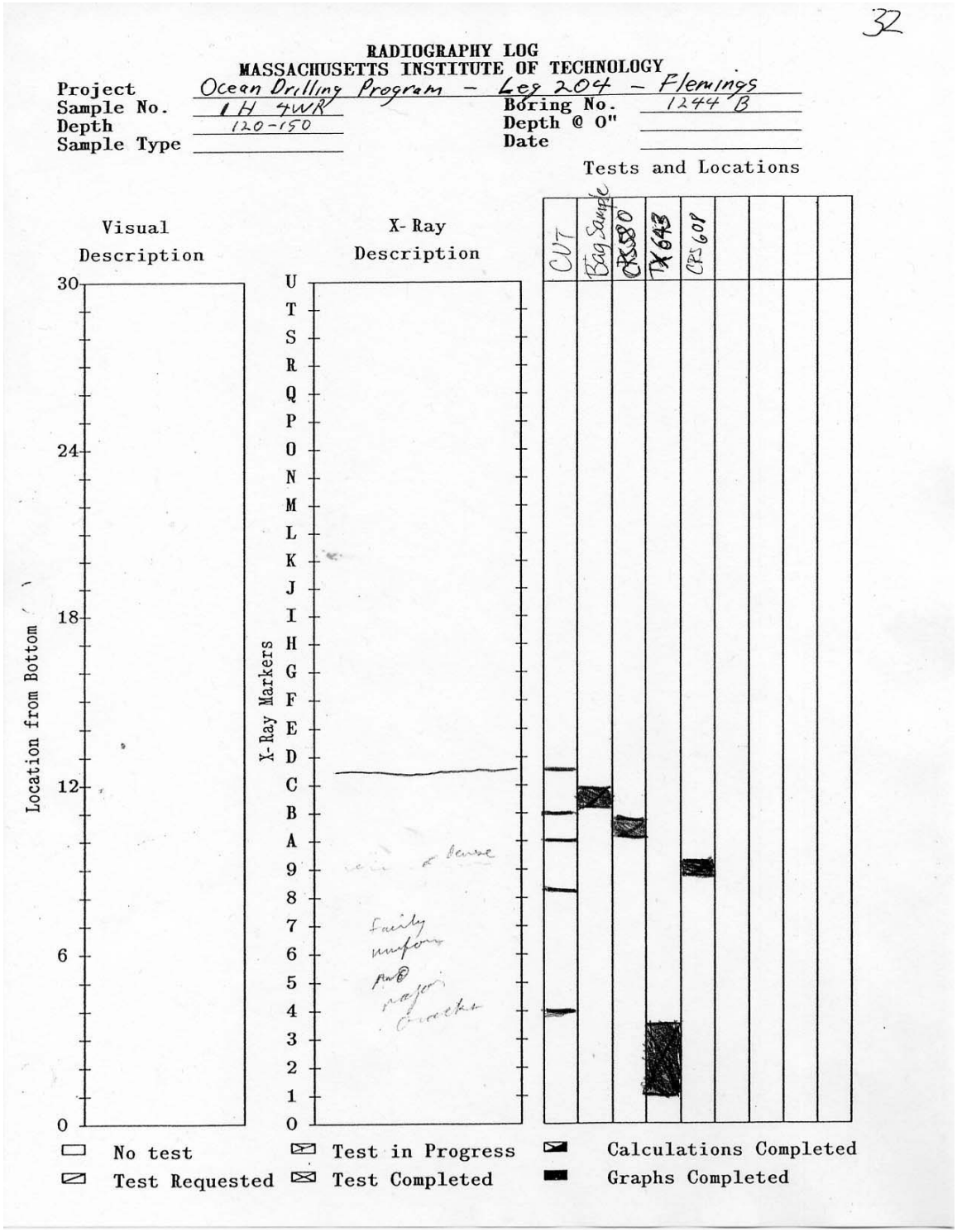


Figure AF18. Radiography log, Sample 204-1244B-3H-3WR, 120–150 cm.

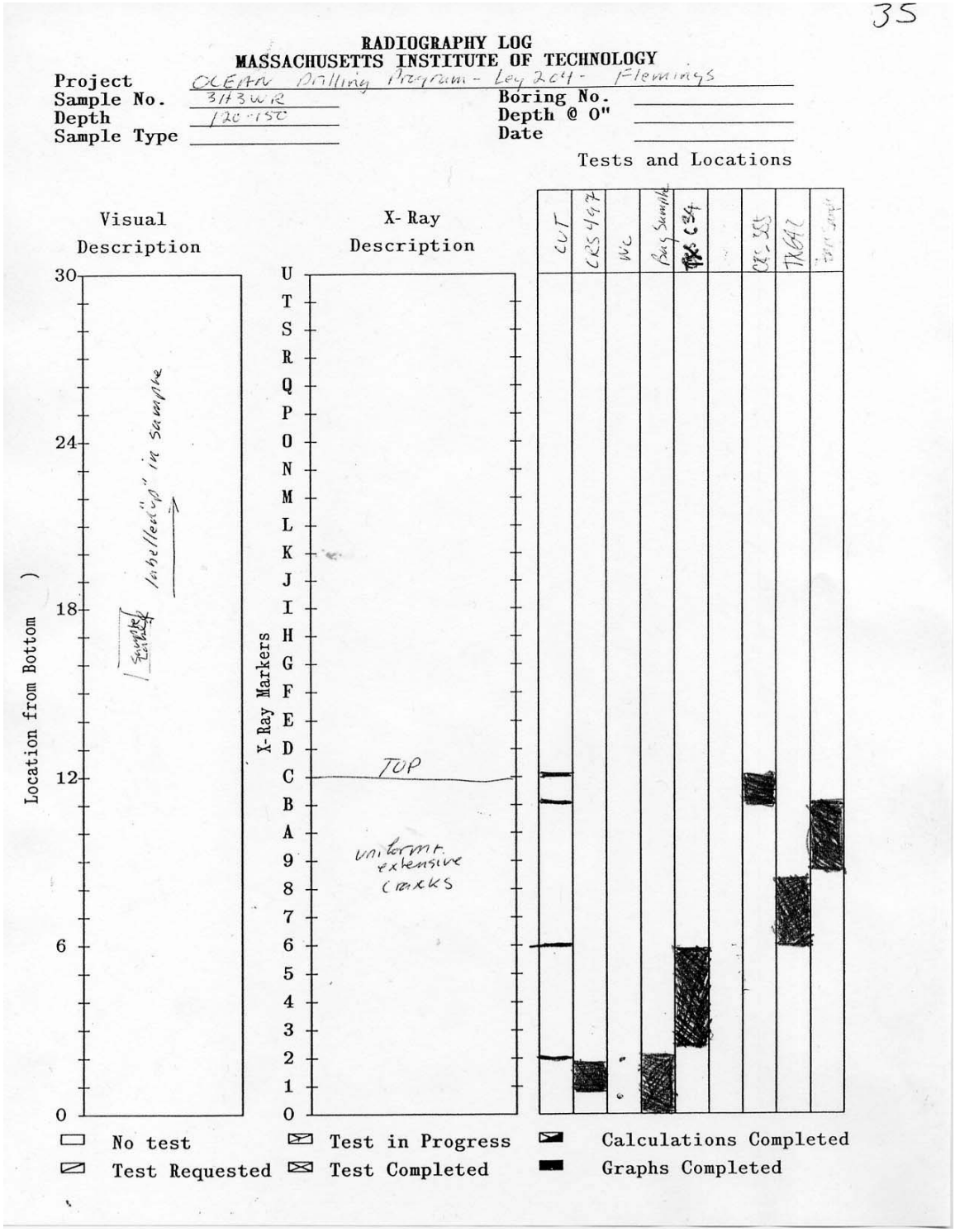


Figure AF19. Radiography log, Sample 204-1244B-4H-6WR, 120–150 cm.

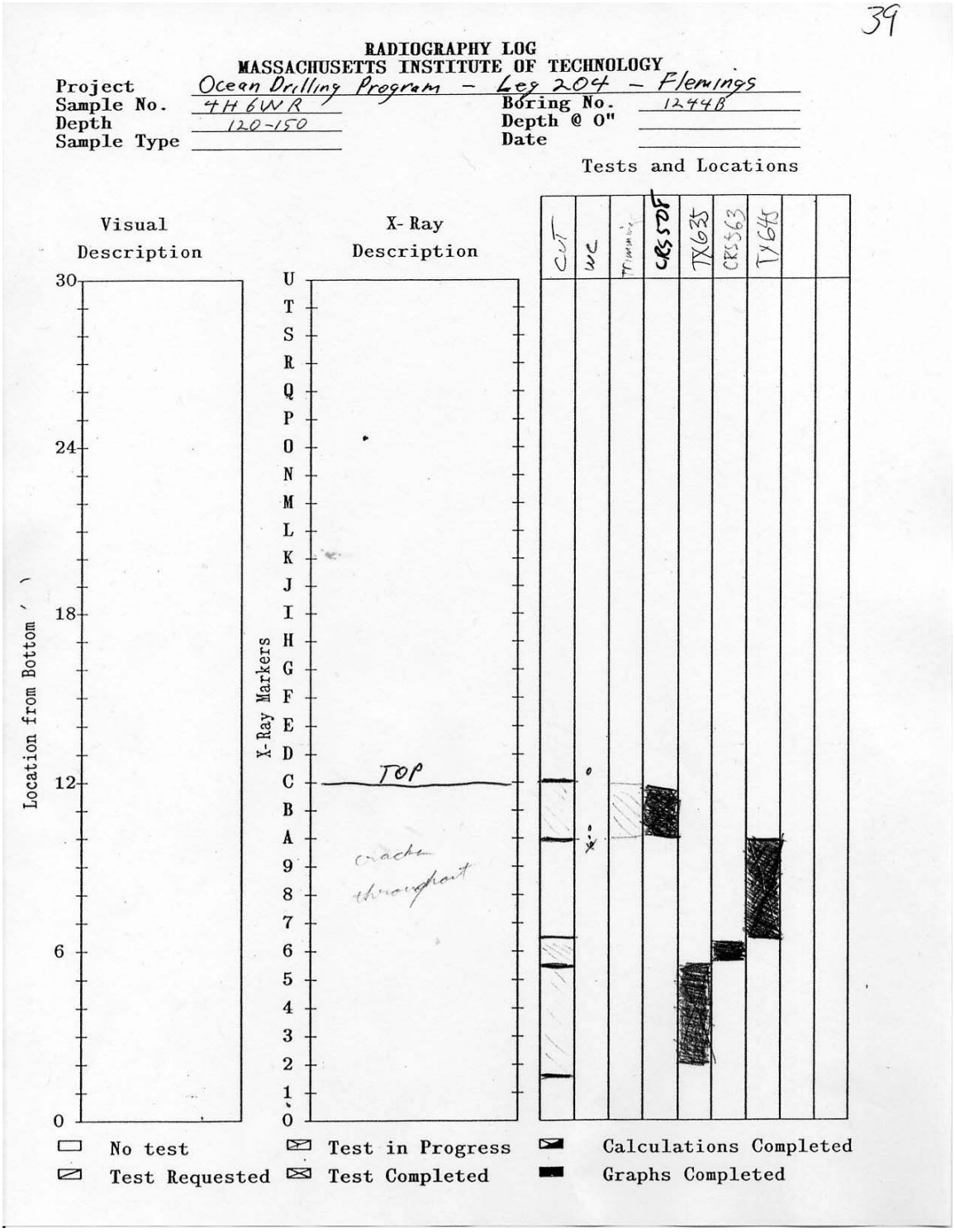


Figure AF20. Radiography log, Sample 204-1244B-6H-8WR, 0–30 cm.

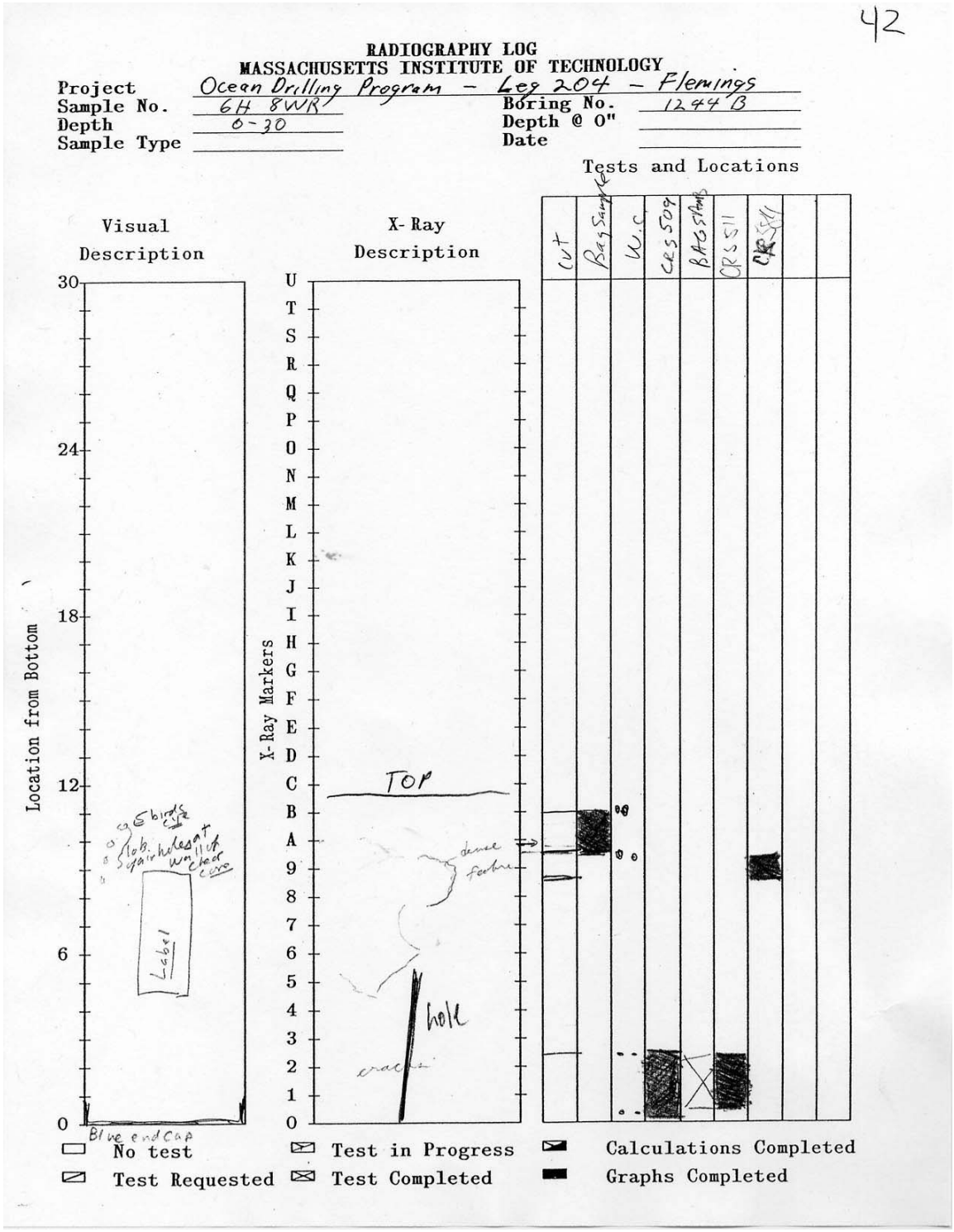


Figure AF21. Radiography log, Sample 204-1244C-8H-7WR, 66 cm.

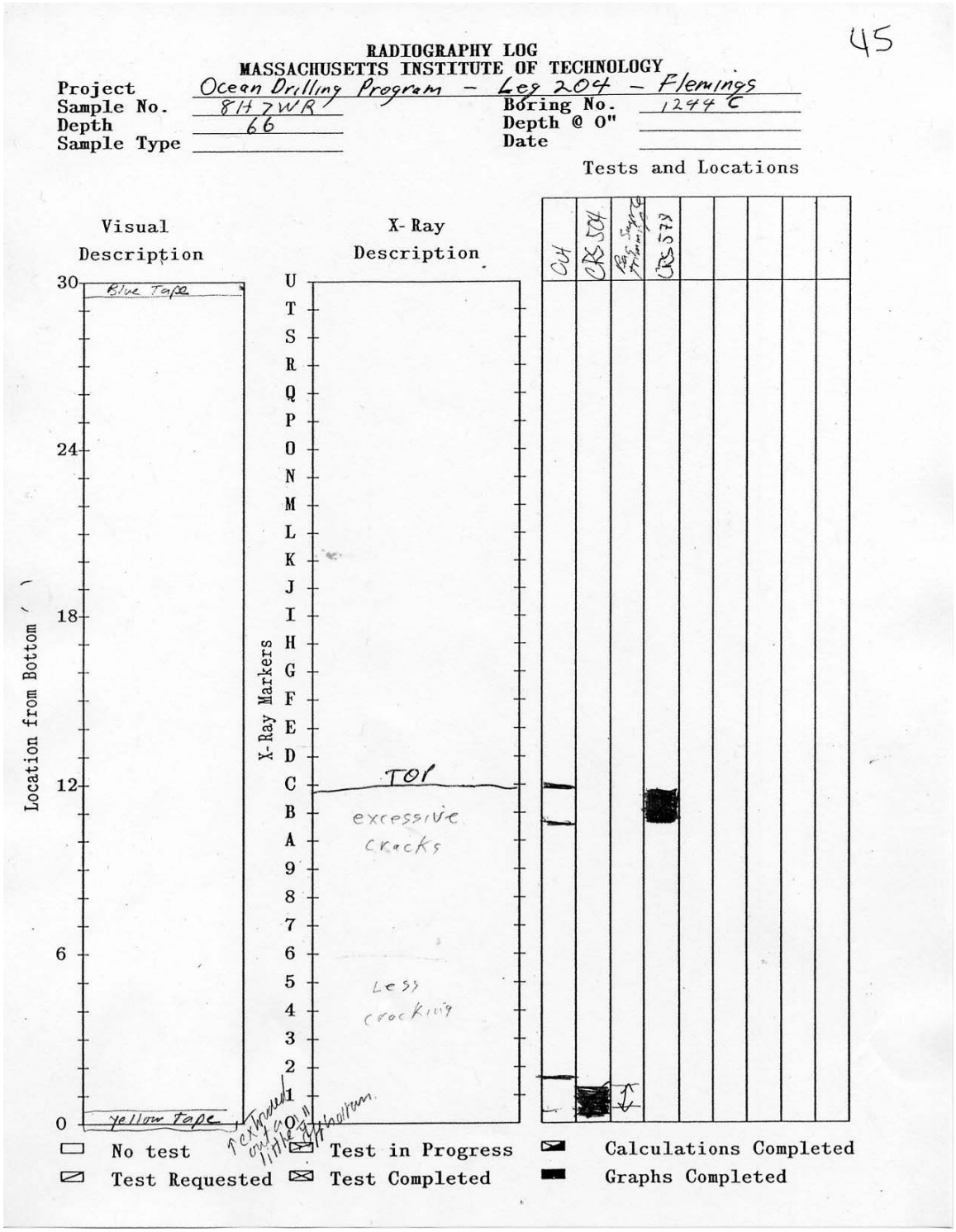


Figure AF22. Radiography log, Sample 204-1244C-9H-5WR, 105 cm.

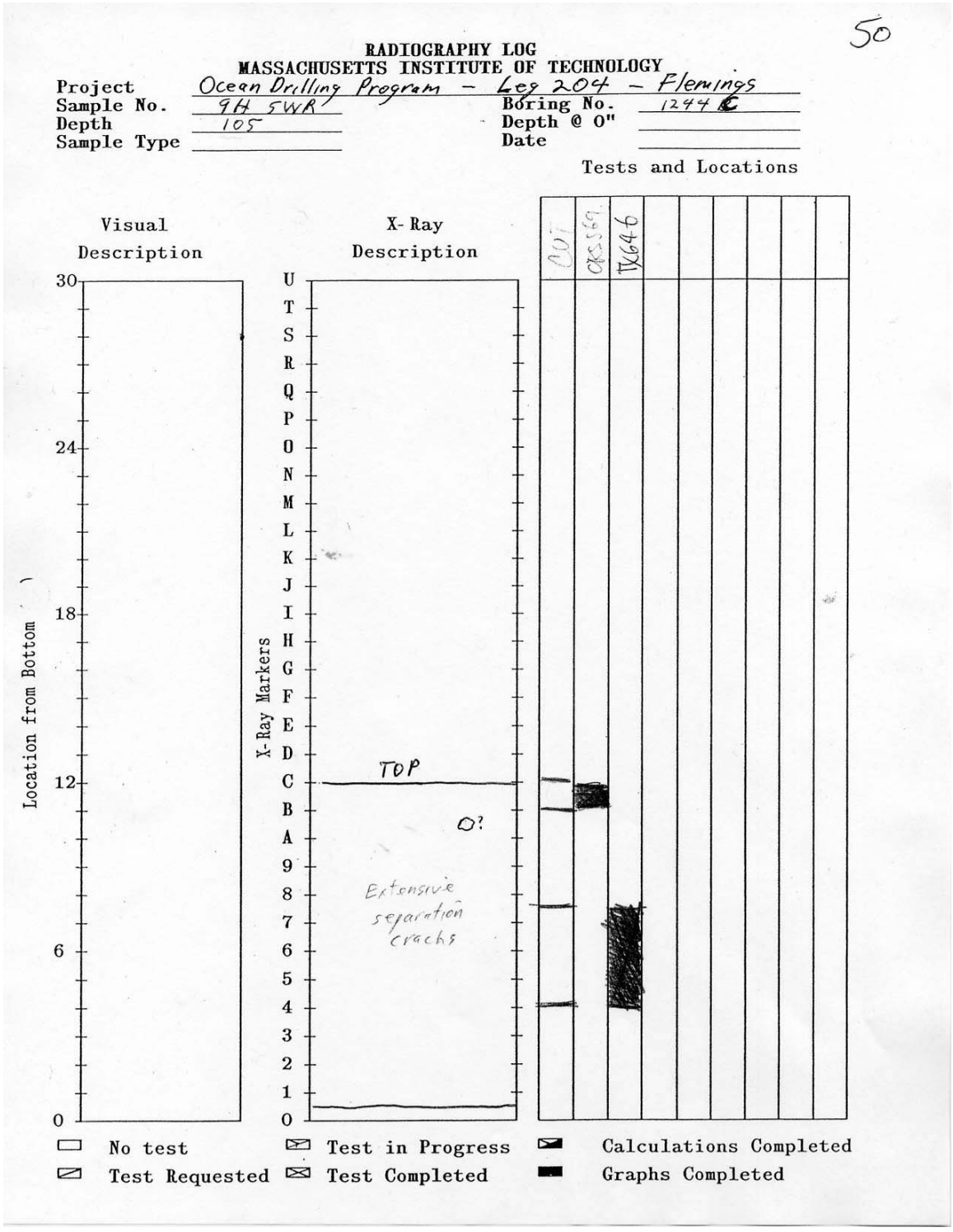


Figure AF23. Radiography log, Sample 204-1244C-13H-3WR, 120 cm.

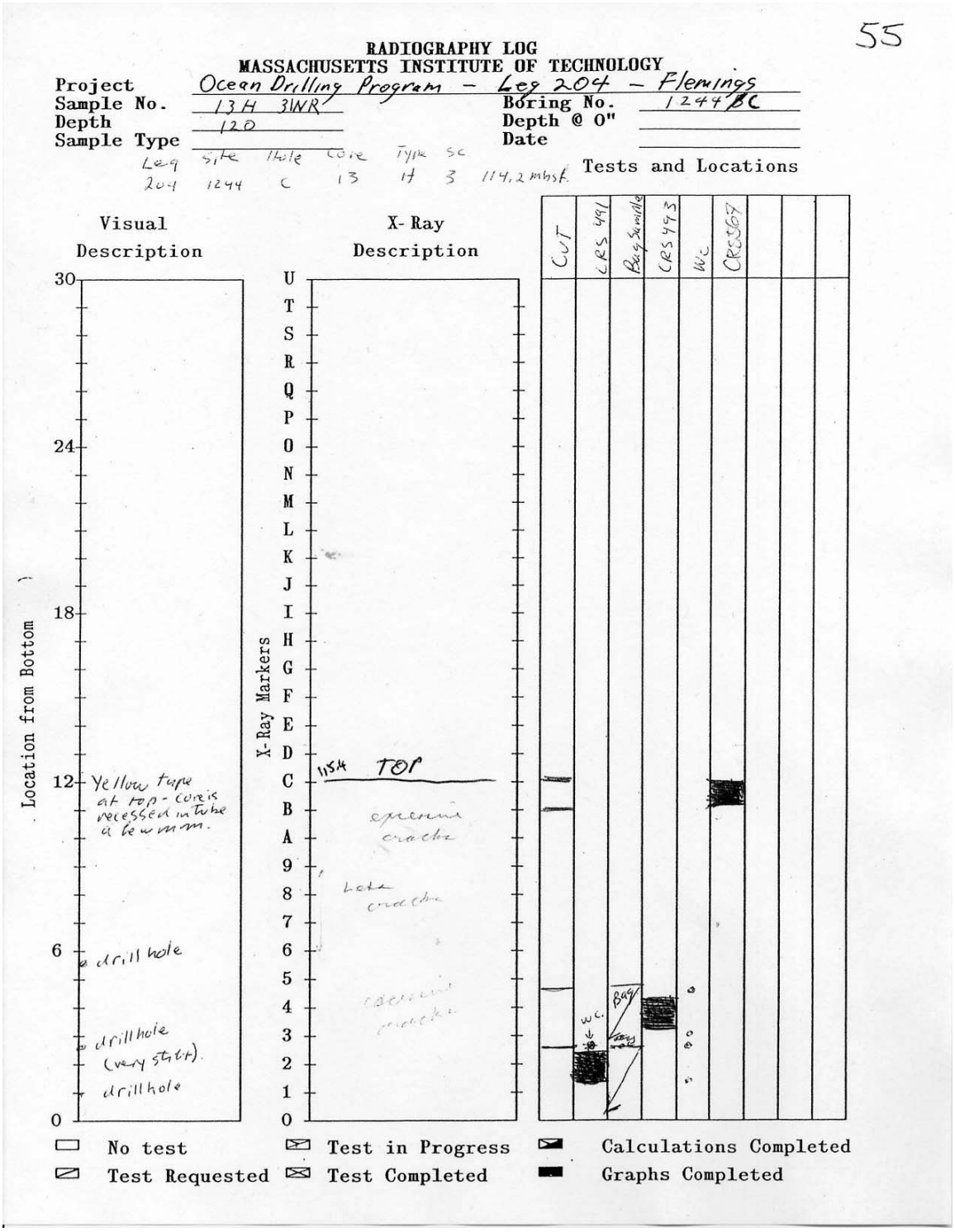


Figure AF24. Radiography log, Sample 204-1244C-17H-3WR, 65 cm.