HUMBOLDT BAY POWER PLANT
CALCULATION COVER SHEET

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RECORDS OF REVISIONS

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1.0 CALCULATION TTLE:

DETERMINATION OF POTENTIAL EARTHQUAKE-INDUCED DISPLACEMENTS OF CRITICAL SLIDES AT HBIP ISFSI SITE

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3.0 RECORD OF REVISIONS

Rev. No.	Reason for Revision	Revision Date
0	Initial Issue	11/27/02
1	Revision 0 (2002) of this calculation package used the program QUAD4M to compute seismic coefficients of potential sliding masses at HBIP ISFSI site. Since the program QUAD4M had been updated to QUAD4MU and was verified in calculation package GEO.DCPP.01.34, Revision 4 in 2003. The updated program QUAD4MU mainly modified the subroutine in QUAD4M for the calculation of seismic coefficient. In this revision 1, the earthquake induced displacements at the ISFSI site are re-evaluated using the updated program QUAD4MU. Attachments E, F, G and H are new for revision 1. These are input files and excerpts of output files for dynamic response and deformation calculations. Attachments A, B, C and D remain unchanged and are copies from revision 0.	7/1/2003

4.0 PURPOSE

As required by Geosciences Work Plan GEO 2002-03 entitled, "Development of Slope Stability Calculations for the Humboldt Bay ISFSI," this calculation package estimates earthquake-induced permanent displacements of potential sliding masses at the proposed Humboldt Bay ISFSI site (hereinafter, "the site") using field and laboratory data, postulated design ground motions, and a Newmark-type procedure incorporating a finite element model of the site.

In revision 0 of this calculation package, the program QUAD4M was used to compute seismic coefficients of potential sliding masses at the site. The program QUAD4M had been updated to QUAD4MU and verified in calculation package GEO.DCPP.01.34, Revision 4 in 2003. The updated program QUAD4MU mainly revised the subroutine in QUAD4M for the calculation of seismic coefficient. Geosciences Department of PG&E requested a repeat of the finite element analyses to obtain updated seismic coefficient time histories for the potential sliding masses using QUAD4MU. These time histories were also re-integrated to obtain new estimates for the earthquake-induced displacement at the site using the updated program QUAD4MU. Accordingly, the computed acceleration time histories and corresponding response spectra were all updated in this revision.

5.0 ASSUMPTIONS

1. There is no potential for liquefaction at the site. This is a reasonable assumption as concluded on page 8 of calculation package GEO.HBIP.02.02.
2. For purposes of analyses, stratigraphic layers are assumed to lie near horizontally. This is a reasonable assumption, as shown on Figure 4-14 of Section 4, Site Geology, of Technical Report TR-HBIP-2002-01.
3. Groundwater is assumed to be at elevation +6 feet, mean lower low water (MLLW) datum. This is a reasonable assumption, as documented on page 2 of

GEO.HBIP.02.02. This elevation is consistent with those measured in monitoring wells installed in the vicinity of the wastewater ponds east of the discharge canal (Figure 4-1 of Section 4 of TR-HBIP-2002-01). Water levels in these wells range between 4 and 7 feet below ground surface and respond only slightly to tidal cycles (White, 2002e).

4. The undrained strengths of stiff cohesive soils and dense sandy soils at the site are not reduced due to earthquake shaking. This is a reasonable assumption because, as reported by Makdisi and Seed (1978), stiff clays and dense sands do not suffer significant reduction in undrained strength due to cyclic loading; such soils retain most of their initial undrained strength even after being subjected to significant cyclic loading.
5. Input ground motions used to analyze the response of the site are deconvolved using the 1-D program SHAKE to the base of the 2-D finite element mesh from the free field of the sections modeled rather than at the higher surface elevations of the hillside. This is a conservative assumption because the ground motions calculated at higher elevations will be greater than the input ground motion due to topographic amplification, thus leading to greater calculated displacements.
6. The 1-D and 2-D site response analyses described herein used a single velocity profile developed using a factor of +1.22 (as described in Input 12, below) rather than varying the profile by plus or minus this factor to determine the maximum site response. This is a reasonable assumption, because Figures 7 and 8 in calculation GEO.HBIP.02.04 indicate maximum site amplification occurs for the positive (upper bound) factor over nearly all frequencies for both the fault normal and fault parallel components.
7. Vertical ground motions are not considered in the analyses, as studies have shown the magnitude of calculated displacements vary by a maximum of about 10% or less when vertical ground motions are included (Yan and others, 1996).

6.0 INPUTS

1. The site map (Figure 7-1) with boring locations and site location is obtained from Figure 4-2 of Section 4, Site Geology, of TR-HBIP-2002-01.
2. ISFSI site configuration is obtained from White, 2002a (Attachment A).
3. ISFSI concrete vault weight, including casks, and dimensions are obtained from White, 2002b (Attachment A).

4. Soil profile underlying the ISFSI site based on borings near ISFSI site obtained from Data Report B.
5. Geophysical data collected in borings near the ISFSI site are obtained from Data Report C.
6. Soil properties are derived from laboratory tests as reported in Data Report E.
7. The design velocity profile derived from the geophysical data is obtained from White, 2002c (Attachment A).
8. Design surface ground motions for use in response analyses are obtained from White, 2002d, as confirmed in White, 2002f (Attachment A).
9. The primary seismic source for ground motions (the Bay Entrance fault) is obtained from page 2 of GEO.HBIP.02.04.
10. The positive directions of primary seismic source components (fault normal and fault parallel) are obtained from Section 7.8 of GEO.HBIP.02.05.
11. The orientation of the primary seismic source is obtained from Swan, 2002 (Attachment A).
12. The stiff soil velocity profile is developed by multiplying velocity values in Input 7 above by 1.22 (as described in Assumption 6 above) or k_{2max} values in Input 7 by 1.5, as recommended on page 26 of ASCE (1986). (Velocities are related to the square root of soil shear modulus as shown on page 10, below, so the square root of the 1.5 factor in ASCE is 1.22, and k_{2max} is proportional to the shear modulus as shown on page 11, below.)

7.0 METHODOLOGY AND EQUATION SUMMARY

1. Determine subsurface stratigraphy beneath the site based on nearby borings.
2. Assign static soil properties to subsurface layers based on field and laboratory data characterizing those layers.
3. Assign dynamic soil properties to subsurface layers based on correlations with published data.

For each cross section analyzed, the following steps were conducted:

4. Perform static slope stability analyses using program UTEXAS4 to search for the critical slide mass (that mass having the lowest long-term static factor of safety) with ISFSI cask and vault loading.
5. Perform pseudo-static slope stability analyses of the critical slide mass as determined in step 4, above, using UTEXAS4 to determine the pseudostatic horizontal acceleration that reduces the factor of safety to approximately 1.0. Acceleration obtained is the yield acceleration, k_y. The yield acceleration depends on the slope geometry, the phreatic surface conditions, the undrained shear strength of the subsurface layers (or the reduced strength due to earthquake shaking), and the location of the potential slide surface.
6. Rotate design surface ground motions to direction of cross section and perform preliminary Newmark displacement analyses using program DEFORMP and k_y of the critical slide mass as determined in step 5, above, to assess relative magnitudes of displacements for each ground motion if it was applied to a rigid block (see step 11, below, for fuller description of displacement analyses). Select ground motions giving greatest displacements for further analyses.

For each ground motion selected in step 6, above, the following steps were conducted:

7. Deconvolve the selected surface ground motion to the base of the finite element mesh using program SHAKE.
8. Perform two-dimensional dynamic finite element analysis of the cross section using program QUAD4MU to determine the seismic response of the slope due to the earthquake motion as determined in step 7, above, placed at base of section.
9. Calculate seismic coefficient time history (and the maximum seismic coefficient, k_{max}) of the critical sliding mass from output of the QUAD4MU analysis. The seismic coefficient is the ratio of the forces acting on the boundary of the mass induced by an earthquake to the weight of the mass.
10. Obtain surface ground motion calculated at one or more representative nodes in the free field from output of QUAD4MU. Compare calculated motion with input motion.
11. Perform Newmark-type displacement analyses (after Newmark, 1965), using DEFORMP, to determine earthquake-induced permanent displacements of the critical slide mass. For a specified potential slide mass, the seismic coefficient time

history of that mass is compared with the yield acceleration k_y. When the seismic coefficient exceeds the yield acceleration, downslope movement will occur along the direction of the assumed failure plane. The movement will decelerate and will stop after the level of the induced acceleration drops below the yield acceleration, and the relative velocity of the sliding mass drops to zero. The accumulated permanent displacement is calculated by double-integrating the increments of the seismic coefficient time history that exceed the yield acceleration. The analysis requires the seismic coefficient time history as calculated in step 9, above, and the yield acceleration of the critical sliding mass as calculated in step 5, above.

8.0 SOFTWARE

The following computer programs (software) are used in this calculation package:

1. UTEXAS4 (version 4.0.0.8 dated 7/27/01), a commercially available Windows-compatible program to perform slope stability analyses, was verified in calculation package GEO.HBIP.02.09.
2. SHAKE (Geomatrix version dated 8/27/95), a 1-D equivalent linear site response PC DOS-compatible program used in this calculation package to compute base motions for use in finite element analyses, was modified by Geomatrix from the originally developed at the University of California, Berkeley to increase the sizes of arrays to accommodate more time history data points and a greater number of layers. The Geomatrix version of the program was verified in GEO.DCPP.02.02.
3. QUAD4MU (updated version dated 3/1/2003), a commercially available PC DOS-compatible program to perform 2-D finite element analyses, was verified in GEO.DCPP.01.34. rev. 4.
4. SPECTRAD (version dated 3/25/98), a PC DOS-compatible program developed by Geomatrix Consultants to calculate response spectra from time histories, was also verified in GEO.DCPP.01.34 in addition to QUAD4MU.
5. DEFORMP (version dated 3/30/2000), a PC DOS-compatible program developed by Geomatrix Consultants to perform Newmark-type displacement analyses, was verified in GEO.DCPP.01.35.

All programs are proprietary and designed to execute on personal computers under the Microsoft Windows 2000 operating system. No passwords are required to execute these programs.

9.0 BODY OF CALCULATION

1. The subsurface stratigraphy beneath the site was determined based on borings drilled at the site as shown in Figure 7-1. The site is located on a relatively flat area of the Buhne Point hill approximately 300 feet northeast of the Unit 2 Fuel Oil Tank and approximately 70 feet south of the bluff cut into the hill that overlooks Humboldt Bay (Figure 7-1). The ground surface slopes gently southeast (the elevation drops by 4 to 6 feet across the site) and has been altered only slightly since plant construction.

   Subsurface conditions at the site were characterized by drilling three exploratory borings, GMX99-3, GMX99-4, and GMX99-5. Borings were drilled and sampled to depths ranging from 61.9 to 77.3 feet. Two additional borings, GMX99-1 and GMX99-2, were drilled to depths of 95 and 402 feet, respectively, somewhat south of the site to investigate other potential sites, obtain in-situ geophysical properties, and evaluate continuity of soils underlying Buhne Point hill. Locations of the exploratory borings are shown on Figure 7-1. Borings were drilled using mud-rotary drilling techniques. A more detailed description of the field exploration program appears in Data Report B.

   The borings were logged in the field by examining drill cuttings and retrieved samples. Final logs, prepared from the field logs, examination of samples in the laboratory, and results of laboratory testing, are presented in Data Report B.

   Selected soil samples retrieved from the exploratory borings were delivered to the laboratory for examination and testing to evaluate their physical characteristics and engineering properties. Samples were tested to determine their moisture content, unit weight, plasticity, grain size distribution, and undrained shear strength using both unconsolidated- and consolidated-undrained (UU and CU) triaxial compression tests. The laboratory tests performed are discussed in more detail in Data Report E. Test results are presented in Data Report E, and also are

summarized at the corresponding sample locations on the boring logs in Data Report B.

Based on the results of field and laboratory investigations, the site is underlain by clayey sand and clay to a depth of approximately 23 feet. Trenches excavated at the site indicate that these strata are relatively continuous laterally and dip 2 to 4 degrees to the southeast. For purposes of analyses, however, these and all other underlying layers are assumed to lie horizontally. The upper 8 to 12 feet consist of medium dense clayey sand and stiff sandy clay. Approximately 8 to 11 feet of very stiff silt and clay underlie the upper layer. This layer is underlain by 3 to 6 feet of hard silty clay. These upper cohesive materials are underlain by very dense sand and silty sand to a depth of 50 to 53 feet. In boring GMX99-5, the sand grades to very stiff to hard sandy silt and silt. A relatively thin layer (less than 10 feet thick) of hard silt and silty clay with a thin stratum of very stiff peat was encountered in all borings at a depth of approximately 55 feet. The borings were terminated in the dense to very dense sand and gravel below this layer. A generalized soil profile used for engineering analyses is presented on Figure 7-2.

2. Static strength properties were assigned to subsurface layers based on field and laboratory data characterizing those layers. Based on the results of unconsolidated-undrained (UU) triaxial tests, an undrained shear strength of 2000 psf was assigned to the predominately cohesive soils in the upper 17 feet and an undrained shear strength of 4000 psf was assigned to the hard clay layer between 17 and 21 feet. Borings GMX99-2 through GMX99-5 indicate that a silty clay layer about 10 feet thick lies at depths between about 50 to 60 feet. It was assumed (Assumption 2) that this layer extends horizontally beyond the toe of the bluff. Based on the results of UU triaxial tests, an undrained strength of 3,000 psf was assigned to this layer. Although results from CU triaxial tests on samples obtained from clays in the upper 20 feet indicate an effective stress friction angle (φ') of 36 degrees, a φ' of 30° was conservatively assigned to all the clay layers using correlations based on Plasticity Index (EPRI, 1990).

Strength parameters for the dense sand layers estimated from the results of CU triaxial tests are presented on Figures 7-4 and 7-5, for effective stress and total

stress analyses, respectively. These layers are also assumed to extend horizontally beneath the site, based on similarly high blowcounts at similar depths from other borings near the site (Figure 7-3). Strengths from CU triaxial tests were determined at either 5 percent axial strain or at residual strain, whichever gave lower strengths (Table 7-1). As shown on Figure 7-4, the effective stress friction angle (φ') is about 37 degrees. The total stress envelope shown on Figure 7-5 was estimated using the procedure developed by Seed and Lee (1967). This procedure is based on results of extensive triaxial tests on Sacramento River sand, which indicated that the undrained strength of the sand is governed by a critical confining pressure. Samples consolidated by Seed and Lee to confining pressures lower than critical tended to dilate during shear, developing negative excess pore water pressures. Pore water pressures cannot drop below minus one atmosphere, the pressure at which water cavitates, which limits the undrained strength of dense sands at low confining pressures. Samples consolidated by Seed and Lee at confining pressures greater than critical tended to contract, developing positive excess pore water pressures. These excess pore pressures result in a decrease in effective confining pressures until the critical confining pressure is reached, at which point there is no tendency for volume change. The critical confining pressure then governs the undrained strength. For a given sand and stress path, Seed and Lee determined that the critical confining pressure is a function of void ratio.

Based on their results, Seed and Lee (1967) made the following observations:

1) In undrained tests on sand in which cavitation occurs, the total stress failure envelope will have a slope equal to the effective stress friction angle of the sand. The cohesion parameter, c, is a function of this friction angle. The confining pressure at failure, σ_{3f}, is less than the critical confining pressure, σ_{3crit}, and $\sigma_{3f} = \sigma_{3c} + u_b + p_{atm}$, where σ_{3c} is the initial confining pressure, u_b is the back-pressure of water, and p_{atm} is atmospheric pressure.

2) In undrained tests on sand in which cavitation does not occur, the total stress failure envelope will be horizontal, that is, independent of initial confining pressure. The critical confining pressure, σ_{3crit}, governs the undrained strength.

Based on the observations of Seed and Lee, the total stress failure envelope shown on Figure 7-5 for the dense sand layer at the site was developed in the following manner. For the portion of the envelope under which cavitation occurs, the effect of back pressure is conservatively ignored, so that $\sigma_{3f} = \sigma_{3c} + p_{atm}$. Because the effective stress envelope can be expressed as $\tau_{ff} = \sigma'_{ff} \tan\varphi'$, and the effective normal stress on the failure plane is $\sigma'_{ff} = \sigma_{ff} + p_{atm}$, the total stress envelope can be expressed as $\tau_{ff} = c + \sigma_{ff} \tan\varphi'$, where $c = p_{atm} \tan\varphi'$. Substituting in values for p_{atm} = 2.0 ksf and σ' = 37 degrees, c = 1.5 ksf. For the portion of the envelope under which no cavitation occurs, the undrained strength is defined as a horizontal line intersecting the inclined portion of the envelope at a confining pressure of 10 ksf, at which point the undrained shear strength is about 9 ksf. Also shown on Figure 7-5 are the results of three CU tests at a confining pressure of 10 ksf for which the corresponding critical confining pressures were estimated to range from 11 ksf to 14 ksf (Table 7-1). The horizontal line at confining pressures greater than 10 ksf is conservatively lower than the undrained strengths determined from these tests. These total stress parameters were selected to represent the undrained strength of the sandy layers below the water table. For the sandy layer above the water table, an effective stress friction angle (φ') of 37° was used in the analyses.

The undrained strengths of the stiff cohesive soils and underlying dense sandy soils are not reduced because of earthquake shaking, as discussed in Assumptions 1 and 4.

Subsurface layers and soil properties used in the stability analyses are presented in Table 7-2.

3. Soil properties required for dynamic finite element analyses include the dynamic shear modulus at low shear strain, G_{max}, and relationships of the modulus reduction factor and damping ratio to higher levels of shear strain.

Dynamic Shear Modulus at Low Strain

Dynamic shear modulus values at low strain can either be measured in the laboratory using resonant column tests or obtained from field shear wave velocity measurements. When available, estimates of G_{max} based on field shear wave

velocity measurements are preferable to laboratory test data. The shear modulus at low strain is related to the shear wave velocity by the following relationship:

$$G_{max} = \frac{\gamma}{g}(V_s)^2 \quad \text{(eqtn 7:3b, page 321, Sowers, 1979)}$$

where:

G_{max}	= shear modulus at low strain
γ	= unit weight of material
g	= acceleration due to gravity
V_s	= shear wave velocity

Shear wave velocities were measured in borings GMX99-1 and GMX99-2 using a downhole "p-s" suspension logger. Details of this procedure are presented in Data Report C. The variations of measured velocities with depth are shown on Figures 7-8 and 7-9 for borings GMX99-1 and GMX99-2, respectively. Using the measured shear wave velocities and results of visual classification and laboratory index tests, the soil profiles at borings GMX99-1 and GMX99-2 were subdivided into various soil layers for use in site response analyses. A representative shear wave velocity within each subdivided layer is shown by thick solid lines on Figures 7-8 and 7-9. The representative shear wave velocities were selected based on an assessment of the variation of measured velocities within each layer. In the case of GMX99-2, representative shear wave velocities were further reviewed and modified (White, 2002c). For each layer, selected properties including depth interval, description, soil density, and average shear wave velocity are listed in Table 7-3.

Also listed in Table 7-3 are values of K_{2max} for granular soils. As indicated in the table footnotes, two of the values were further modified slightly during analyses to be consistent with the modifications made to the shear wave velocities. Studies by Seed and Idriss (1970) have shown that the dynamic shear modulus of granular soils is related to the effective confining pressure as follows:

$$G_{max} = 1000\, K_{2max}(\sigma_m')^{1/2}, \text{ in psf} \quad \text{(figure 2, Seed, 1970)}$$

where: K_{2max} = parameter relating G_{max} and σ_m'; K_{2max} is a function of density or void ratio
σ_m' = mean effective confining pressure in psf

Using the above relationships, variations of shear wave velocities with depth were estimated for the granular soils using assumed values of K_{2max}. The estimated values are compared with measured shear wave velocities from GMX99-2 on Figure 7-10. Values of K_{2max} that provide the best fit between the estimated and measured shear wave velocities range between 100 and 140.

Because selected soil properties are generally similar for the upper 90 feet within both borings, and trenching demonstrated continuity of strata across Buhne Point hill, soil properties derived from boring GMX99-2 were considered representative of soil properties throughout the hillside and were used in the dynamic finite element analyses described in this section.

Modulus Reduction and Damping Relationships with Strain

Modulus reduction factor and damping relationships with shear strain are used to select strain-compatible modulus and damping values for each layer in the iterative equivalent-linear procedure. Modulus reduction and damping curves for the subsurface soils were selected on the basis of published data for similar soils.

The selected modulus reduction and damping curves for the various soil layers are listed in Table 7-3. Classification tests for the predominantly clayey soils indicate plasticity index (PI) values between 10 and 20. The modulus reduction and damping curves developed by Vucetic and Dobry (1991) for PI=15 were used for both the shallow clay layers and the layer encountered between 150 and 215 feet below ground surface in boring GMX99-2. Selected modulus reduction and damping curves are presented on Figure 7-11.

For the sandy and gravelly layers, studies performed for the Electric Power Research Institute (EPRI, 1993) have shown that the variation of modulus reduction and damping with shear strain are dependent on depth and confining pressure. Generic curves were developed for various depths below ground surface. These curves are presented on Figure 7-12 and are listed for the appropriate depth ranges

of the layers in Table 7-3. For shallow cohesionless soils, the generally accepted curves are the upper-bound modulus reduction curve and the lower-bound damping curve of the relationships developed for sands by Seed and Idriss (1970). These relationships, shown by the dashed curves on Figure 7-12, are compared with the EPRI (1993) curves. The Seed and Idriss (1970) upper-bound modulus reduction curve compares well with the EPRI (1993) curve for a depth range of 20 to 50 feet. The Seed and Idriss (1970) lower-bound damping curve lies within the EPRI (1993) curves for the depth ranges of 50 to 120 and 120 to 250 feet.

4. Slope stability analyses were performed to evaluate the factor of safety against sliding at the site. Analyses were performed with the computer program UTEXAS4 using Spencer's method. Spencer's method satisfies both force and moment equilibrium.

Two cross sections were analyzed (Figure 7-1). The first cross section, A-A', is on the bluff side of the hill. The center of the proposed ISFSI vault is about 70 feet from the slope break at elevation +44 feet MLLW (White, 2002a). The vault pressure load varies from 1400 psf to 2900 psf depending on total vault weight and dimensions (White, 2002b). To be conservative, a pressure load of 3000 psf was assumed acting over a vault width of 20 feet. The effect of this pressure load is accounted for in the analysis by replacing an equivalent soil volume 15.5 feet deep with a mass of unit weight 193.5 pounds per cubic foot (pcf) (3000 psf divided by 15.5 feet) and an arbitrarily high shear strength of 1,000,000 psf to prevent shear failure through the vault. The two-dimensional slope stability analysis assumes an infinite pad length. The second cross section, B-B', is on the plant side of the hill. The proposed pad is about 150 feet from the top of the cut slope near the Unit 2 Fuel Oil Tank. A generalized soil profile is presented on Figure 7-2. The water table was assumed to be at elevation +6 feet MLLW (as per Assumption 3).

Searches were conducted for the slide mass having the minimum factor of safety using Spencer's method and the long-term (effective stress) soil strength parameters described above for circular slip surfaces daylighting beneath the pad. The results of the stability analyses are shown on Figures 7-6 and 7-7 for the two cross sections analyzed. The minimum factors of safety computed range between 2.7 and 4.9

(Table 7-4), which are sufficiently high to preclude unlimited slope displacements (slope failure) during earthquake shaking.

Additional stability analyses were performed to check the effect of variations of groundwater level and vault dimensions. Results show that safety factors were reduced by less than 5% for variations in groundwater elevation of up to several feet (Assumption 3) and for variations in vault dimensions of up to 30% (White, 2002b).

UTEXAS4 input and selected output files are found in Attachment B. All files are also included on the enclosed CD.

5. The slope stability computations were repeated for the slide mass having the lowest static factor of safety by incrementally increasing the horizontal pseudostatic acceleration to determine the yield acceleration, k_y, that reduced the factor of safety of the slip surface to unity. Yield accelerations were computed using a two-stage approach in UTEXAS4, wherein normal stresses along the failure plane are first calculated under static pre-earthquake conditions and are then held constant during application of the horizontal pseudostatic acceleration to estimate the undrained shear strengths during transient earthquake loading. For the critical slide masses at the site, computed values of k_y are about 0.69g and 0.66g for the bluff-side and plant-side slopes, respectively (Table 7-4). Figures 7-6 and 7-7 show the slide masses having the minimum computed factors of safety and the corresponding yield accelerations for the bluff-side and the plant-side slopes, respectively.

   Analyses were repeated using wedge-type failure surfaces. The factors of safety computed using the wedge-type failure surfaces were greater than those computed for the circular slip surfaces.

   UTEXAS4 input and selected output files are found in Attachment B. All files are also included on the enclosed CD and are listed in Table 7-4.

6. Prior to performing finite element analyses, each horizontal component of the surface ground motion provided (White, 2002d, as confirmed in White, 2002f) was

rotated to the direction of each cross section. Seismic response due to the vertical component of ground motions was not considered in this analysis as described in Assumption 7. The amount of rotation was determined by calculating the difference between the azimuths of each cross section as shown on Figure 7-1 and the azimuth of the primary source of the ground motions (the Bay Entrance fault, from GEO.HBIP.02.04) as determined in Swan, 2002. For section A-A', the difference between its azimuth of N 17° W and the fault azimuth of N 7° W is 350°. For section B-B', the difference between its azimuth of N 24° E and the fault azimuth of N 7° W is 31°.

The rotated component along each section is the sum of the projections of the fault normal and fault parallel components along the direction of the section. The formulation is as follows:

$$AA' = F_P \cos(\Phi) + F_N \sin(\Phi)$$

where F_P and F_N are fault parallel and fault normal components of the acceleration time histories, AA' is the component along the section A-A', and Φ is the difference between the orientations of the section and the fault. Calculations of rotated components were performed in Excel spreadsheets. Excerpts of the spreadsheets along with related time history input and output are found in Attachment C. All files are also included on the enclosed CD and are listed in Table 7-7. The spreadsheets are verified by the following hand check from SET1ROT.XLS (page 4 of Attachment C):

at +0.000 seconds, set 1 FN = - 0.229294E-03 and FP = 0.846349E-04
Then for section A-A' with Φ = 350 degrees,
AA' = 0.846349E-04 · cos (350) + - 0.229294E-03 · sin (350) = 1.23166E-04 *checks*

Then a rigid block Newmark-type analysis was performed with each rotated surface ground motion and the yield acceleration for each critical slide mass determined in step 5, above, using program DEFORMP. The positive direction of each ground motion component (south for fault parallel and west for fault normal) was obtained from Input 10. Calculated displacements are summarized in Table 7-5. Two of the

ground motions producing the largest calculated displacements (sets 1 and 3), were selected for further finite element analyses. All DEFORMP input and output files are included on the enclosed CD and are listed in Table 7-7. Excerpts of these files are not attached, as they are similar to those found in Attachment G.

7. Earthquake motions input at the base of each section were developed from the rotated surface ground motions determined in step 6, above. Plots of the rotated surface ground motions are shown on Figures 7-14 through 7-17. The surface motions were deconvolved to a depth of 48 feet below sea level (see Assumption 5) using program SHAKE (Geomatrix version) and the dynamic properties for layers 2c, 3, and 4a listed in Table 7-3, as modified to obtain a "stiff soil" velocity profile (1.22 times velocities or 1.5 times k_{2max} values in Table 7-3 as described in Input 12) to obtain the motions at depth for use in QUAD4MU analyses. The base was modeled as elastic half-space with a shear wave velocity obtained from Table 7-3. SHAKE input and selected output files can be found in Attachment D. All files are also included on the enclosed CD and are listed in Table 7-7. Values of maximum calculated strains of 0.26 to 0.53 percent from the output are not excessive.

8. The earthquake-induced seismic coefficient time histories (and their peak values k_{max}) for each slide mass were computed using a two-dimensional dynamic finite element analysis program QUAD4MU that is an updated version of the program QUAD4M. The program uses equivalent linear strain-dependent modulus and damping properties and an iterative procedure to estimate the non-linear strain-dependent soil properties. The time-step analysis incorporates a Rayleigh damping approach and allows for variable damping in different elements. The option of computing the seismic coefficient time history of a sliding mass in QUAD4M was modified in QUAD4MU and this option was verified in the calculation package GEO.DCPP.01.34, rev. 4.

   The QUAD4M analyses reported in GEO.HBIP.01.07, rev. 0 were repeated in this revision using QUAD4MU. The QUAD4MU analyses were performed at each cross section analyzed using the dynamic properties summarized in Table 7-3 from step 3, above, the velocity profile as modified to obtain a "stiff soil" in step 7, above, and the earthquake motion at the base derived in step 7, above. A finite

element representation of the site is shown on Figure 7-13. For simplicity, the finite element mesh was developed to represent both cross sections A-A' and B-B' that are shown on the site plan, Figure 7-1. Both of these cross sections pass through the proposed ISFSI site. The surface topography along section A-A' represents the bluff-side area of the ISFSI site, and section B-B' represents the area on the plant-side. The mesh, on Figure 7-13, also shows the potential slide masses having the minimum factors of safety on both plant- and bluff-side slopes. These masses extend from the ground surface down into the sand layer at a depth of about 90 feet (elevation -46 feet MLLW). The base of the model is in the dense sand layer and the half-space properties were set the same as in the SHAKE analyses performed in step 7, above. The motions developed along the direction of section A-A' were only used to calculate the seismic coefficient time histories for the left facing sliding mass (to the bluff-side). Similarly, the motions developed along the direction of section B-B' were only used to calculate the seismic coefficient time histories for the right facing sliding mass (to the plant-side).

QUAD4MU input and selected output files are found in Attachment E. All files are also included on the enclosed CD and are listed in Table 7-7.

9. The seismic coefficient time histories of the critical section were output from the QUAD4MU analysis. Plots of the seismic coefficient time histories for each input ground motion are shown in Figures 7-14 through 7-17.

10. The surface ground motions calculated at three surface nodes (23, 34, and 45) near the critical section were obtained from QUAD4MU output. These nodes were selected because they are in the "free field" and can be compared with the motion input in SHAKE (step 7 above) to assess the reasonableness of the QUAD4MU analysis results. The response spectra for the three nodal points and the input time histories were calculated using program SPECTRAD. Excerpts of SPECTRAD input and output files are found in Attachment F. All files are also included on the enclosed CD. The response spectra are plotted in Figures 7-18 through 7-21. It can be seen that the response spectra for the nodes at free filed agree well with each another and with the input time history spectrum for SHAKE at ground surface. These are not expected to be identical because SHAKE uses a frequency domain

approach in the deconvolution computation, while QUAD4MU uses time domain computation to propagate the base motion to the surface. The comparison provides confidence in that QUAD4MU's response calculations are reasonable.

11. Newmark displacement analyses, using DEFORMP, were performed to determine the earthquake-induced permanent displacements of the critical section. The analyses utilize the calculated seismic coefficient time history as described in step 8, above, and the yield acceleration of the critical section as calculated in step 3, above.

    The relationship between calculated displacement and yield acceleration is presented on Figures 7-22 and 7-23 for the bluff-side slide mass having the minimum factor of safety and for the seismic coefficient time histories calculated in step 9, above. For a yield acceleration of 0.69g, the earthquake-induced downslope displacements for the critical bluff-side slide mass are calculated from Figures 7-22 and 7-23 to range from 0.2 to 0.5 feet. Similar relationships presented on Figures 7-24 and 7-25 for the slide mass on the plant-side slope indicate permanent displacements range from 0.3 to 4.7 feet for a yield acceleration of 0.66g. These calculated displacements are presented in Table 7-6. The average displacement for the full range of displacements is 1.4 feet. DEFORMP input and selected output files are included in Attachment G. All files are included in the enclosed CD and are listed in Table 7-7.

10.0 RESULTS AND CONCLUSIONS

Results of stability analyses beneath the ISFSI site, listed in Table 7-4, indicate static safety factors range from 2.7 to 4.9. Results of Newmark displacement analyses, listed in Table 7-6, indicate displacements beneath the site range from 0.0 to 4.7 feet, averaging 1.4 feet.

Analyses of slope stability indicate that static factors of safety for circular failure surfaces daylighting beneath the ISFSI site are 2.7 or greater. During the postulated design ground motions, analyses indicate displacements of the failure surface beneath the site average 1.4 feet. It is concluded that the site is not susceptible to deep landslides, but that small amounts of ground deformation are possible during maximum earthquake loading.

11.0 LIMITATIONS

There are no limitations on the use of the calculation results.

12.0 IMPACT EVALUATION

The results of the displacements presented in Section 10 do not impact other Geosciences calculations.

13.0 REFERENCES

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3. Data Report C, Downhole Geophysics, Rev. 0.
4. Data Report E, Laboratory Testing of Soils Samples, Rev. 0.
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24. White, R., 2002a, letter from Robert White to Faiz Makdisi, Re: transmittal of drawing showing proposed location and configuration of the Humboldt Bay ISFSI site, dated 23 July 2002.
25. White, R., 2002b, letter from Robert White to Faiz Makdisi, Re: transmittal of bounding values of vault size and weight (including ISFSI casks) for HBIP slope stability analyses, dated 5 August 2002.
26. White, R., 2002c, letter from Robert White to Faiz Makdisi, Re: transmittal of velocity profile for HBPP ISFSI site response analyses, dated 24 July 2002.
27. White, R., 2002d, letter from Robert White to Faiz Makdisi, Re: transmittal of preliminary ground motions for Humboldt Bay ISFSI Project slope stability analyses, dated 29 July 2002 (with enclosed CD).
28. White, R., 2002e, letter from Robert White to Faiz Makdisi, Re: excerpt from Humboldt Bay Power Plant December 1985 TPCA HAR, dated 15 November 2002.
29. White, R., 2002f, letter from Robert White to Faiz Makdisi, Re: transmittal of final approved time histories for Humboldt Bay ISFSI Project slope stability analyses, dated 27 November 2002.

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14.0 ATTACHMENTS

A. Transmittals (14 pages)

White, R., 2002a, letter from Robert White to Faiz Makdisi, Re: transmittal of drawing showing proposed location and configuration of the Humboldt Bay ISFSI site, dated 23 July 2002.

White, R., 2002b, letter from Robert White to Faiz Makdisi, Re: transmittal of bounding values of vault size and weight (including ISFSI casks) for HBIP slope stability analyses, dated 5 August 2002.

White, R., 2002c, letter from Robert White to Faiz Makdisi, Re: transmittal of velocity profile for HBPP ISFSI site response analyses, dated 24 July 2002.

White, R., 2002d, letter from Robert White to Faiz Makdisi, Re: transmittal of preliminary ground motions for Humboldt Bay ISFSI Project slope stability analyses, dated 29 July 2002 (without enclosed CD).

White, R., 2002e, letter from Robert White to Faiz Makdisi, Re: excerpt from Humboldt Bay Power Plant December 1985 TPCA HAR, dated 15 November 2002.

White, R., 2002f, letter from Robert White to Faiz Makdisi, Re: transmittal of final approved time histories for Humboldt Bay ISFSI Project slope stability analyses, dated 27 November 2002.

Swan, F.H., 2002, Distance to Bay Entrance fault, letter to Robert White from Frank H. (Bert) Swan, dated 30 July 2002.

B. UTEXAS4 input and excerpts of output files for static and dynamic stability analyses (28 pages)

C. EXCEL spreadsheet excerpts and related excerpts of time histories for rotations (13 pages)

D. SHAKE input and excerpts of output files to obtain motion at base of QUAD4MU section (21 pages)

E. QUAD4MU input and excerpts of output files for response analyses (48 pages)

F. SPECTRAD input and excerpts of output files for calculating response spectra of time histories (19 pages)
G. DEFORMP input and excerpts of output for calculation of displacements (17 pages)
H. CD-ROM table of contents

15.0 LIST OF TABLES

16.0 LIST OF FIGURES

17.0 ENCLOSURE

CD labeled "GEO.HBIP.02.07, rev. 1, 7/18/2003," containing the files as listed in Tables 7-4, 7-5, and 7-7 (all ASCII files unless otherwise noted). The CD is located with this calculation in Geosciences' project-designated file cabinets. The CD table of contents is included in Attachment H.

TABLE 7-1

Shear strength data from ICU-TC tests on sand samples from boring GMX99-4

Boring	Depth	Stage	Sig3(C)	Dev Stress	Sig1eff(f)	Sig3eff(f)	p	peff	q	τ_f=qcos(♦)
99-4	50.5-51.0	1	6.96	17.25	21.95	4.71	15.59	13.33	8.63	6.87
99-4	50.5-51.0	2	9.95	30.7	39.22	8.52	25.30	23.87	15.35	12.23
99-4	30.5-31.0	1	4.97	38.58	48.49	9.91	24.26	29.20	19.29	15.37
99-4	30.5-31.0	2	10.08	36.01	50.42	14.41	28.09	32.42	18.01	14.34
99-4	40.5-41.0	1	6.11	20.75	26.58	5.83	16.49	16.21	10.38	8.26
99-4	40.5-41.0	2	10.08	29.93	40.84	10.92	25.05	25.88	14.97	11.92

Sig3(C) = consolidation stress
Dev Stress = deviator stress at failure
Sig1eff(f) = major principle stress at failure
Sig3eff(f) = minor principle stress at failure
p = [Dev Stress + 2 x Sig3(C)] / 2
peff = [Sig1eff(f) + Sig3eff(f)] / 2
q = [Sig1eff(f) - Sig3eff(f)] / 2
τ_f=qcos(♦) = shear stress on the failure plane, phi = 37 degrees, from fit of peff-q data, see Figure 7-4.
2nd stage values of shear stress are plotted against Sig3(c) on Figure 7-5.

Data from Data Report E as follows:
sample at 30.5-31.0 feet: pages 196-201
sample at 40.5-41.0 feet: pages 202-207
sample at 50.5-51.0 feet: pages 208-213

TABLE 7-2

MATERIAL PROPERTIES FOR POST-EARTHQUAKE STABILITY ANALYSES

Layer No. (Fig. 7-6)	Material	Unit Weight		Effective Strength		Undrained Strength	
		γ_{moist} (pcf)	γ_{sat} (pcf)	Cohesion c' (psf)	Friction Angle ϕ' (degree)	Cohesion c (psf)	Friction Angle ϕ (degree)
8	Medium Dense Clayey Sand and Stiff Sandy Clay	125	125	0	30	2000	0
7	Very Stiff Clay	123	123	0	30	2000	0
6	Hard Silty Clay	130	130	0	30	4000	0
3,4	Dense to Very Dense Silty Sand	125	128	0	37	1500*	37*
2	Hard Silt and Silty Clay	128	128	0	30	3000	0
1	Dense to Very Dense Sand and Gravel	130	130	0	37	1500*	37*

* Undrained strength of dense sand is limited to 9 ksf.

TABLE 7-3

Revised Shear Wave Velocity Profile for Site Response Analysis
(based on I.M. Idriss Interpretation on May 24, 2002)

Layer No. *	Depth (ft)	Description	Density (pcf)	Shear Wave Velocity (fps)	K_{2max}	Modulus Reduction and Damping Curves
1-a (8)	0-15	Silty Clay	125	750	--	Vucetic and Dobry (1991) PI=15
1-b (7)	15-20	Silty Clay	125	750		Vucetic and Dobry (1991) PI=15
1-c (6)	20-25	Silty Clay	125	1,000		Vucetic and Dobry (1991) PI=15
2-a (4)	25-30	Sand with Gravel	130	1,000	80	EPRI (1993) Depth = 20-50 feet
2-b (4)	30-40	Sand with Gravel	130	1,150	100	EPRI (1993) Depth = 20-50 feet
2-c (3)	40-50	Sand with Gravel	130	1,150	80	EPRI (1993) Depth = 20-50 feet
3 (2)	50-60	Silty Clay	130	1,500	--	Vucetic and Dobry (1991) PI=15
4-a (1)	60-90	Sand with Gravel	130	1,500	125	EPRI (1993) Depth = 50-120 feet
4-b	90-135	Sand	130	1,750	130	EPRI (1993) Depth = 50-120 feet
5	135-150	Sand with Gravel	130	2,000	140	EPRI (1993) Depth = 120-250 feet
6	150-215	Silty Clay	130	1,550	--	Vucetic and Dobry (1991) PI = 15
7	215-260	Silty Sand	130	1,650	100	EPRI (1993) Depth = 120-250 feet
8a	260-320	Gravelly Sand	130	2,000	120	EPRI (1993) Depth = 250-500 feet
8b	320-400	Silty Sand	130	1,800	100	EPRI (1993) Depth = 250-500 feet
9	400-450	Silty Sand**	130	1,900	--	EPRI (1993) Depth = 250-500 feet
10	450-500	Silty Sand**	130	2,000	--	EPRI (1993) Depth = 250-500 feet
11	500-600	Silty Sand**	130	2,100	--	EPRI (1993) Depth = > 500 feet
12	600+	Half space	135	5,000	--	

Notes: * Layer numbers in parentheses are those assigned in Figure 7-6 and listed in Table 7-2 for stability analyses.
** Extrapolated from bottom of boring.
Layers 2b and 2c k_{2max} values modified slightly to 90 and 85, respectively, in analyses to be consistent with modifications to the shear wave velocities.

Table 7-4

Results of slope stability analyses for Sections A-A' and B-B'

Section	long term static factor of safety	yield acceleration, k_y	UTEXAS4 static input/output files**	UTEXAS4 dynamic input/output files**
A-A'	2.68	0.69	bluffs5.txt bluffs5.out	bluffs5(dyn).txt bluffs5(dyn).out
B-B'	4.94	0.66	plant_s5c.txt plant_s5c.out	plant_s5c(dyn).txt plant_s5c(dyn).out

** All files are ASCII text and are found on the CD-ROM enclosed with the calculation. Excerpts are found in Attachment B.

TABLE 7-5

Permanent displacement versus yield acceleration assuming rotated surface motion equal to seismic coefficient time history

					computer input/output files **			
ky				Displacement (ft)	spreadsheet	rotated motion	DEFORMP input	DEFORMP output
Section A-A					(*.xls)	(*.prn)	(*.inp)	(*.dat)
0.69	Set 1	350°	Positive	1.1	set1rot	s1aa	s1ap	s1ap
			Negative	0.2	set1rot	s1aa	s1an	s1an
	Set 2	350°	Positive	0.4	set2rot	s2aa	s2ap	s2ap
			Negative	1.2	set2rot	s2aa	s2an	s2an
	Set 3	350°	Positive	0.4	set3rot	s3aa	s3ap	s3ap
			Negative	0.8	set3rot	s3aa	s3an	s3an
	Set 4	350°	Positive	0.8	set4rot	s4aa	s4ap	s4ap
			Negative	0.9	set4rot	s4aa	s4an	s4an
Section B-B'								
0.66	Set 1	31°	Positive	6.1	set1rot	s1bb	s1bp	s1bp
			Negative	0.6	set1rot	s1bb	s1bn	s1bn
	Set 2	31°	Positive	0.7	set2rot	s2bb	s2bp	s2bp
			Negative	1.1	set2rot	s2bb	s2bn	s2bn
	Set 3	31°	Positive	0.8	set3rot	s3bb	s3bp	s3bp
			Negative	5.9	set3rot	s3bb	s3bn	s3bn
	Set 4	31°	Positive	0.4	set4rot	s4bb	s4bp	s4bp
			Negative	5.6	set4rot	s4bb	s4bn	s4bn

** All files on CD-ROM enclosed with calculation.
Spreadsheet (*.xls) files are Excel files. All others are ASCII text.

TABLE 7-6

Permanent Displacement versus Yield Acceleration (seismic coefficients from QUAD4MU)

Yield Acceleration, Ky			Kmax	Ky/Kmax	Displacement (ft)
ISFSI, Section A-A					
0.69	Set 1+	350°	1.21	0.57	0.5
	Set 1 -	350°	0.93	0.74	0.0
	Set 3 +	350°	0.93	0.74	0.2
	Set 3 -	350°	1.18	0.58	0.5
ISFSI, Section B-B'					
0.66	Set 1+	31°	1.88	0.35	4.7
	Set 1 -	31°	0.86	0.77	0.3
	Set 3 +	31°	1.12	0.59	0.3
	Set 3 -	31°	1.42	0.46	4.4

TABLE 7-7
List of files for ground motion response and displacement analyses

ROTATED MOTIONS (excerpts in Attachment C)

	Section A-A'		Section B-B'		
	SET 1	SET 3	SET 1	SET 3	
Input (.ACC)	SET1_FP SET1_FN_FLING_BC	SET3_FP SET3_FN_FLING_BC	SET1_FP SET1_FN_FLING_BC	SET3_FP SET3_FN_FLING_BC	
Output	SET1ROT.XLS S1AA.AC8	SET3ROT.XLS S3AA.AC8	SET1ROT.XLS S1BB.AC8	SET3ROT.XLS S3BB.AC8	rotated surface motion

SHAKE (excerpts in Attachment D)

	Section A-A'		Section B-B'		
	SET 1	SET 3	SET 1	SET 3	
Input	PD1A.INP S1AA.AC8	PD3A.INP S3AA.AC8	PD1B.INP S1BB.AC8	PD3B.INP S3BB.AC8	rotated surface motion
Output	PD1A.OUT PD1A.PUN	PD3A.OUT PD3A.PUN	PD1B.OUT PD1B.PUN	PD3B.OUT PD3B.PUN	rotated outcrop motion

QUAD4MU (excerpts in Attachment E)

	Section A-A'		Section B-B'		
	SET 1	SET 3	SET 1	SET 3	
Input	PD1A.Q4I PD1A.O11 HBSOILNW.DAT	PD3A.Q4I PD3A.O11 HBSOILNW.DAT	PD1B.Q4I PD1B.O11 HBSOILNW.DAT	PD3B.Q4I PD3B.O11 HBSOILNW.DAT	rotated outcrop motion
Output	PD1A.Q4O PD1A00.QSC	PD3A.Q4O PD3A00.QSC	PD1B.Q4O PD1B01.QSC	PD3B.Q4O PD3B01.QSC	seismic coeff. motion
Acceleration Time History Outputs at Ground Surface (excerpts not attached)	PD1A00.Q4A PD1A01.Q4A PD1A02.Q4A PD1A03.Q4A PD1A04.Q4A PD1A05.Q4A	PD3A00.Q4A PD3A01.Q4A PD3A02.Q4A PD3A03.Q4A PD3A04.Q4A PD3A05.Q4A	PD1B00.Q4A PD1B01.Q4A PD1B02.Q4A PD1B03.Q4A PD1B04.Q4A PD1B05.Q4A	PD3B00.Q4A PD3B01.Q4A PD3B02.Q4A PD3B03.Q4A PD3B04.Q4A PD3B05.Q4A	node 23 node 34 node 45 node 375 node 715 node 1395
seismic coeff. motion (excerpts not attached)	PD1A01.QSC	PD3A01.QSC	PD1B00.QSC	PD3B00.QSC	output not applicable

SPECTRAD (excerpts in Attachment F)

	Section A-A'		Section B-B'		
	SET 1	SET 3	SET 1	SET 3	
Input	SPECTRA1.INP SPECTRA2.INP	SPECTRA1.INP SPECTRA2.INP	SPECTRA1.INP SPECTRA2.INP	SPECTRA1.INP SPECTRA2.INP	
Output	PD1A00. 050 PD1A01. 050 PD1A02. 050 S1AA.050	PD3A00. 050 PD3A01. 050 PD3A02. 050 S3AA.050	PD1B00. 050 PD1B01. 050 PD1B02. 050 S1BB.050	PD3B00. 050 PD3B01. 050 PD3B02. 050 S3BB.050	node 23 at free field node 34 at free field node 45 at free field rotated surface spectra

DEFORMP (excerpts in Attachment G)

	Section A-A'		Section B-B'		
	SET 1	SET 3	SET 1	SET 3	
Input	PD1ASP.INP PD1ASN.INP PD1A00.QSC	PD3ASP.INP PD3ASN.INP PD3A00.QSC	PD1BSP.INP PD1BSN.INP PD1B01.QSC	PD3BSP.INP PD3BSN.INP PD3B01.QSC	seismic coeff. motion
Output	PD1ASP.DAT PD1ASN.DAT	PD3ASP.DAT PD3ASN.DAT	PD1BSP.DAT PD1BSN.DAT	PD3BSP.DAT PD3BSN.DAT	

Note: All files are ASCII text included on the CD-ROM enclosed with the calculation.

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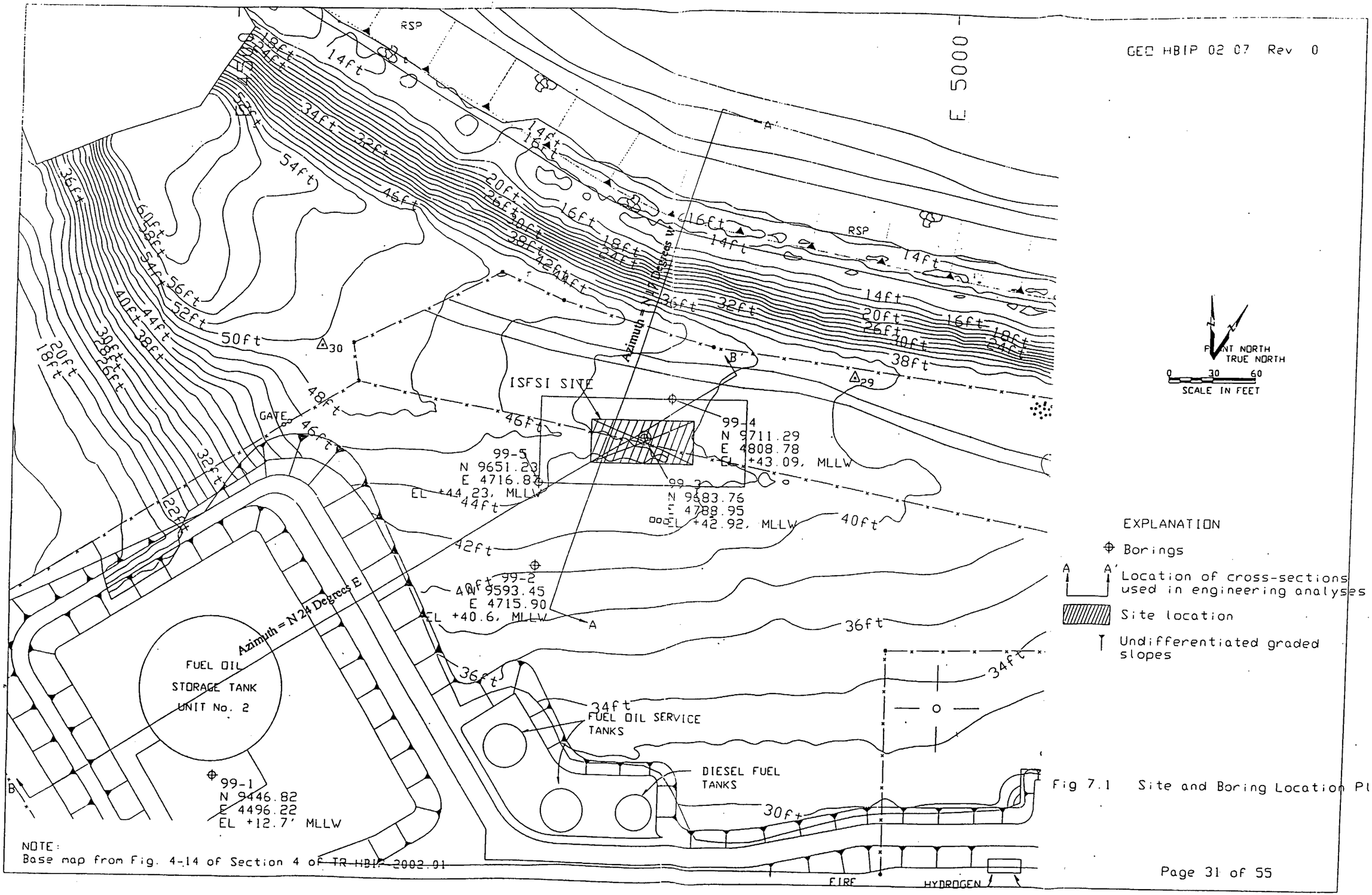

NOTE:
Base map from Fig. 4-14 of Section 4 of ~~TR HBIP 2002.01~~

Fig 7.1 Site and Boring Location Plan

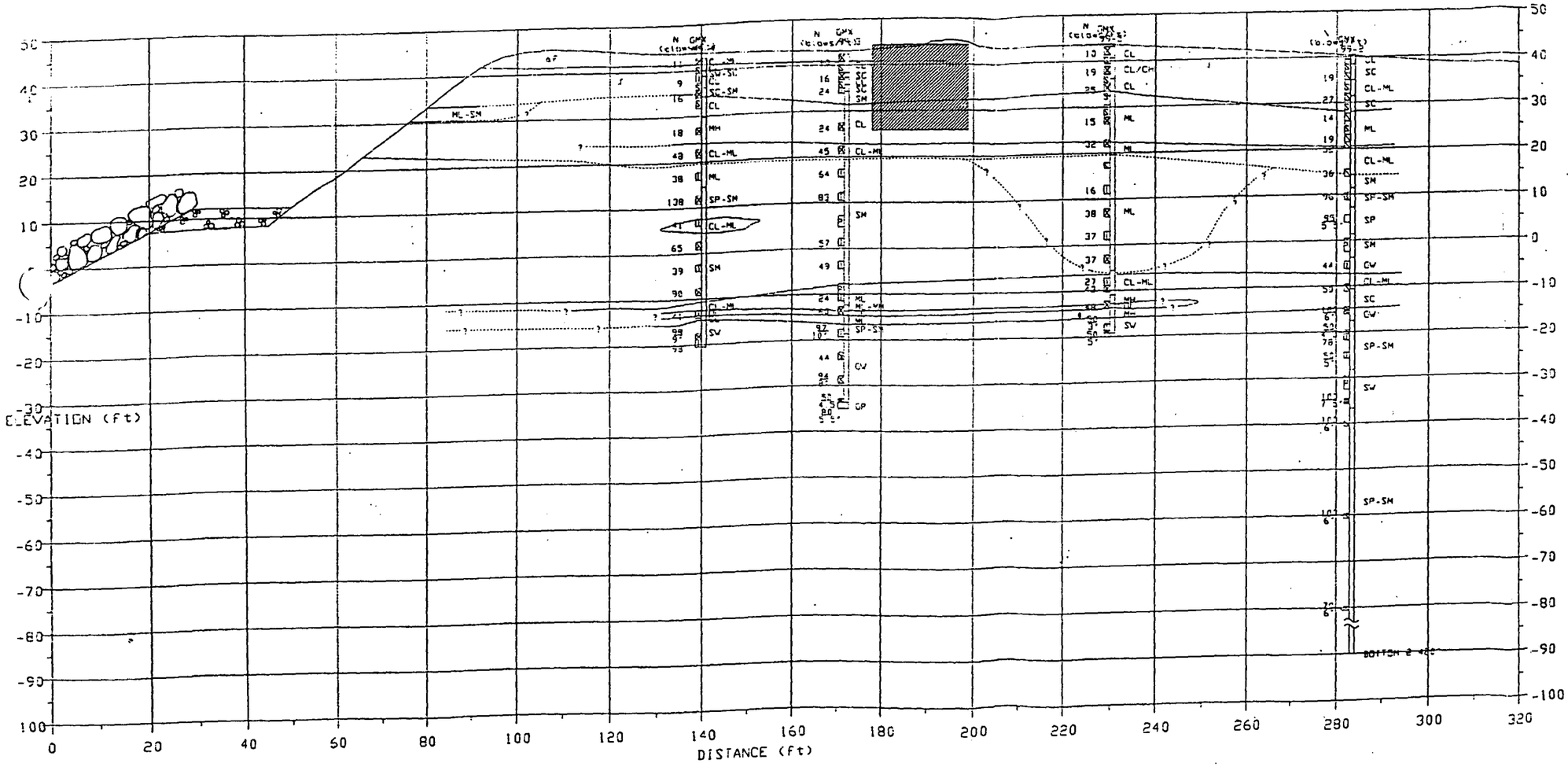

Fig. 7-2. Generalized soil profile used in engineering analyses

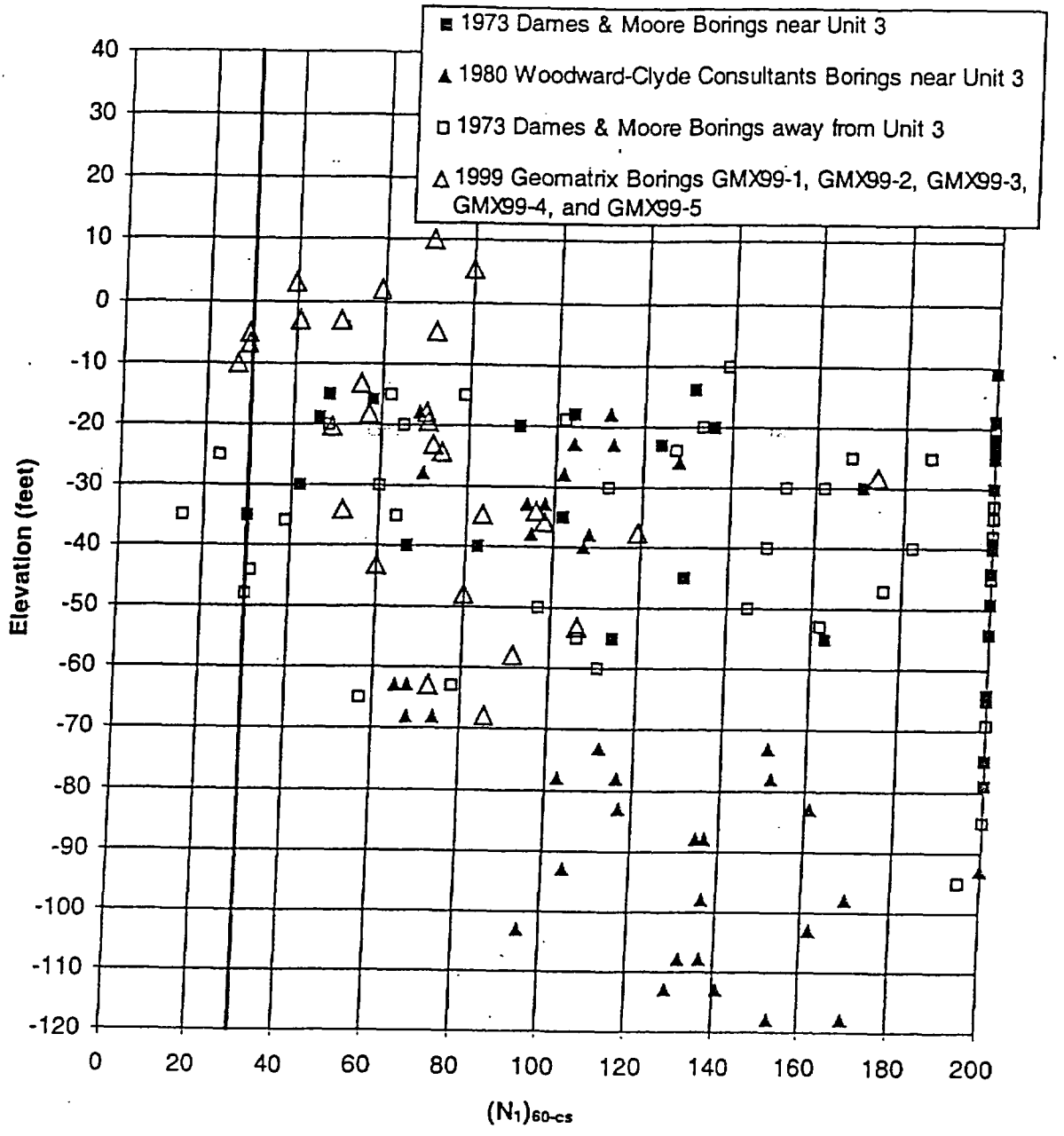

Figure 7-3. Comparison of blowcounts near proposed ISFSI Site with those from other plant areas.

(from Figure 2 of calculation GEO.HBIP.02.02)

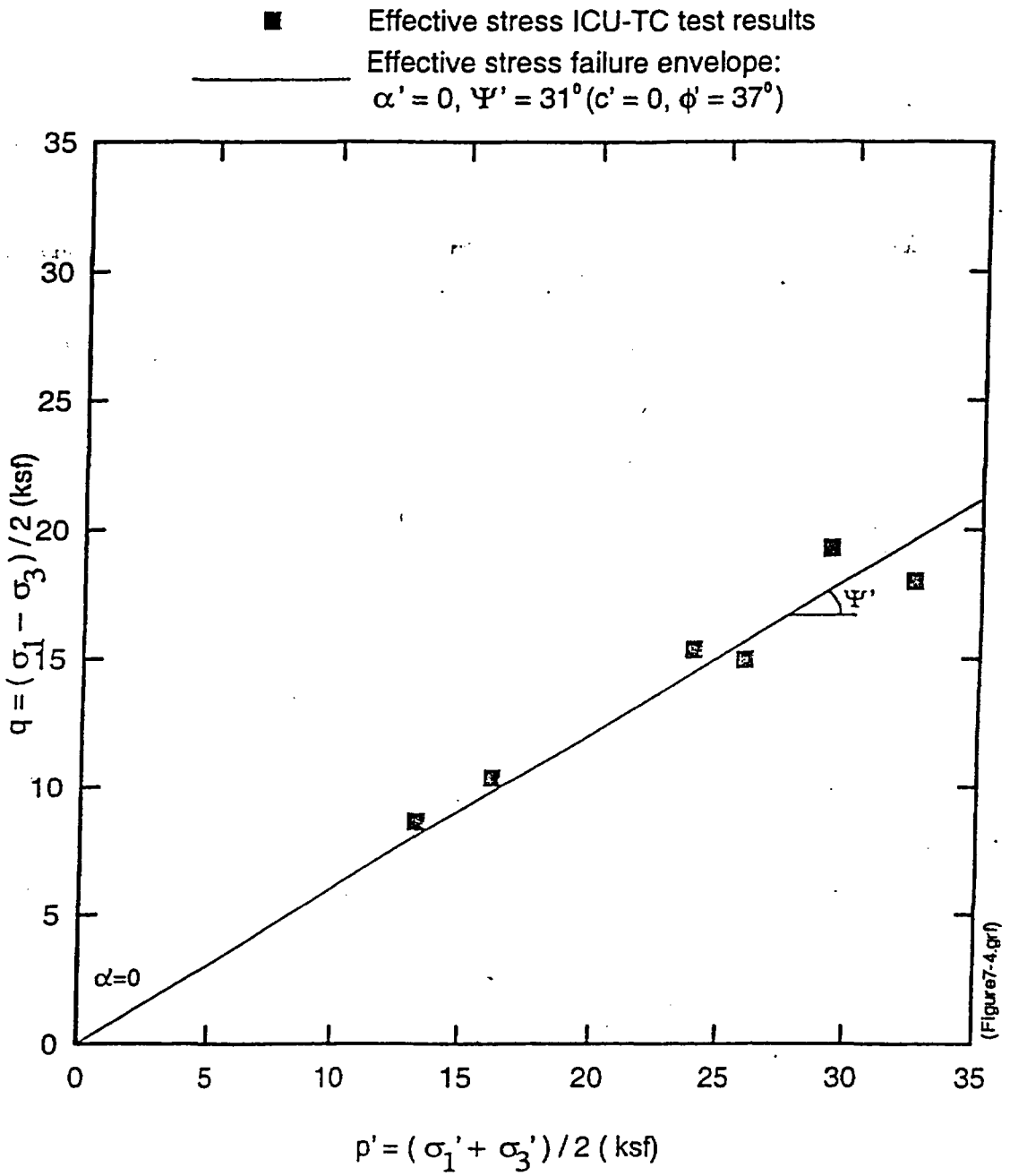

Figure 7-4. Effective stress failure envelope from ICU-TC tests on samples from boring GMX99-4.

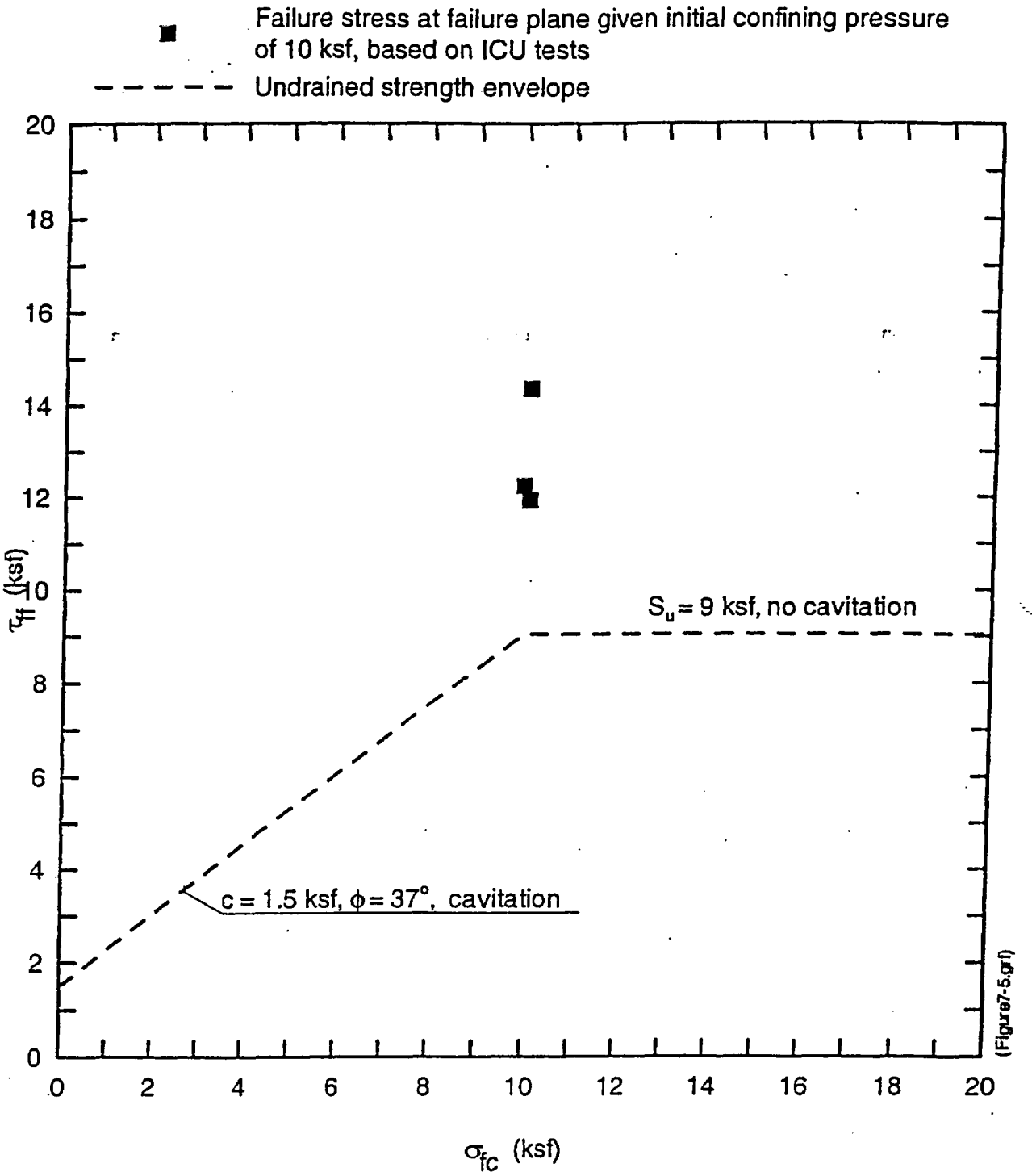

Figure 7-5. Undrained strength parameters from ICU-TC tests on samples from boring GMX99-4.

SEISMIC COEFFICIENT = 0.69g

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Med dense to dense sand and gravel	130	2-Stage Linear Intercept (Kc = 1): 1500.00 Slope (Kc = 1): 37.00 Intercept (Kc = Kf): 1500.00 Slope (Kc = Kf): 37.00	Piezometric Line no. 1
2	Hard silt and silty clay	128	2-Stage Linear Intercept (Kc = 1): 3000.00 Slope (Kc = 1): 0.00 Intercept (Kc = Kf): 3000.00 Slope (Kc = Kf): 0.00	Piezometric Line no. 1
3	Dense to very dense silty sand (sat)	128	2-Stage Linear Intercept (Kc = 1): 1500.00 Slope (Kc = 1): 37.00 Intercept (Kc = Kf): 1500.00 Slope (Kc = Kf): 37.00	Piezometric Line no. 1
4	Dense to very dense silty sand (unsat)	125	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 37.00 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 37.00	None
5	Rip rap facing	110	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 42.00 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 42.00	Piezometric Line no. 1
6	Hard silty clay	130	Cohesion: 4000.0 Friction angle: 0	None
7	Very stiff silt and clay	123	Cohesion: 2000.0 Friction angle: 0	None
8	Medium dense clayey sand	125	Cohesion: 2000.0 Friction angle: 0	None
9	Surficial Fill	125	Cohesion: 500.0 Friction angle: 0	None
10	Footing load	193.5	Cohesion: 1000000.0 Friction angle: 0	None

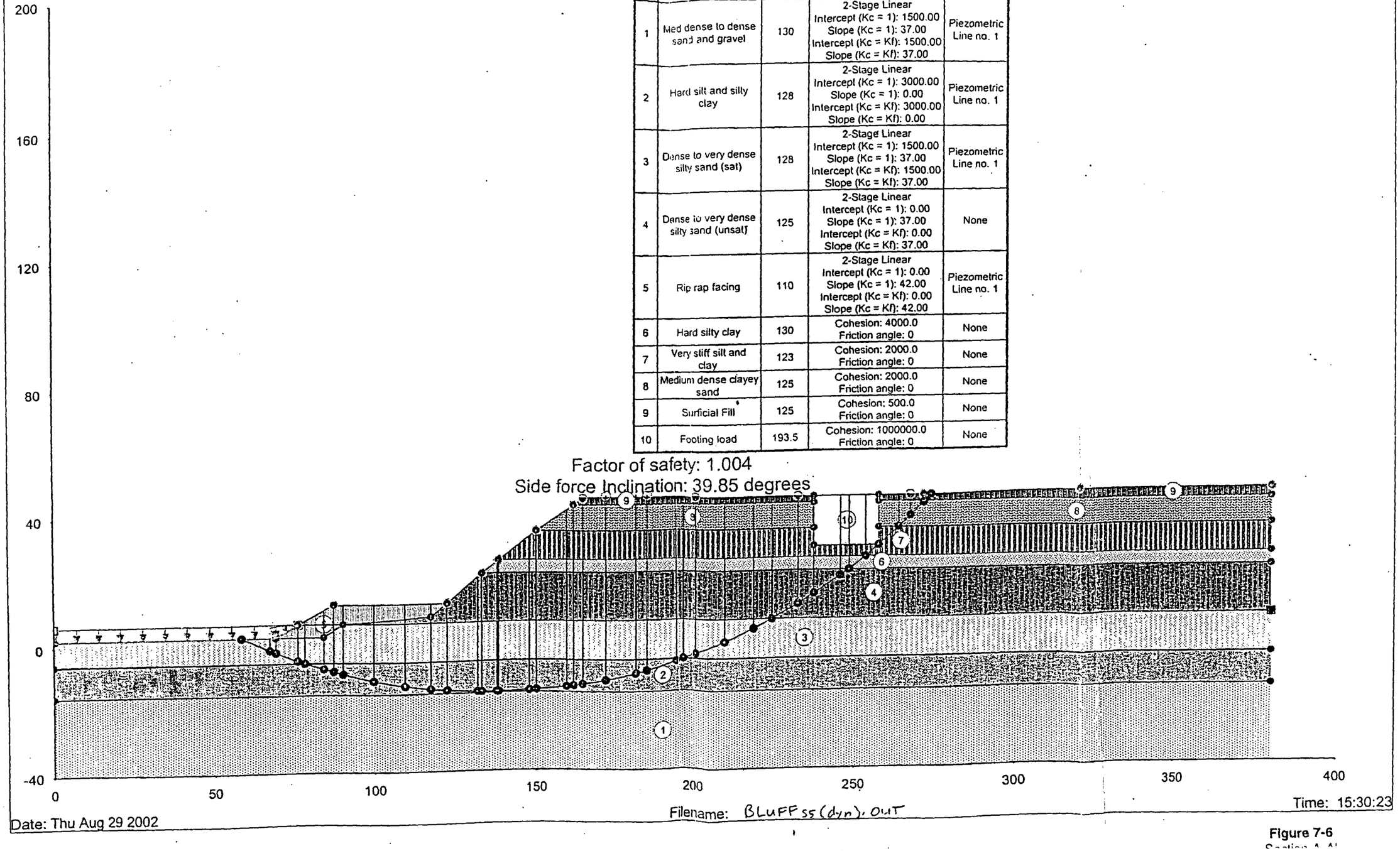

Figure 7-6
Section A-A'

SEISMIC COEFFICIENT = 0.66g

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Med dense to dense sand and gravel	130	2-Stage Linear Intercept (Kc = 1): 1500.00 Slope (Kc = 1): 37.00 Intercept (Kc = Kf): 1500.00 Slope (Kc = Kf): 37.00	Piezometric Line no. 1
2	Hard silt and silty clay	128	Cohesion: 3000.0 Friction angle: 0	Piezometric Line no. 1
3	Dense to very dense silty sand (sat)	128	2-Stage Linear Intercept (Kc = 1): 1500.00 Slope (Kc = 1): 37.00 Intercept (Kc = Kf): 1500.00 Slope (Kc = Kf): 37.00	Piezometric Line no. 1
4	Dense to very dense silty sand (unsat)	125	2-Stage Linear Intercept (Kc = 1): 0.00 Slope (Kc = 1): 37.00 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 37.00	None
5	Hard silty clay	130	Cohesion: 4000.0 Friction angle: 0	None
6	Very stiff silt and clay	123	Cohesion: 2000.0 Friction angle: 0	None
7	Medium dense clayey sand	125	Cohesion: 2000.0 Friction angle: 0	None
8	Footing load	193.5	Cohesion: 1000000.0 Friction angle: 0	None

Factor of safety: 1.012

Side force Inclination: 36.66 degrees

420
360
300
240
180
120
60
0
-60

-200 -100 0 100 200 300 400 500 600

Filename: PLANT - SCC (SAT).OUT

Time: 18:40:39

Date: Fri Aug 30 2002

Figure 7-7

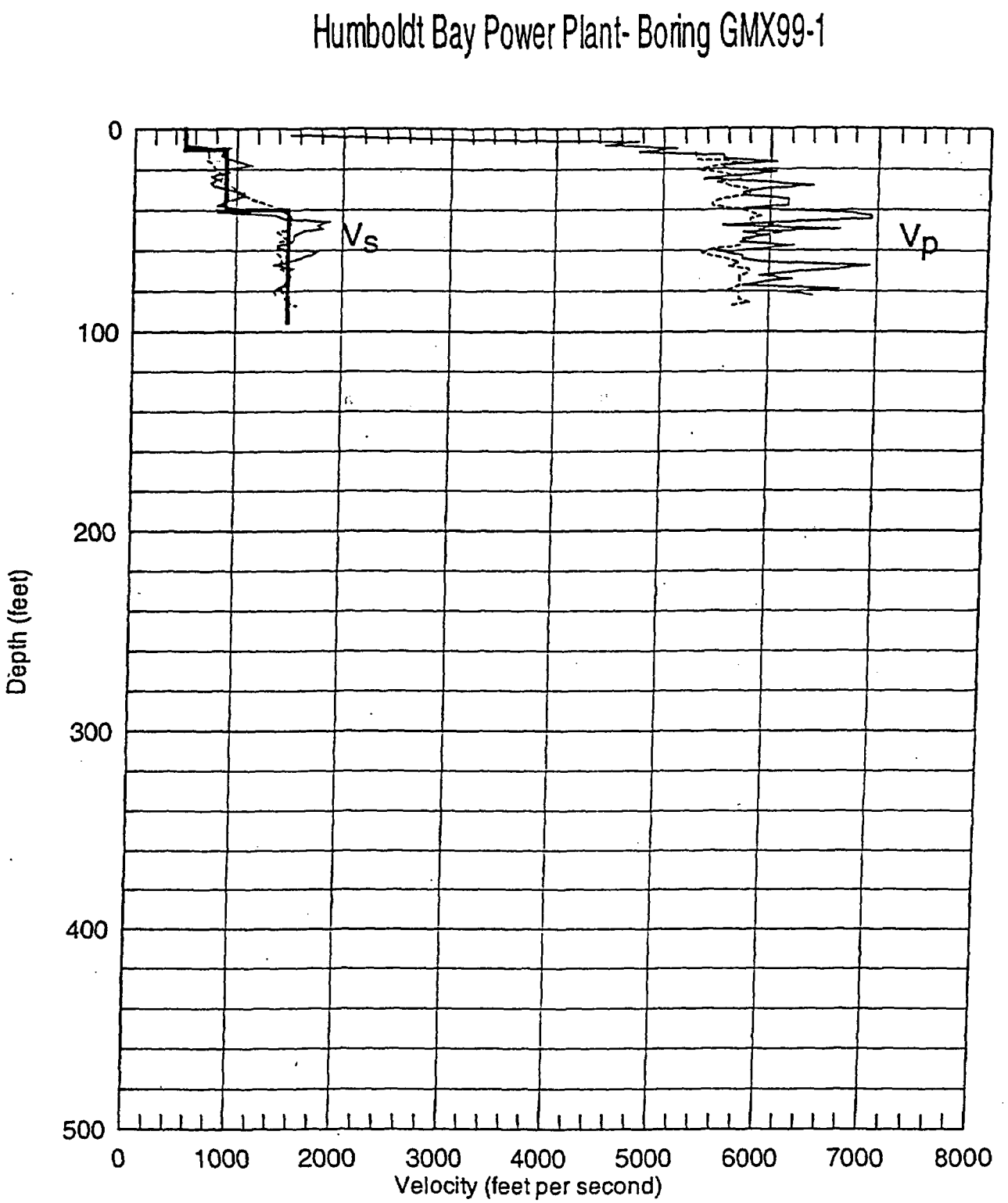

Figure 7-8. Variation of shear and compression wave velocities with depth – boring GMX99-1.

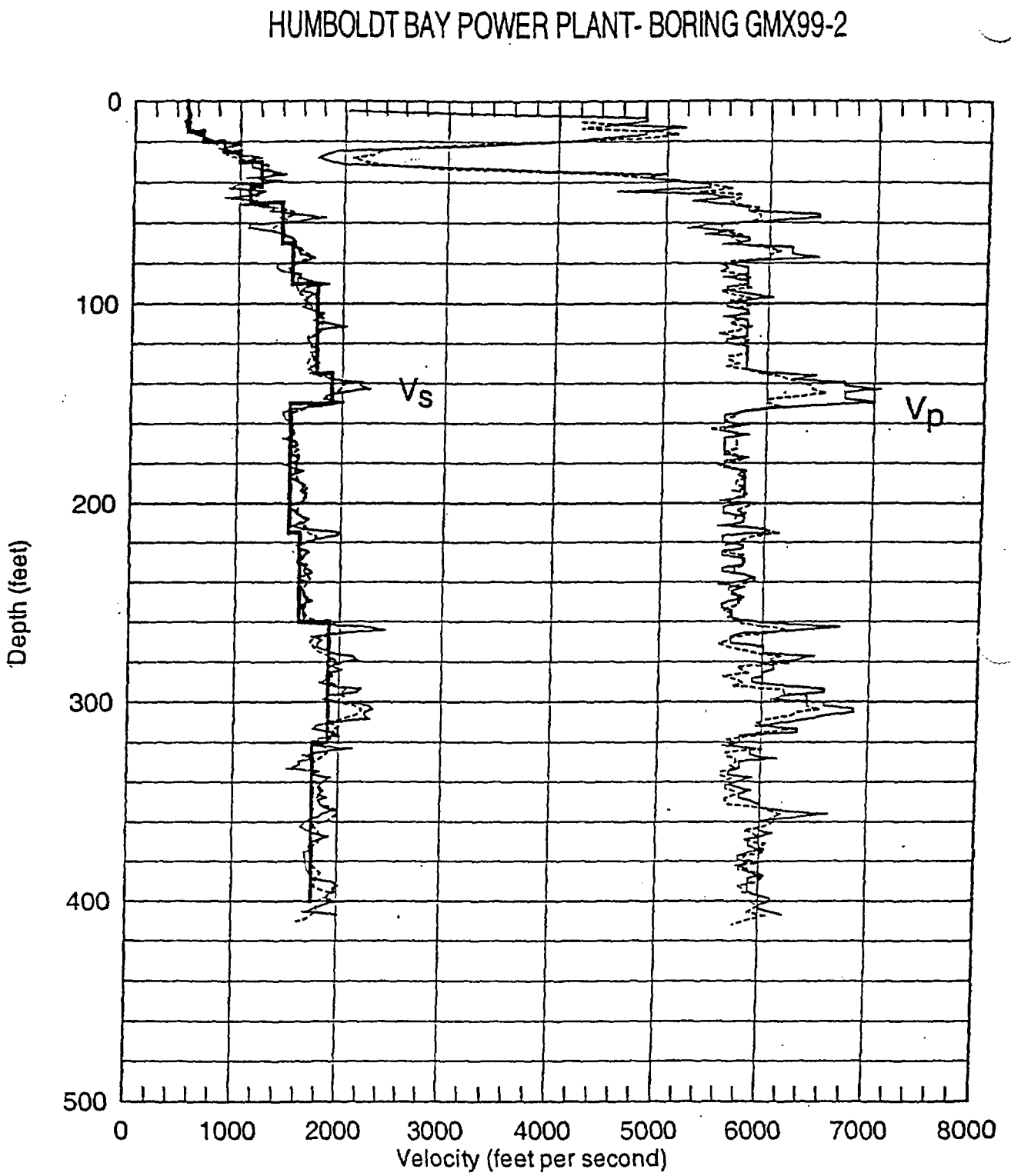

Figure 7-9. Variation of shear and compression wave velocities with depth – boring GMX99-2.

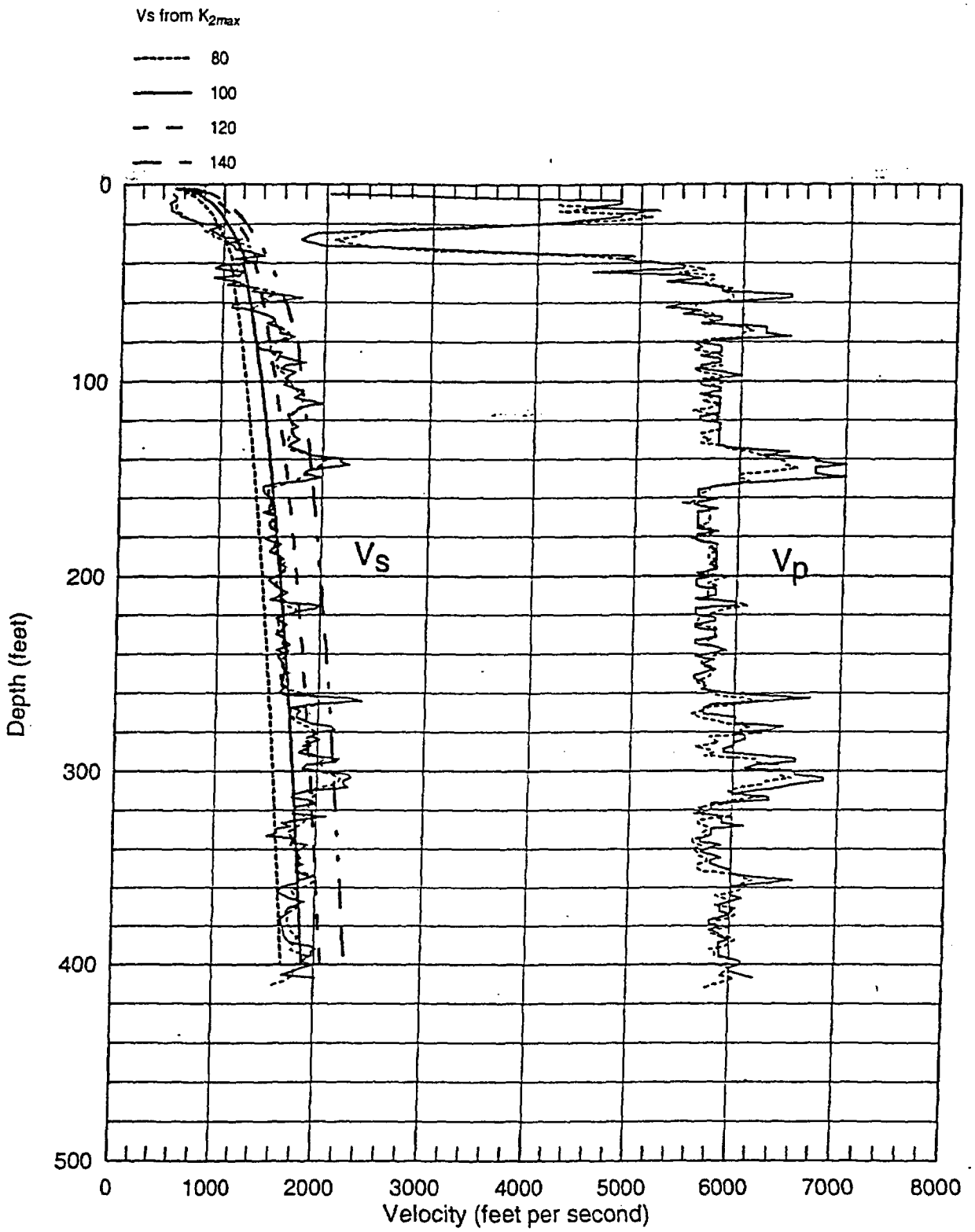

Figure 7-10. Comparison of K_{2max}-estimated shear wave velocities with measured values – boring GMX99-2.

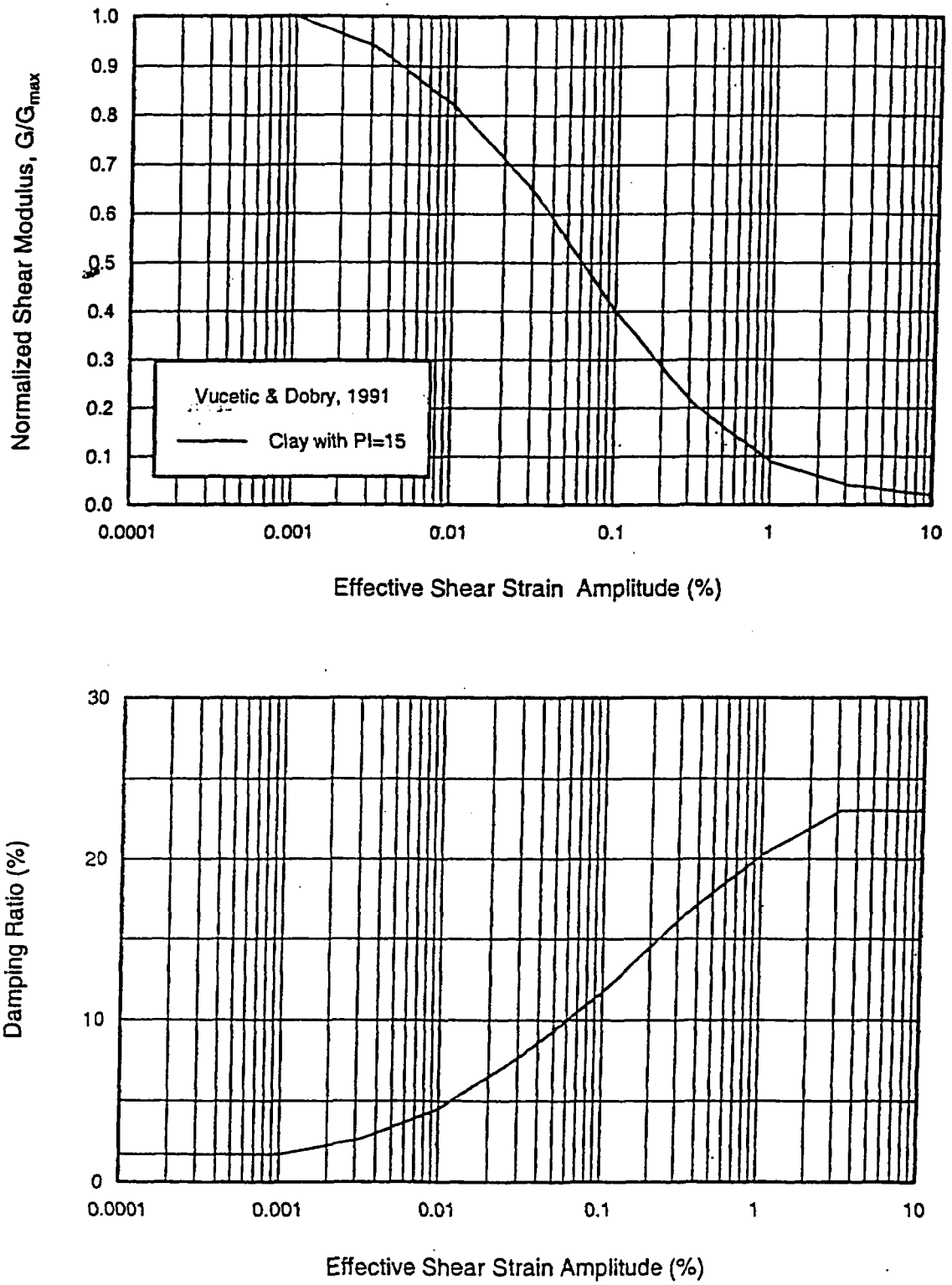

Figure 7-11. Relationships of normalized modulus and damping ratio with shear strain for clay. (from Vucetik and Dobry, 1991)

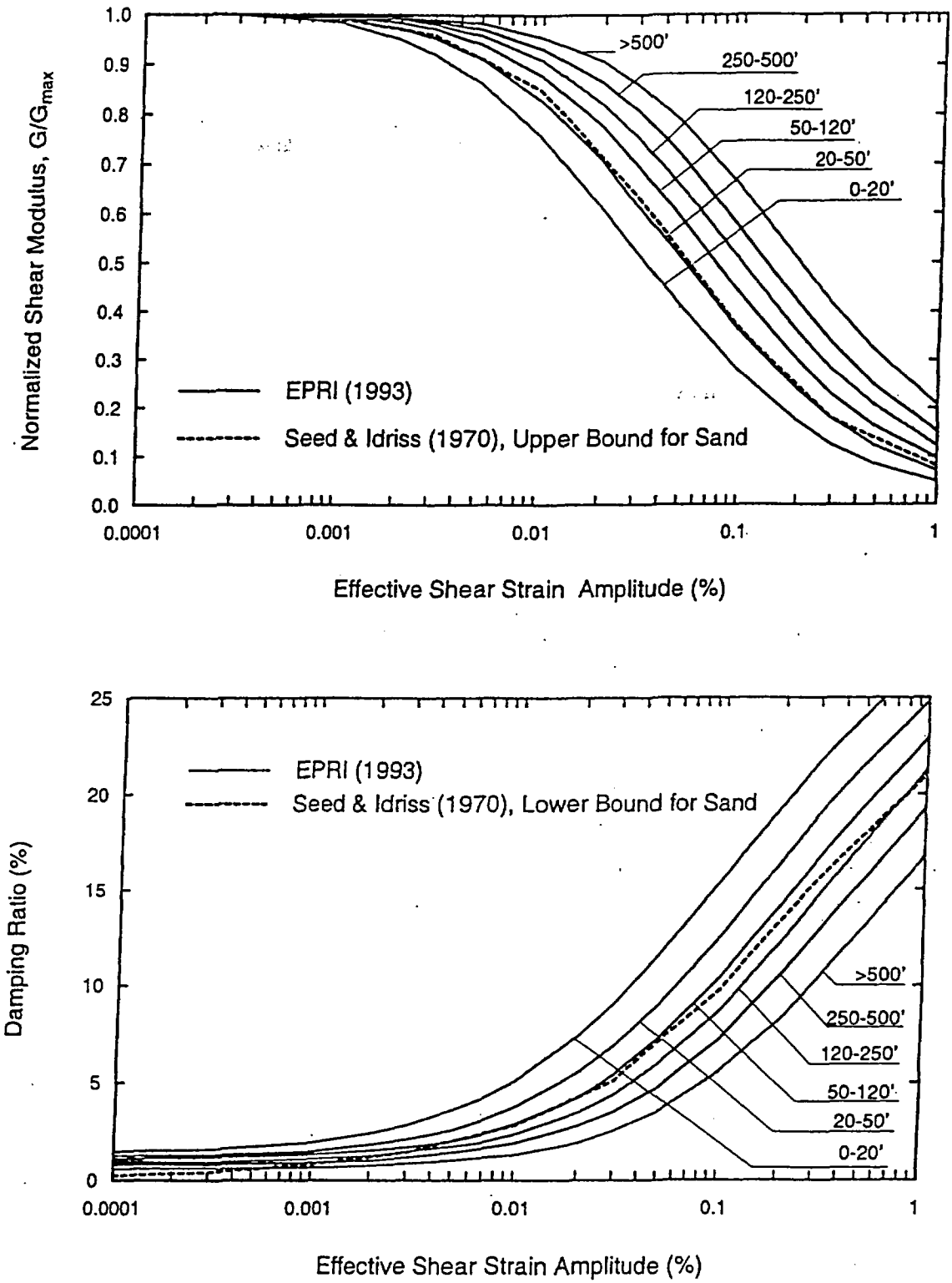

Figure 7-12. Relationships of normalized modulus and damping ratio with shear strain and depth for sand. (from EPRI, 1993)

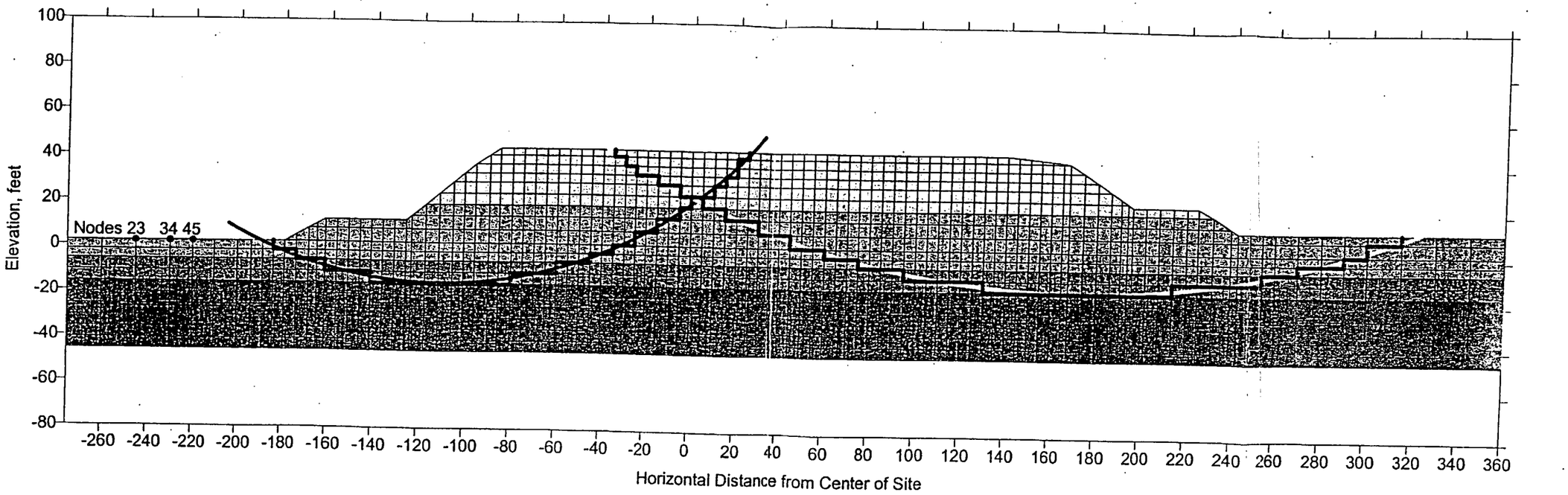

Figure 7-13. Finite element mesh and slide masses having minimum factors of safety for Section A-A' and B-B'.

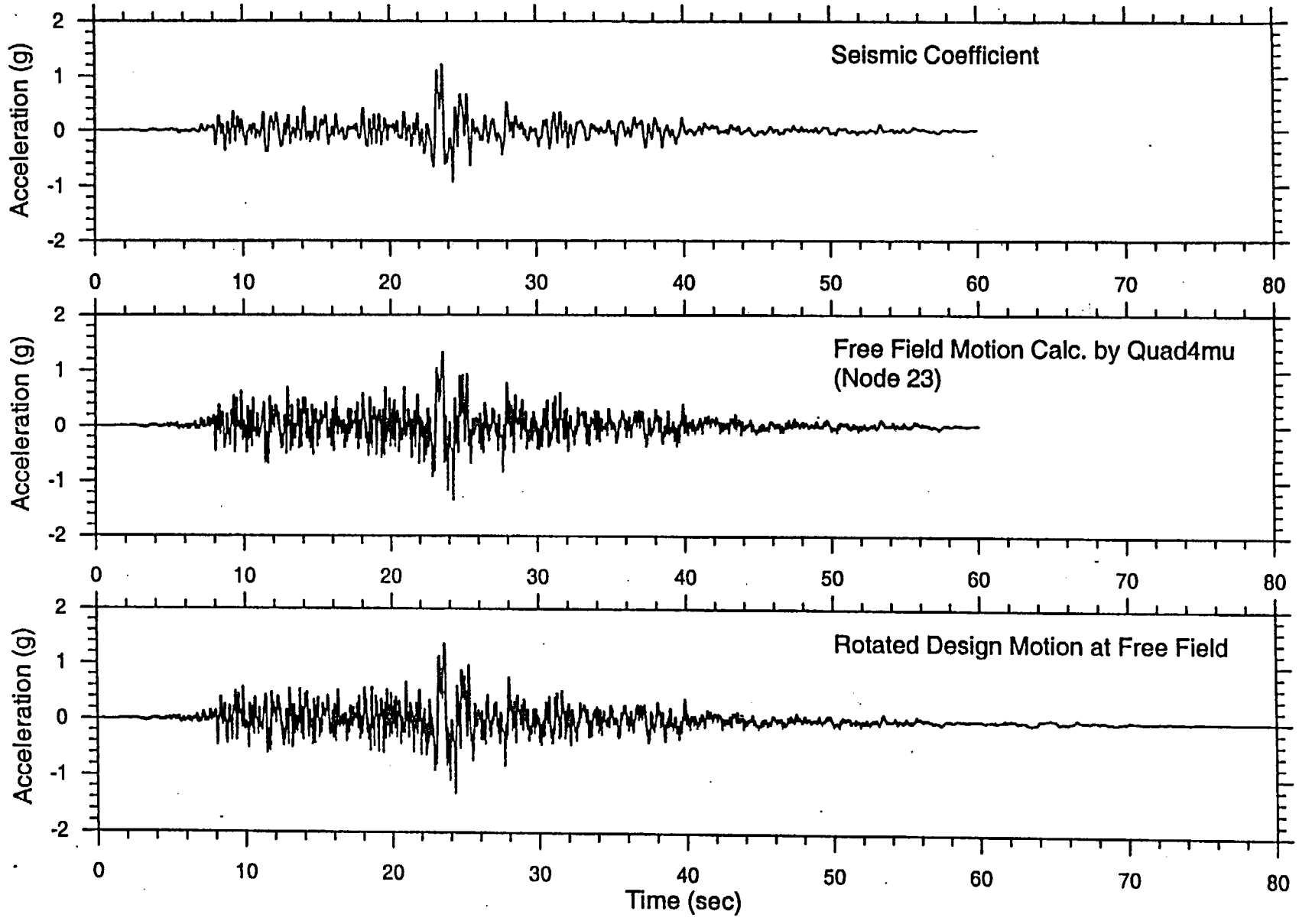

Figure 7-14. Time Histories, Section A-A', Set 1 Ground Motions.

pd1aa.grf

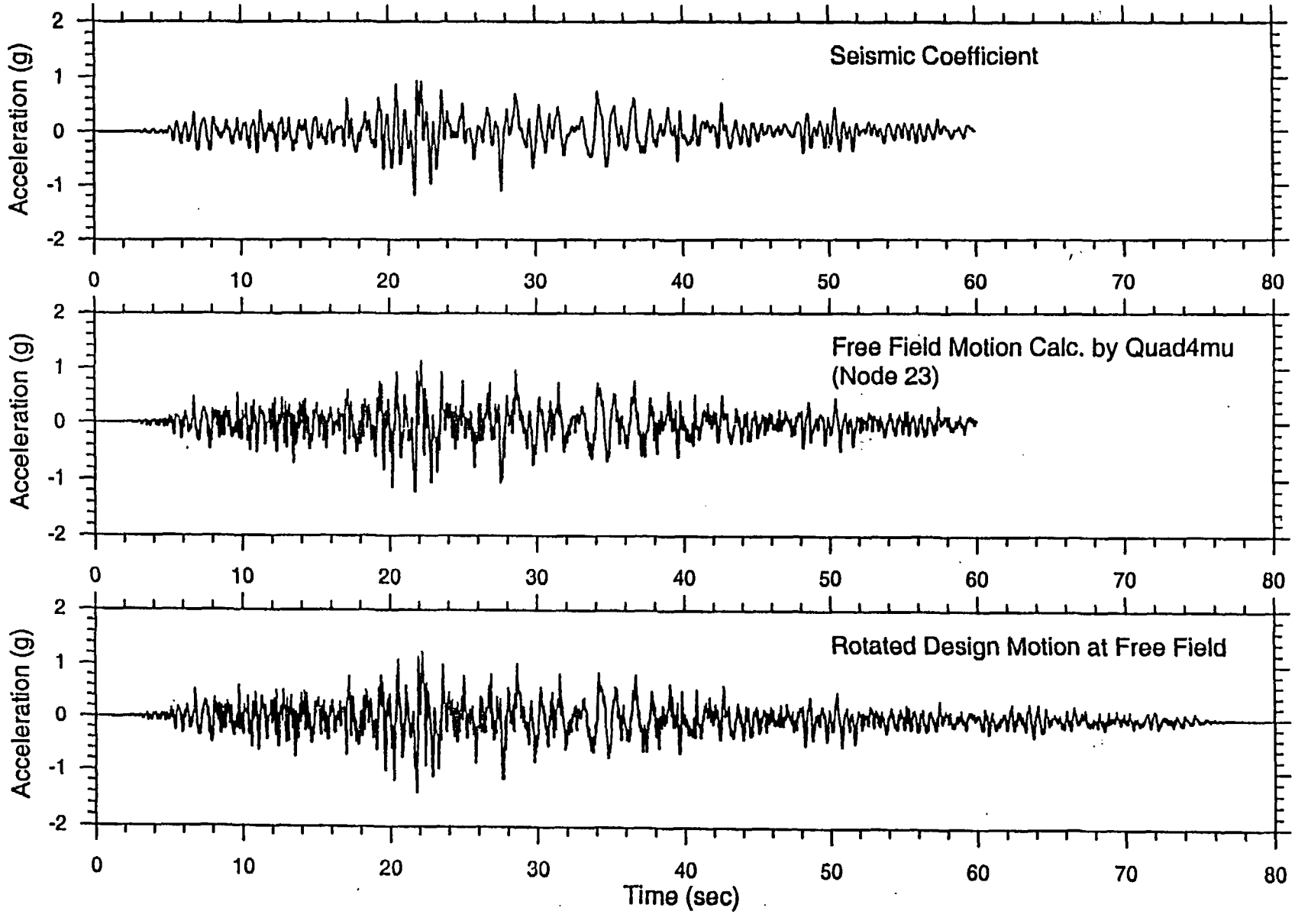

Figure 7-15. Time Histories, Section A-A', Set 3 Ground Motion.

pd3aa.grf

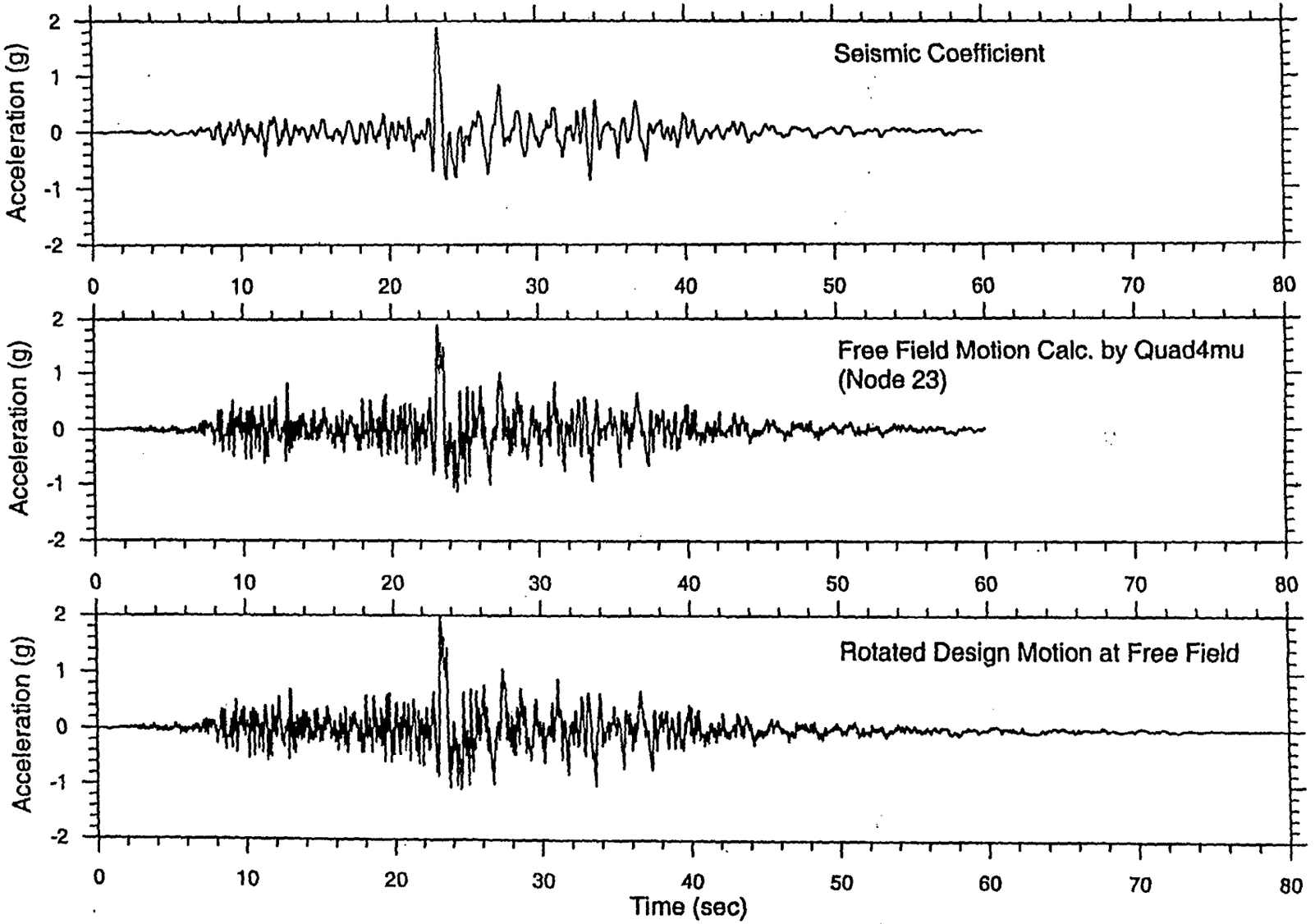

Figure 7-16. Time Histories, Section B-B', Set 1 Ground Motion.

pd1bb.grf

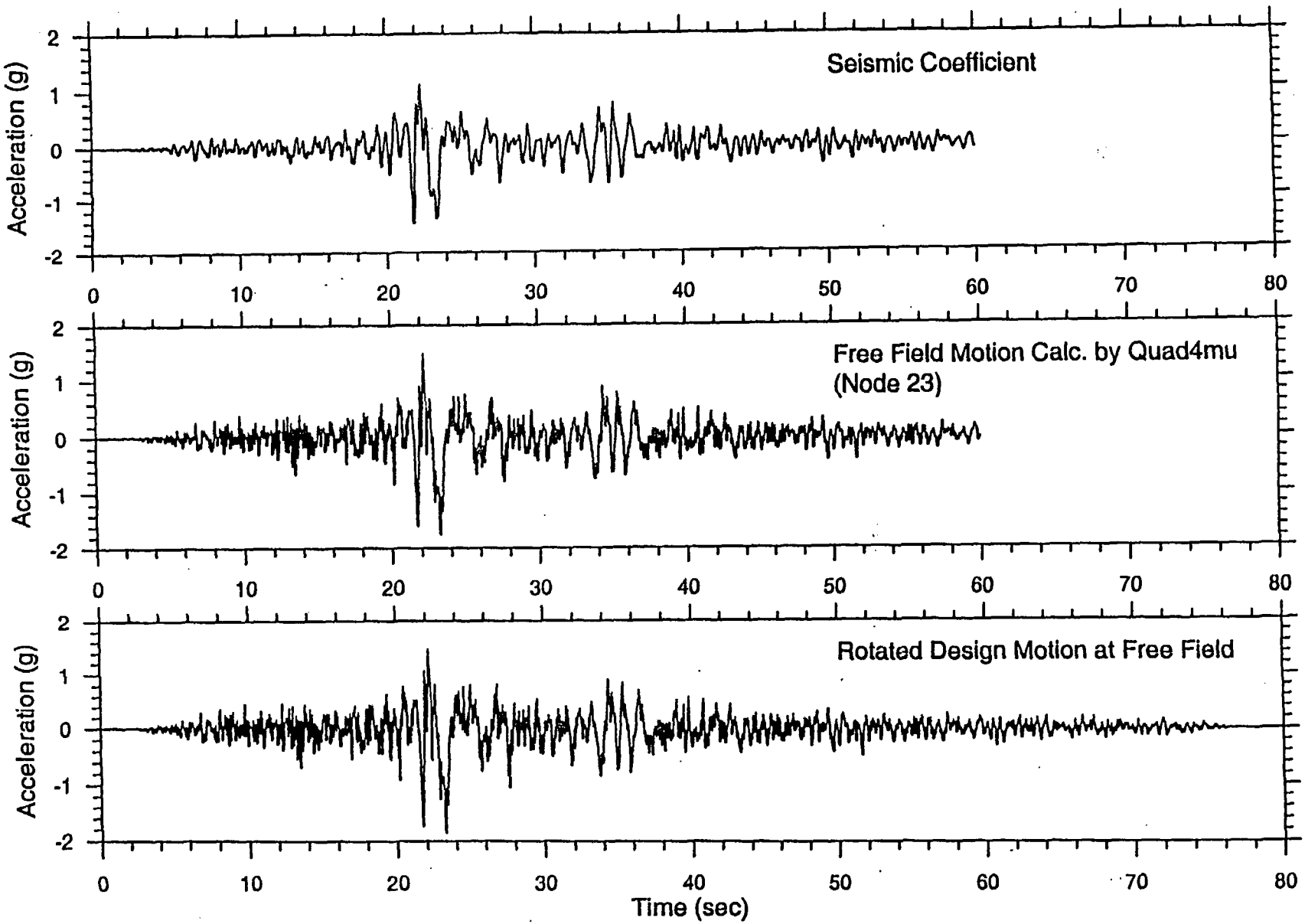

Figure 7-17. Time Histories, Section B-B", Set 3 Ground Motion.

pd3aa.grf

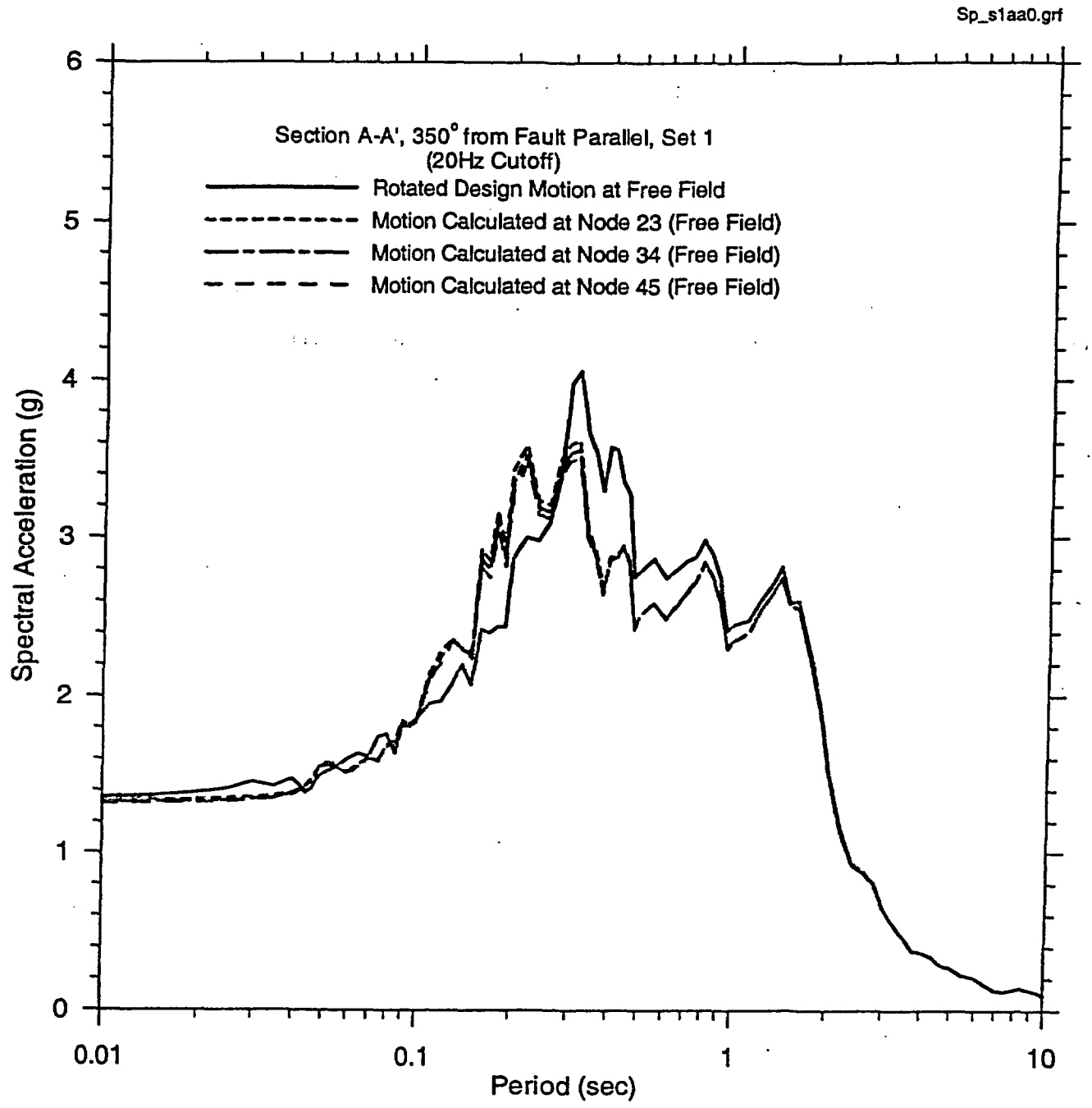

Figure 7-18. Spectral Accelerations (5% Damped), Section A-A', Set 1 Ground Motion.

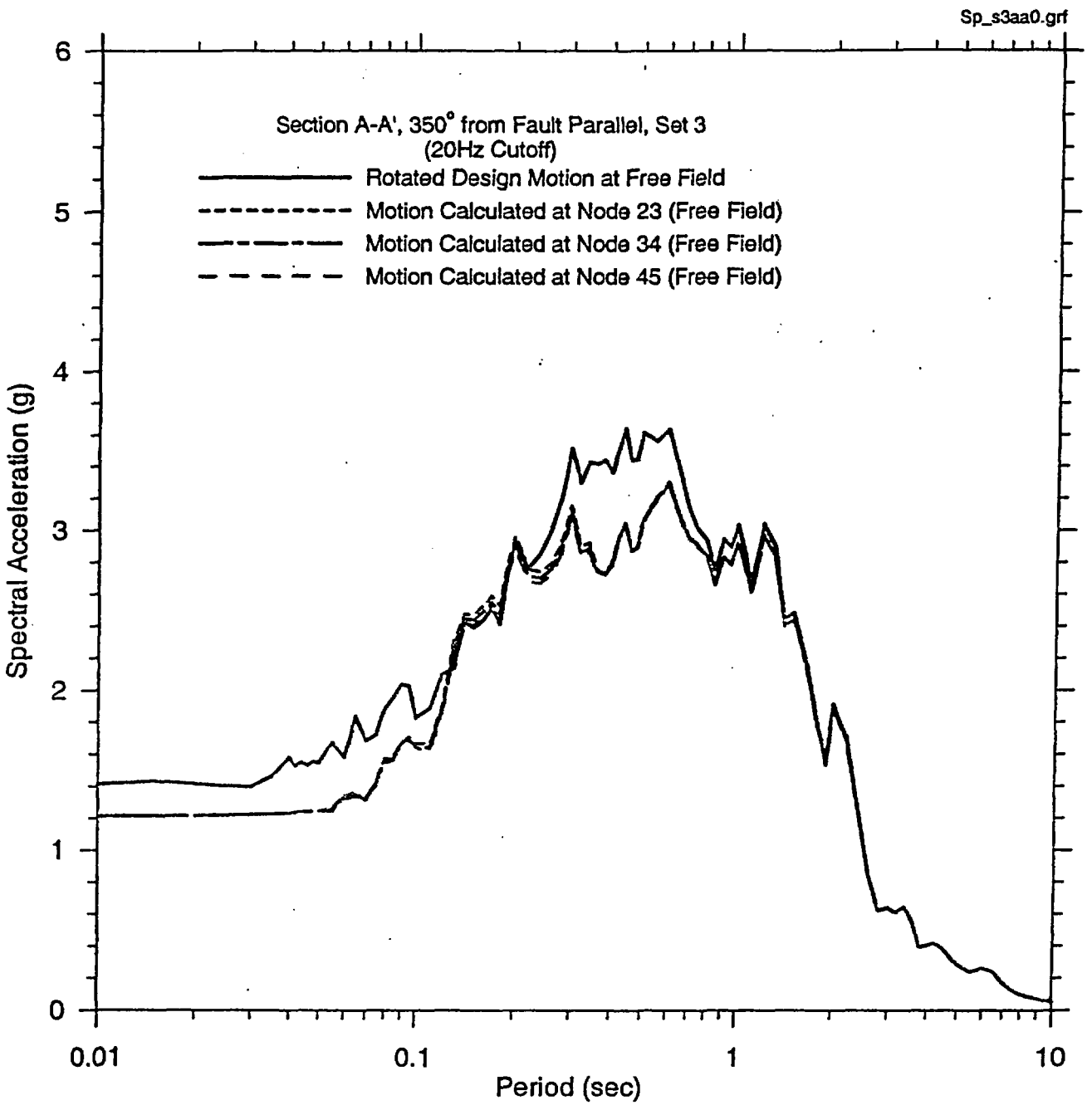

Figure 7-19. Spectral Accelerations (5% Damped), Section A-A', Set 3 Ground Motion.

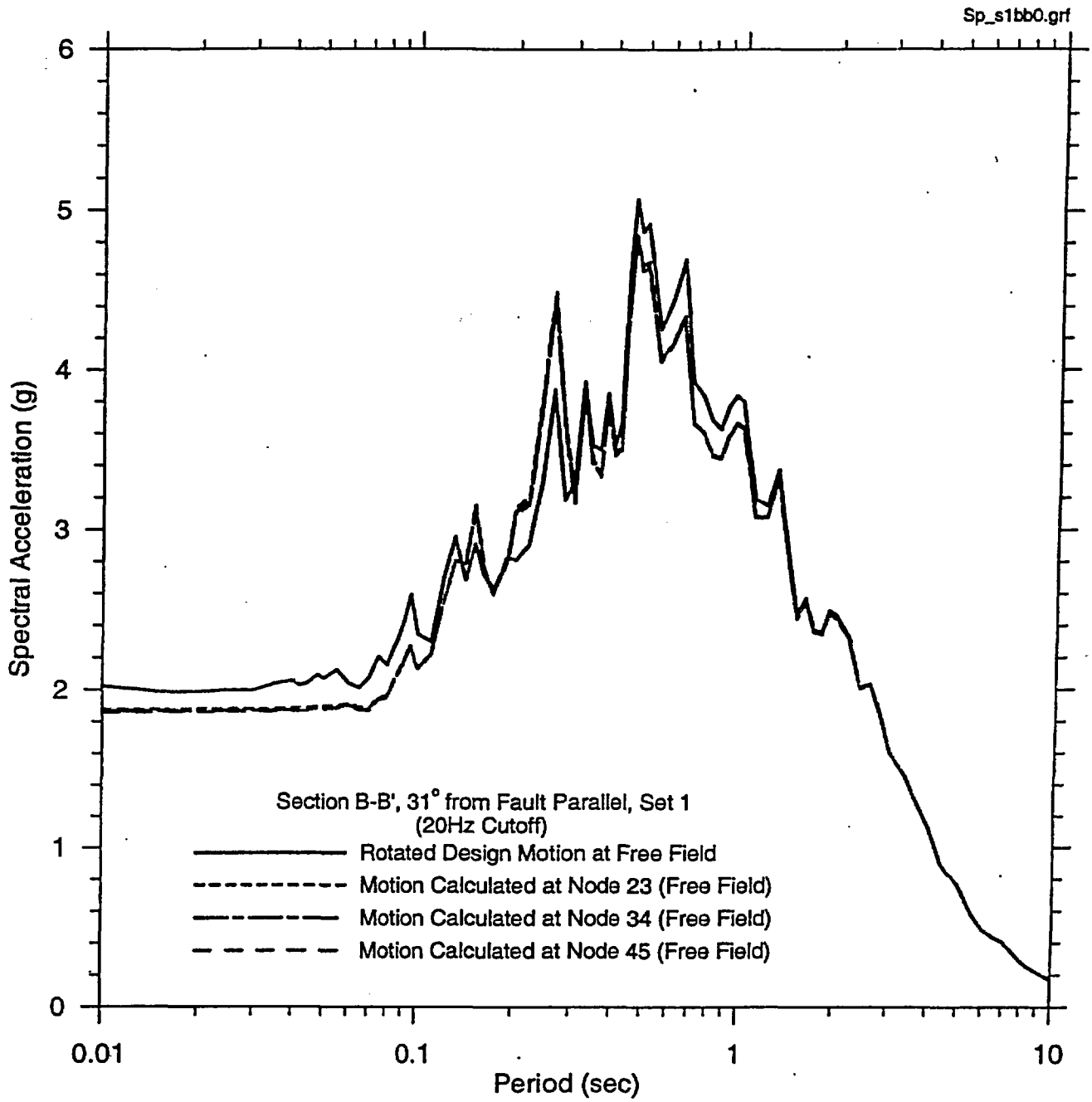

Figure 7-20. Spectral Accelerations (5% Damped), Section B-B', Set 1 Ground Motion.

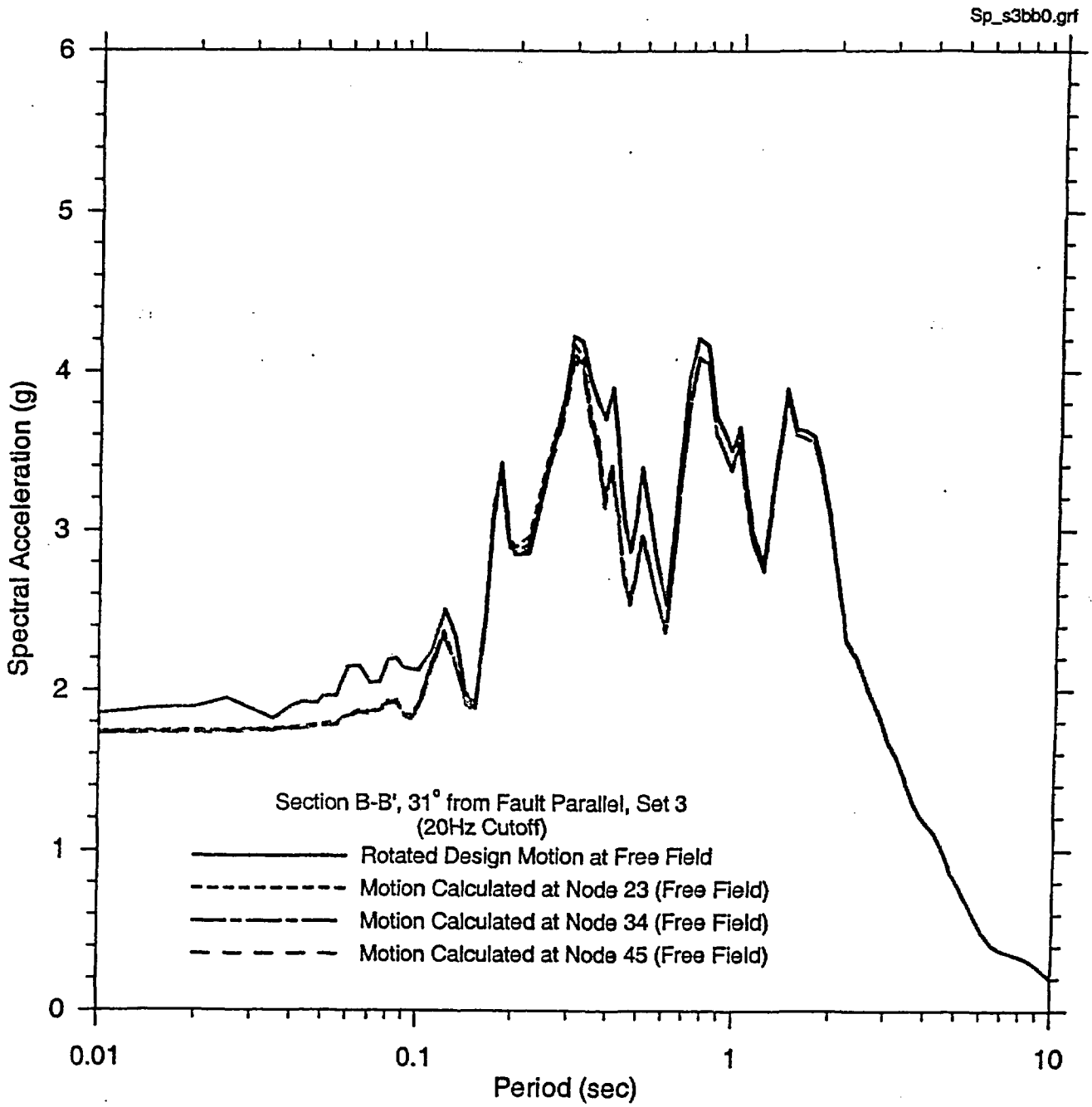

Figure 7-21. Spectral Accelerations (5% Damped), Section B-B', Set 3 Ground Motion.

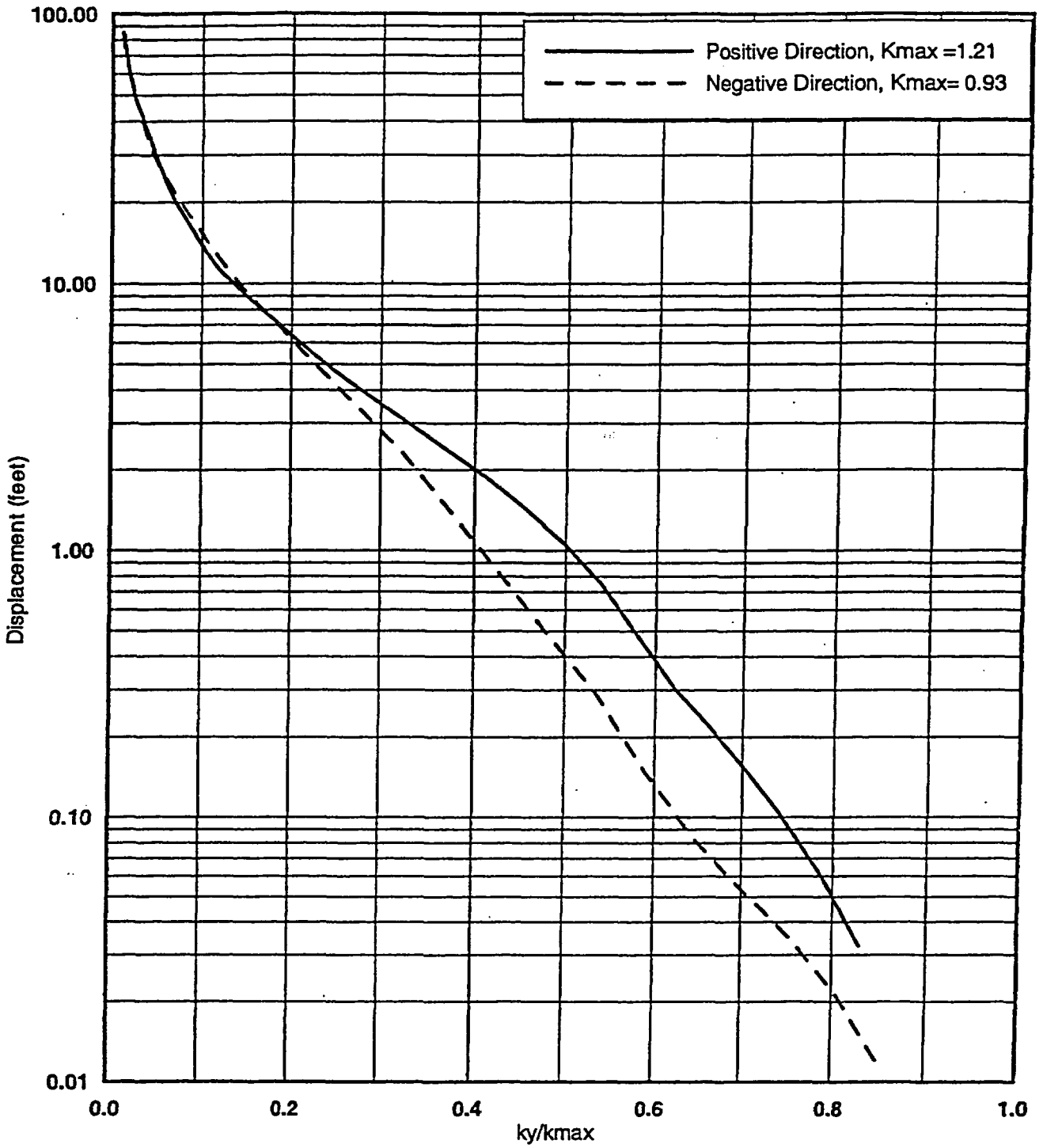

Figure 7-22. Permanent Displacement versus Yield Acceleration
Section A-A', Set 1 Ground Motion

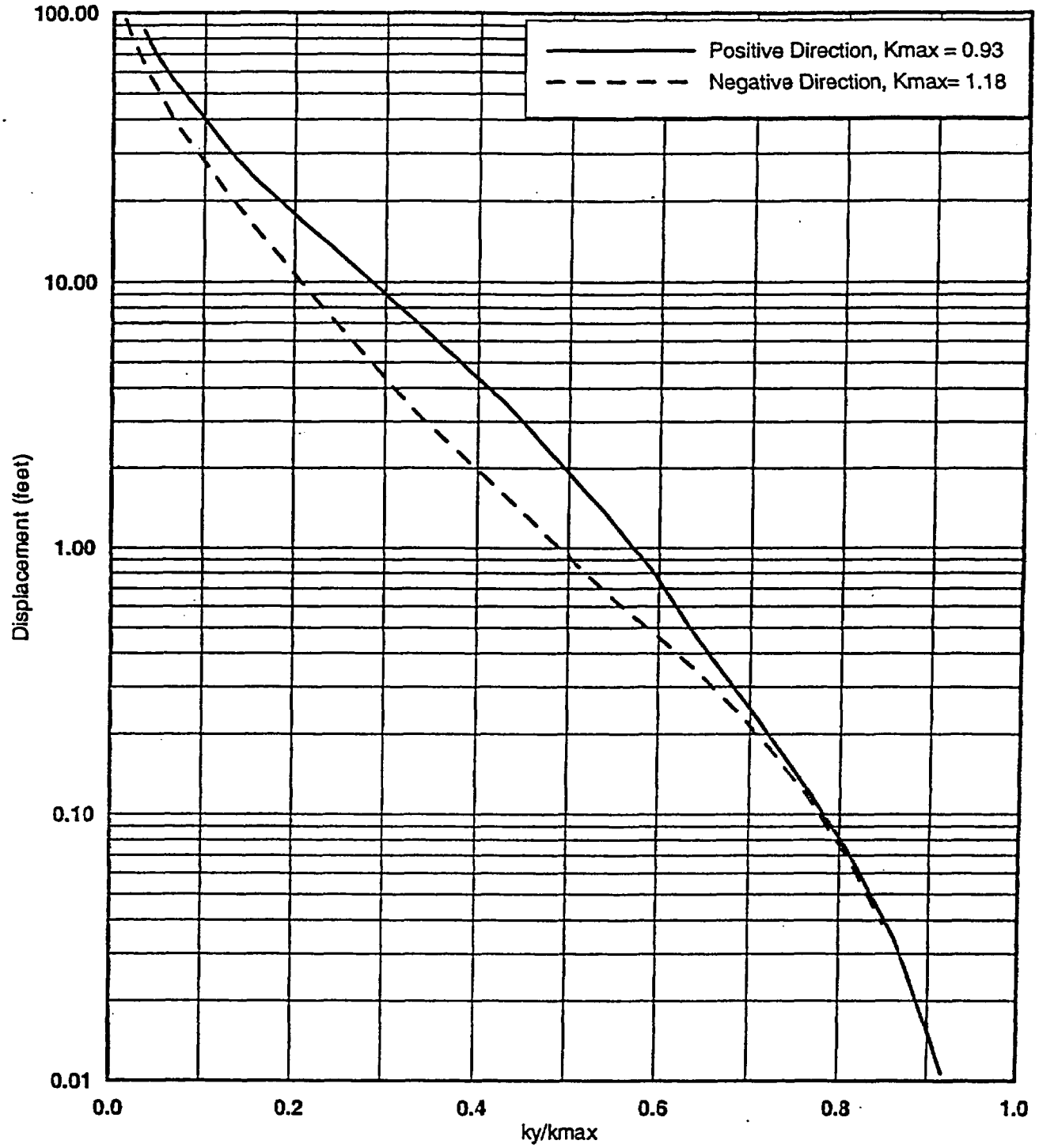

Figure 7-23. Permanent Displacement versus Yield Acceleration
Section A-A', Set 3 Ground Motion

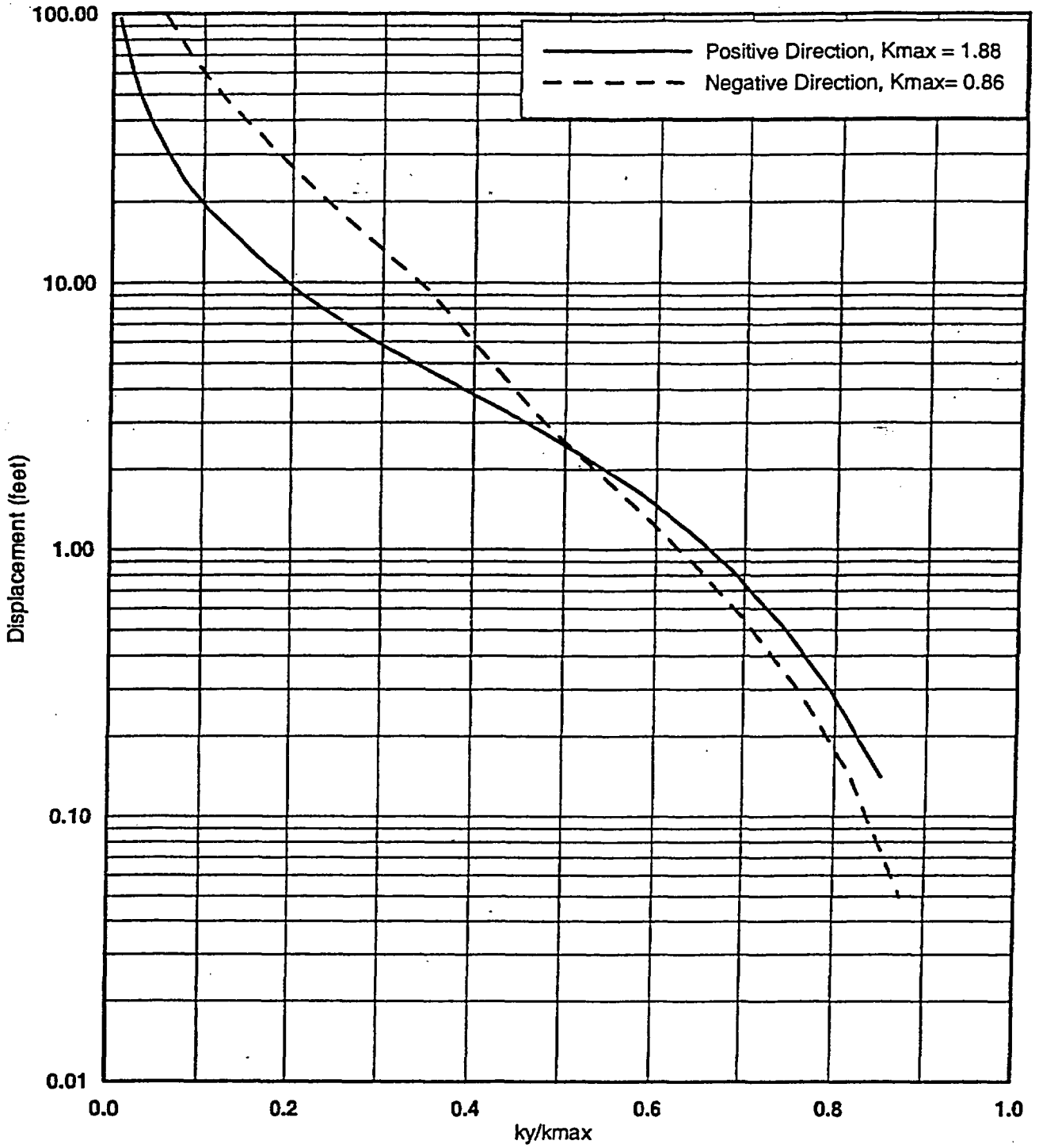

Figure 7-24. Permanent Displacement versus Yield Acceleration
Section B-B', Set 1 Ground Motion

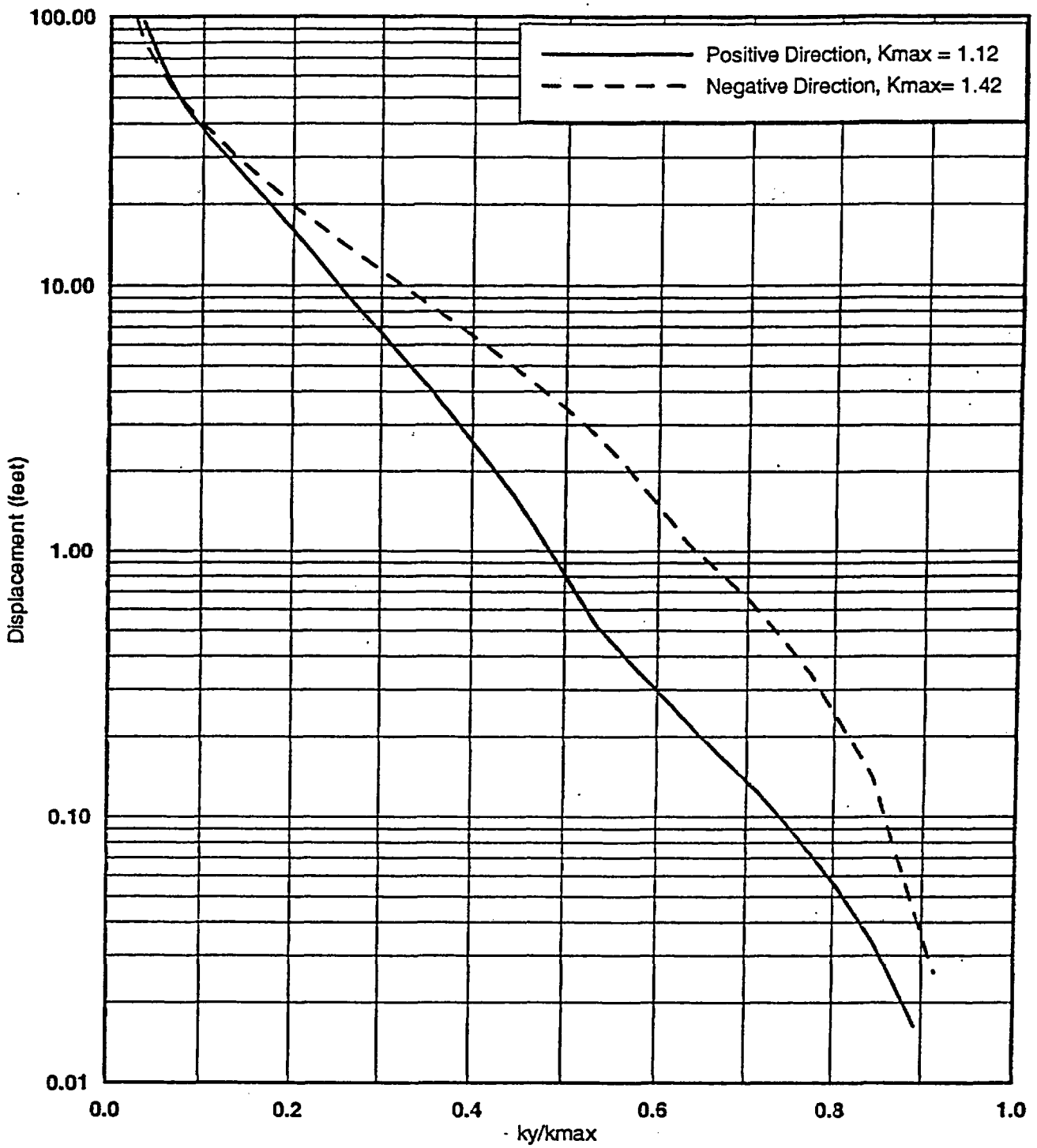

Figure 7-25. Permanent Displacement versus Yield Acceleration
Section B-B', Set 3 Ground Motion

Attachment A

Transmittals

(see Attachments section for list of transmittals)

Pacific Gas and Electric Company

Geosciences
245 Market Street, Room 4188
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San Francisco, CA 94177
415/973-2792
Fax 415/973-5778

FAIZ MAKDISI
GEOMATRIX CONSULTANTS
2101 WEBSTER STREET
OAKLAND, CA 94612

23 July 2002

Re: Transmittal of drawing showing proposed location and configuration of the Humboldt Bay ISFSI site

Dear Faiz:

Please find enclosed a memo from Roy Willis, Project Manager of the Humboldt Bay ISFSI Project, transmitting a drawing showing the proposed location and configuration of the Humboldt Bay ISFSI site. Also enclosed are a copy of the drawing and a floppy disk with the drawing file saved in "tif" format.

Please use this drawing as input to the analysis of ISFSI site stability you are performing under Geosciences Work Plan GEO 2002-03.

If you have any questions, please call me.

Thanks.

Rob White

ROBERT K. WHITE

Enclosures

Memorandum

Date: July 22, 2002 File #: 72.10.05

To: Robert White

From: Roy Willis, Project Manager

Subject: Humboldt Bay ISFSI Project
Transmittal of HBPP Site Survey Data

Pacific Gas and Electric Company

Dear Rob,

Attached for your use in performance of your work is the electronic drawing file for the ISFSI conceptual plan. This is drawing 4025276, Rev 2.

This drawing shows the vault concept for the ISFSI. The actual vault dimensions are yet to be determined by the vault design contractor, which is Holtec. Any location or other dimension requirements that are inputs to the Geosciences calculations must be communicated to HBIP for transmittal to Holtec.

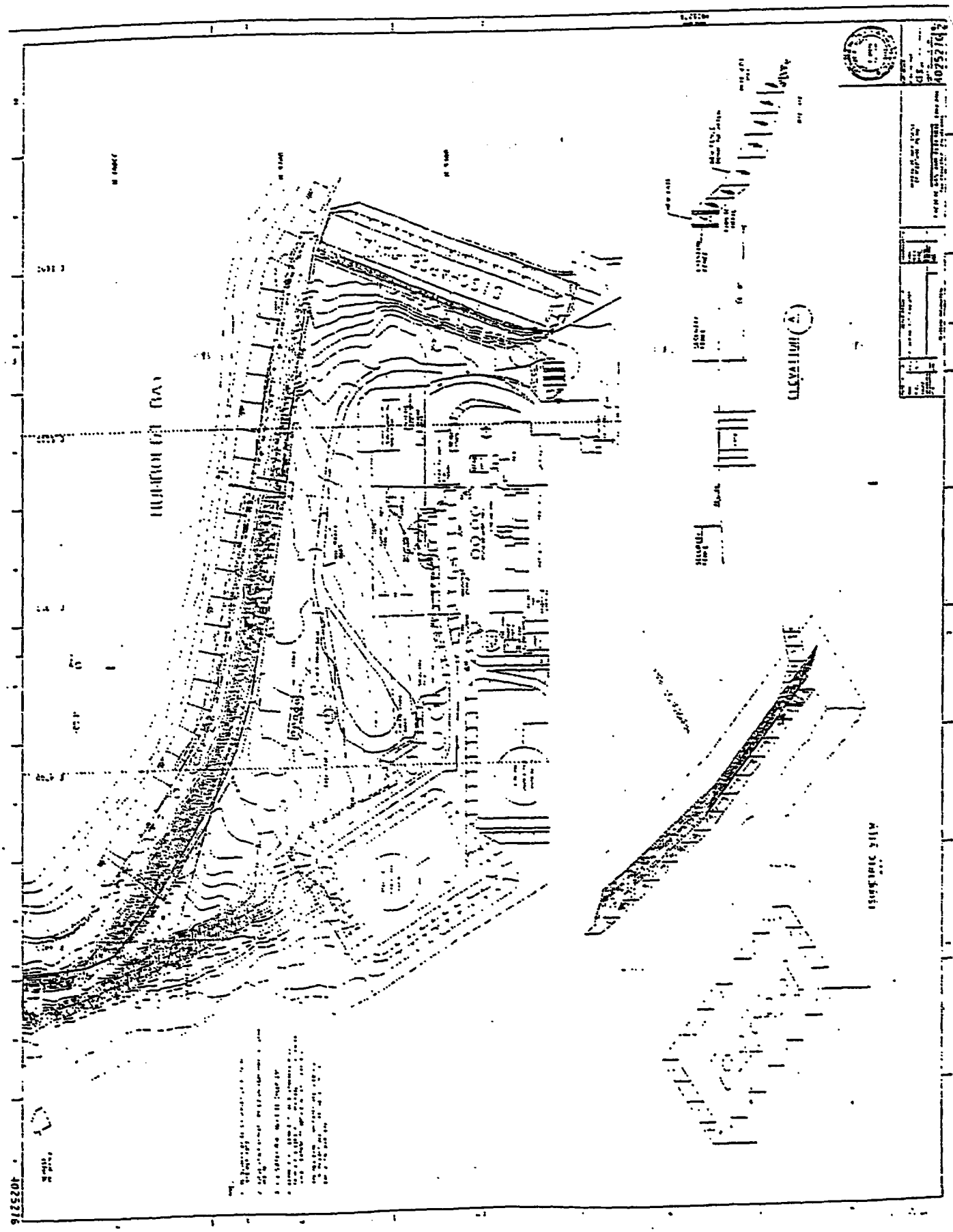
This file name is "4025276.tif".

Please let me, or L. Pulley, know if you have any questions.

L.B. Pulley for

Roy Willis
Project Manager
Humboldt Bay ISFSI Project

cc:
LBPulley HBPP
HBIP File No. 72.10.05
HBIP RMS File



C:\DATA\kw_active\PWRPLISH\HBIP\DRTCASK\drawings\4025270.dgn

Pacific Gas and Electric Company

Geosciences
245 Market Street, Room 4188
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Fax 415/973-5778

FAIZ MAKDISI
GEOMATRIX CONSULTANTS
2101 WEBSTER STREET
OAKLAND, CA 94612

5 August 2002

Re: Transmittal of bounding values of vault size and weight (including ISFSI casks) for HBIP slope stability analyses

Dear Faiz:

Please find an email from Larry Pulley describing the current bounding values of dimension and weight for the proposed ISFSI cask vault and casks for the HBIP. As indicated, the minimum vault footprint is approximately 14 feet by 64 feet. The corresponding weight of 2.6E6 pounds produces a pressure load of about 3000 psf as used by you in previous analyses. Placing this load at the surface in the analyses would be a conservative estimate of the effect of the cask and vault load on the hillside, since it neglects the effect of excavating a comparable volume of soil. Please review and incorporate these values as you prepare your analyses of slope stability for the HBIP.

Let me know if you have any questions.

Rob L White

ROBERT K. WHITE

Enclosure

cc: Larry Pulley w/o

White, Robert (Geosciences)

From: Pulley, Lawrence
Sent: Thursday, August 01, 2002 10:40 AM
To: White, Robert (Geosciences)
Subject: HBIP vault size

Rob:

Per our discussions on vault size/weight for the HBIP slope stability work;
The "bounding" sizes of the vault are:
a. 20 ft wide, 100 ft long and 15.5 ft high, weighing 2.8E6 lb when filled.
b. 14 ft wide, 64 ft long and 15.5 ft high, weighing 2.6E6 lb when filled.

Note that these are estimates at this time as the vault designer has not started work.

Acknowledging that it is conservative to place the load at the surface, lets not go overboard with conservatism, such that we have structural issues to deal with.

Larry

Pacific Gas and Electric Company

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FAIZ MAKDISI
GEOMATRIX CONSULTANTS
2101 WEBSTER STREET
OAKLAND, CA 94612

24 July 2002

Re: Transmittal of velocity profile for HBPP ISFSI site response analysis

Dear Faiz:

Please find attached a table entitled "Revised Shear Wave Velocity Profile for Site Response Analysis (based on I.M. Idriss Interpretation on May 24, 2002)." As indicated by the title, Dr. Idriss proposed some modifications to the profile initially developed by you and reported in your July 2000 report entitled "Geotechnical Study, Humboldt Bay Independent Spent Fuel Storage Installation, Alternate Site S-4." Dr. Idriss used velocity data as found in HBPP Data Report C, "Downhole Geophysics in ISFSI Site Area," rev. 0 as part of his review. We agree with and approve these modifications. This table was also provided to Dr. Ann Becker for use in her recent site response analyses to develop a site ground response model.

Please use this table as input to the analysis of ISFSI site stability you are performing under Geosciences Work Plan GEO 2002-03.

If you have any questions, please call me.

Thanks.

Rob White

ROBERT K. WHITE

Attachment

TABLE 1 Revised Shear Wave Velocity Profile for Site Response Analysis
(based on I.M. Idriss Interpretation on May 24, 2002)

Layer No.	Depth (ft)	Description	Density (pcf)	Shear Wave Velocity (fps)	K_{2max}	Modulus Reduction and Damping Curves
1-a	0-15	Silty Clay	125	750	--	Vucetic and Dobry (1991) PI=15
1-b	15-20	Silty Clay	125	750	--	Vucetic and Dobry (1991) PI=15
1-c	20-25	Silty Clay	125	1,000	--	Vucetic and Dobry (1991) PI=15
2-a	25-30	Sand with Gravel	130	1,000	80	EPRI (1993) Depth = 20-50 feet
2-b	30-40	Sand with Gravel	130	1,150	100	EPRI (1993) Depth = 20-50 feet
2-c	40-50	Sand with Gravel	130	1,150	80	EPRI (1993) Depth = 20-50 feet
3	50-60	Silty Clay	130	1,500	--	Vucetic and Dobry (1991) PI=15
4-a	60-90	Sand with Gravel	130	1,500	125	EPRI (1993) Depth = 50-120 feet
4-b	90-135	Sand	130	1,750	130	EPRI (1993) Depth = 50-120 feet
5	135-150	Sand with Gravel	130	2,000	140	EPRI (1993) Depth = 120-250 feet
6	150-215	Silty Clay	130	1,550	--	Vucetic and Dobry (1991) PI = 15
7	215-260	Silty Sand	130	1,650	100	EPRI (1993) Depth = 120-250 feet
8a	260-320	Gravelly Sand	130	2,000	120	EPRI (1993) Depth = 250-500 feet
8b	320-400	Silty Sand	130	1,800	100	EPRI (1993) Depth = 250-500 feet
9	400-450	Silty Sand*	130	1,900	--	EPRI (1993) Depth = 250-500 feet
10	450-500	Silty Sand*	130	2,000	--	EPRI (1993) Depth = 250-500 feet
11	500-600	Silty Sand*	130	2,100	--	EPRI (1993) Depth = > 500 feet
12	600+	Half space	135	5,000	--	

Note: * Extrapolated from bottom of boring.

Pacific Gas and Electric Company

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FAIZ MAKDISI
GEOMATRIX CONSULTANTS
2101 WEBSTER STREET
OAKLAND, CA 94612

29 July 2002

Re: Transmittal of preliminary ground motions for Humboldt ISFSI Project slope stability analyses

Dear Faiz:

Please find enclosed a CD with four sets of time histories (fault parallel and fault normal components) for use in Humboldt ISFSI slope stability analyses. These time histories are preliminary until otherwise noted, but you are authorized to proceed with their use in your analyses.

As described in the readme.txt file on the CD, the CD was assembled from the following sources:

fault parallel component of Set 1, Set 3, and Set 4
C:\hbpp\motions\7-24-02\Source\set1_fp.acc
C:\hbpp\motions\7-24-02\Source\set3_fp.acc
C:\hbpp\motions\7-24-02\Source\set4_fp.acc

fault parallel component of Set 2a
C:\hbpp\motions\7-26-02\Source\set2a_fp.acc

fault normal component with fling of Set 1, Set 2a, Set 3, and Set 4
C:\hbpp\motions\7-26-02\Source\set1_fn_fling_bc.acc
C:\hbpp\motions\7-26-02\Source\set2a_fn_fling_bc.acc
C:\hbpp\motions\7-26-02\Source\set3_fn_fling_bc.acc
C:\hbpp\motions\7-26-02\Source\set4_fn_fling_bc.acc

Let me know if you have any questions.

Robert K. White

ROBERT K. WHITE

Enclosure

cc: Larry Pulley w/o

Geomatrix Consultants, Inc.
Engineers, Geologists & Environmental Scientists
2101 Webster Street, 12th Floor
Oakland, California 94612 U.S.A.
Tel: (510) 663-4143 Fax: (510)-663-4141
E-mail: bswan@geomatrix.com

GEOMATRIX

July 30, 2002
5117.009

Pacific Gas and Electric Company
Geosciences Department
P.O. Box 770000, Mail Code N4C
San Francisco, California 94177

FAX: (415) 973-5778

Attention: Dr. William D. Page
Mr. Robert K. White

Subject: Distance to Bay Entrance fault
Humboldt Bay ISFSI Project
Seismic Hazards Analysis

Based on measurements made from Geomatrix (2002) figure 4-18, the Bay Entrance trace of the Little Salmon fault zone strikes N 07° ±2°W (relative to true north) and dips 58° ±1° NW (measured from the horizontal).

The closest horizontal distance to the projected surface trace [measured from the center of the proposed ISFSI site as shown on figure 4-2 of Geomatrix (2002)] is 1,780 ±10 ft or 543 ±3 m. The closest fault-normal distance (also measured to the center of the proposed site) is 1,530 ±25 feet or 466 ±8 m.

Reference:

Geomatrix Consultants, Inc. (Geomatrix), 2002, Technical Report 4 - Site Geology, Humboldt Bay ISFSI Project Seismic Hazards Analysis: Technical report prepared for Pacific Gas and Electric Company Geosciences, submitted by Geomatrix Consultants, Inc., Revision 0a, March 18, 2002, 14 p, 1 table (4 p.), 30 figs, annex 4a (45 p.).

Sincerely,

Frank H. Swan
Consulting Geologist

Pacific Gas and Electric Company

Geosciences
245 Market Street, Room 4188
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San Francisco, CA 94177
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Fax 415/973-5778

FAIZ MAKDISI
GEOMATRIX CONSULTANTS
2101 WEBSTER STREET
OAKLAND, CA 94612

15 November 2002

Re: Excerpt from Humboldt Bay Power Plant December 1985 TPCA HAR

FAIZ MAKDISI:

Please find attached a 9-page excerpt from the Humboldt Bay Power Plant December 1985 Toxic Pits Cleanup Act Hydrogeologic Assessment Report for your use as needed in the preparation of slope stability calculations for the HBIP. The excerpt includes a discussion of water levels as determined from monitoring wells installed in the vicinity of the wastewater holding ponds located east of the discharge canal. Page 4-7, in particular, states that "water levels ... range between 4 and 7 feet below ground surface," and that "this zone appears to respond only slightly to tidal cycles."

If you have any questions regarding this attachment, please call.

Thanks.

Rob White

ROB WHITE

Attachment

Pacific Gas and Electric Company

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Fax 415/973-5778

FAIZ MAKDISI
GEOMATRIX CONSULTANTS
2101 WEBSTER STREET
OAKLAND, CA 94612

27 November 2002

Re: Transmittal of final approved time histories for Humboldt ISFSI Project slope stability analyses

Dear Faiz:

Please find enclosed a CD with four sets of time histories (fault parallel and fault normal components) for use in Humboldt ISFSI slope stability analyses. These time histories are final and approved as developed in Calculation GEO.HBIP.02.05 and are identical to those provided previously (in my 29 July 2002 letter to you) for your use in your analyses.

The CD includes the following files:

fault parallel components
set1_fp.acc
set2_fp.acc
set3_fp.acc
set4_fp.acc

fault normal components
set1_fnf.acc
set2_fnf.acc
set3_fnf.acc
set4_fnf.acc

Please verify that these time histories are the same as those used in your analyses.

Let me know if you have any questions.

Rob White

ROBERT K. WHITE

Enclosure

cc: Larry Pulley w/o

Attachment B

UTEXAS4

Input and Output Excerpts

(see Table 7-4 for listing of files)

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BLUFFs5.txt

```
GRA
HEAding follows -
EST. OF YIELD ACC. (Static Loading, Search)
HBPP ISFSI - Bluff side - 3000 psf footing load

PROfile line data follow -
     1 1 Med dense to dense sand & gravel
             0 -16
           380 -16

     2 2 Hard silt and silty clay
             0  -6
           380  -6

     3 3 Dense to very dense silty sand (sat)
             0   2
            69   2
            84   2
            90   6
           380   6

     4 4 Dense to very dense silty sand (unsat)
            90   6
           117   8
           122  12
           133  21
           380  21

     5 5 Rip rap facing
            69   2
            76   6
            87  12
           122  12

     6 6 Hard silty clay
           133  21
           138  25
           380  25

     7 7 Very stiff silt and clay
           138  25
           150  34
           238  34
           238  28.5
           258  28.5
           258  34
           380  34

     8 8 Medium dense clayey sand
           150  34
           162  42
           238  42
           238  34

    10 9 Surficial fill
           162  42
           165  44
           172  45
           185  45
           201  44
           238  44
           238  42

    11 9 Surficial fill
           258  42
           258  44
           272  44
           320  45
           380  45

    12 10 Footing load
           238  28.5
           238  34
           238  42
```

Page 1

```
            238  44
            258  44
            258  42
            258  34
            258  28.5

     13 8 Medium dense clayey sand
            258  34
            258  42
            380  42


  MATerial property data follow (for first stage)
       1 Med dense to dense sand and gravel
            130 = unit weight
            Conventional shear strengths
                 0 37
            Piezometric Line
                 1
       2 Hard silt and silty clay
            128 = unit weight
            Conventional shear strengths
               0   30
            Piezometric Line
                 1
       3 Dense to very dense silty sand (sat)
            128 = unit weight
            Conventional shear strengths
                 0 37
            Piezometric Line
                 1
       4 Dense to very dense silty sand (unsat)
            125 = unit weight
            Conventional shear strengths
                 0   37
            No pore pressures
       5 Rip rap facing
            110 = unit weight
            Conventional shear strengths
                 0   42
            Piezometric Line
                 1
       6 Hard silty clay
            130 = unit weight
            Conventional shear strength
                 0   30
            No pore pressures
       7 Very stiff silt and clay
            123 = unit weight
            Conventional shear strength
                 0   30
            No pore pressures
       8 Medium dense clayey sand
            125 = unit weight
            Conventional shear strength
                 0   30
            No pore pressures
       9 Surficial Fill
            125 = unit weight
            Conventional shear strength
                 0   30
            No pore pressures
      10 Footing load
            193.5 = unit weight
            Conventional shear strength
                 1000000   0
            No pore pressures

PIEzometric line data follow -
       1 Piezometric Line
                 0    6
                76    6
               380    6
```

BLUFFs5.txt

```
DIS SURface pressures to follow (water)
                0     2    249.6     0
               69     2    249.6     0
               76     6      0.0     0
               87    12      0.0     0
              122    12      0.0     0
              133    21      0.0     0
              138    25      0.0     0
              150    34      0.0     0
              162    42      0.0     0
              165    44      0.0     0
              172    45      0.0     0
              185    45      0.0     0
              201    44      0.0     0
              233    44      0.0     0
              268    44      0.0     0
              272    44      0.0     0
              320    45      0.0     0
              380    45      0.0     0

ANAlysis/computation data follow -
     Circle Search 1
     118.0   154.0   0.50    -60.0
     Radius of circle.
     186.68

COMpute
```

```
TABLE NO. 1
COMPUTER PROGRAM DESIGNATION: UTEXAS4
Originally Coded By Stephen G. Wright
Version No. 4.0.0.8 - Last Revision Date: 07/27/2001
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Time and date of run: Thu Aug 29 13:48:15 2002
Name of input data file: L:\Project\5000s\5117.015\Slope Stability\UTexas4\Bluff
side\with mat\longterm\BLUFFs5.txt

EST. OF YIELD ACC. (Static Loading, Search)
HBPP ISFSI - Bluff side - 3000 psf footing load

TABLE NO. 3
**************************
* NEW PROFILE LINE DATA *
**************************

------------------------------------------------------------
----- Profile Line No. 1 - Material Type (Number): 1 -----
------------------------------------------------------------
Description: Med dense to dense sand & gravel

Point        X           Y

   1        0.00      -16.00
   2      380.00      -16.00

------------------------------------------------------------
----- Profile Line No. 2 - Material Type (Number): 2 -----
------------------------------------------------------------
Description: Hard silt and silty clay

Point        X           Y

   1        0.00       -6.00
   2      380.00       -6.00

------------------------------------------------------------
----- Profile Line No. 3 - Material Type (Number): 3 -----
------------------------------------------------------------
Description: Dense to very dense silty sand (sat)
```

```
UTEXAS4 S/N:00107  - Version: 4.0.0.8 - Latest Revision: 07/27/2001
Licensed for use by: Larry Scheibel, Geomatrix Consultants
Time and date of run: Thu Aug 29 13:48:15 2002
Name of input data file: L:\Project\5000s\5117.015\Slope Stability\UTexas4\Bluff
side\with mat\longterm\BLUFFs5.txt

EST. OF YIELD ACC. (Static Loading, Search)
HBPP ISFSI - Bluff side - 3000 psf footing load

TABLE NO. 33
**********************************************
* 1-STAGE FINAL CRITICAL CIRCLE INFORMATION *
**********************************************

CAUTION - THE FACTOR OF SAFETY COULD NOT BE COMPUTED
FOR SOME OF THE GRID POINTS AROUND THE MINIMUM
X Coordinate of Center . . . . . 137.50
Y Coordinate of Center . . . . . 171.00
Radius . . . . . 186.68
Factor of Safety . . . . . 2.682
Side Force Inclination (degrees) . . . . . 10.65
Number of Circles Tried . . . . . 92
Number of Circles F Calculated for . . . . . 55
Time Required for Search (seconds) . . . . . 11.0
```

BLUFFsS(dyn).txt

```
GRA
HEAding follows -
EST. OF YIELD ACC. (Dynamic Loading)
HBPP ISFSI - Bluff side - 3000 psf footing load

PROfile line data follow -
     1 1 Med dense to dense sand & gravel
               0 -16
             380 -16

     2 2 Hard silt and silty clay
               0  -6
             380  -6

     3 3 Dense to very dense silty sand (sat)
               0   2
              69   2
              84   2
              90   6
             380   6

     4 4 Dense to very dense silty sand (unsat)
              90   6
             117   8
             122  12
             133  21
             380  21

     5 5 Rip rap facing
              69   2
              76   6
              87  12
             122  12

     6 6 Hard silty clay
             133  21
             138  25
             380  25

     7 7 Very stiff silt and clay
             138  25
             150  34
             238  34
             238  28.5
             258  28.5
             258  34
             380  34

     8 8 Medium dense clayey sand
             150  34
             162  42
             238  42
             238  34

    10 9 Surficial fill
             162  42
             165  44
             172  45
             185  45
             201  44
             238  44
             238  42

    11 9 Surficial fill
             258  42
             258  44
             272  44
             320  45
             380  45

    12 10 Footing load
             238  28.5
             238  34
             238  42
```

```
              238   44
              258   44
              258   42
              258   34
              258   28.5

       13 8 Medium dense clayey sand
              258   34
              258   42
              380   42


   MATerial property data follow (for first stage)
        1 Med dense to dense sand and gravel
             130 = unit weight
             Conventional shear strengths
                  0 37
             Piezometric Line
                  1
        2 Hard silt and silty clay
             128 = unit weight
             Conventional shear strengths
                0   30
             Piezometric Line
                  1
        3 Dense to very dense silty sand (sat)
             128 = unit weight
             Conventional shear strengths
                  0 37
             Piezometric Line
                  1
        4 Dense to very dense silty sand (unsat)
             125 = unit weight
             Conventional shear strengths
                  0   37
             No pore pressures
        5 Rip rap facing
             110 = unit weight
             Conventional shear strengths
                  0   42
             Piezometric Line
                  1
        6 Hard silty clay
             130 = unit weight
             Conventional shear strength
                  0   30
             No pore pressures
        7 Very stiff silt and clay
             123 = unit weight
             Conventional shear strength
                  0   30
             No pore pressures
        8 Medium dense clayey sand
             125 = unit weight
             Conventional shear strength
                  0   30
             No pore pressures
        9 Surficial Fill
             125 = unit weight
             Conventional shear strength
                  0   30
             No pore pressures
       10 Footing load
             193.5 = unit weight
             Conventional shear strength
                  1000000   0
             No pore pressures

   PIEzometric line data follow -
        1 Piezometric Line
                  0    6
                 76    6
                380    6
```

```
DIS SURface pressures to follow (water)
              0     2    249.6     0
             69     2    249.6     0
             76     6      0.0     0
             87    12      0.0     0
            122    12      0.0     0
            133    21      0.0     0
            138    25      0.0     0
            150    34      0.0     0
            162    42      0.0     0
            165    44      0.0     0
            172    45      0.0     0
            185    45      0.0     0
            201    44      0.0     0
            233    44      0.0     0
            268    44      0.0     0
            272    44      0.0     0
            320    45      0.0     0
            380    45      0.0     0

ANAlysis/computation data follow -
    Circle
    137.5  171.0  186.68

COMpute
SECond stage input activated
MATerial property data follow (for second stage)
    1 Med dense to dense sand and gravel
        130 = unit weight
        2-stage Linear strength envelope
           1500 37  1500 37
        Piezometric Line
             1
    2 Hard silt and silty clay
        128 = unit weight
        2-stage linear strength envelope
           3000  0  3000 0
        Piezometric Line
             1
    3 Dense to very dense silty sand (sat)
        128 = unit weight
        2-stage Linear strength envelope
           1500 37  1500 37
        Piezometric Line
             1
    4 Dense to very dense silty sand (unsat)
        125 = unit weight
        2-stage Linear strength envelope
             0   37   0   37
        No pore pressures
    5 Rip rap facing
        110 = unit weight
        2-stage Linear strength envelope
             0   42   0   42
        Piezometric Line
             1
    6 Hard silty clay
        130 = unit weight
        Conventional shear strength
          4000    0
        No pore pressures
    7 Very stiff silt and clay
        123 = unit weight
        Conventional shear strength
          2000    0
        No pore pressures
    8 Medium dense clayey sand
        125 = unit weight
        Conventional shear strength
          2000    0
        No pore pressures
    9 Surficial Fill
        125 = unit weight
```

```
          Conventional shear strength
             500     0
          No pore pressures
     10 Footing load
          193.5 = unit weight
          Conventional shear strength
               1000000   0
          No pore pressures

PIEzometric line data follow -
      1 Piezometric Line
                0     6
               76     6
              380     6


DIS SURface pressures to follow (water)
                0     2    249.6     0
               69     2    249.6     0
               76     6      0.0     0
               87    12      0.0     0
              122    12      0.0     0
              133    21      0.0     0
              138    25      0.0     0
              150    34      0.0     0
              162    42      0.0     0
              165    44      0.0     0
              172    45      0.0     0
              185    45      0.0     0
              201    44      0.0     0
              233    44      0.0     0
              268    44      0.0     0
              272    44      0.0     0
              320    45      0.0     0
              380    45      0.0     0

ANAlysis/computation data follow -
Circle
          137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.0

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.60g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.60

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.68g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.68

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.69g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
```

```
0.69

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.70g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.70

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.71g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.71

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.74g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.74

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.75g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.75

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.78g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.78

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.80g

ANAlysis/computation data follow -
Circle
     137.5  171.0  186.68
TWO-stage computations
SEIsmic Coefficient follows -
0.80

COMpute
```

```
TABLE NO. 1
COMPUTER PROGRAM DESIGNATION: UTEXAS4
Originally Coded By Stephen G. Wright
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Name of input data file: L:\Project\5000s\5117.015\Slope Stability\UTexas4\Bluff
side\with mat\longterm\BLUFFs5(dyn).txt

EST. OF YIELD ACC. (Dynamic Loading)
HBPP ISFSI - Bluff side - 3000 psf footing load

TABLE NO. 3
*************************
* NEW PROFILE LINE DATA *
*************************

------------------------------------------------------------
----- Profile Line No. 1 - Material Type (Number): 1 -----
------------------------------------------------------------
Description: Med dense to dense sand & gravel

Point        X           Y

   1        0.00      -16.00
   2      380.00      -16.00

------------------------------------------------------------
----- Profile Line No. 2 - Material Type (Number): 2 -----
------------------------------------------------------------
Description: Hard silt and silty clay

Point        X           Y

   1        0.00       -6.00
   2      380.00       -6.00

------------------------------------------------------------
----- Profile Line No. 3 - Material Type (Number): 3 -----
------------------------------------------------------------
Description: Dense to very dense silty sand (sat)
```

```
UTEXAS4 S/N:00107  - Version: 4.0.0.8 - Latest Revision: 07/27/2001
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Time and date of run: Thu Aug 29 13:48:15 2002
Name of input data file: L:\Project\5000s\5117.015\Slope Stability\UTexas4\Bluff
side\with mat\longterm\BLUFFs5(dyn).txt

SEISMIC COEFFICIENT = 0.69g

TABLE NO. 51
22222222222222222222222222222222222222222222222222222222222
2  Information for the Iterative Solution for the Factor of  2
2  Safety and Side Force Inclination by Spencer's Procedure  2
2  Second Stage of Multi-Stage Computations                  2
22222222222222222222222222222222222222222222222222222222222
Allowable force imbalance for convergence:  9
Allowable moment imbalance for convergence: 1582
```

Iteration	Trial Factor of Safety	Trial Side Force Inclination (degrees)	Force Imbalance (lbs.)	Moment Imbalance (ft.-lbs.)	Delta-F	Delta Theta (degrees)
1	3.00000	17.1887	5.436e+005	2.025e+007		
First-order corrections to F and Theta					-6.5067	4.6033
Reduced values - Deltas were too large					-0.5000	0.3537
2	2.50000	17.5425	4.934e+005	1.820e+007		
First-order corrections to F and Theta					-4.0949	4.9565
Reduced values - Deltas were too large					-0.5000	0.6052
3	2.00000	18.1477	4.181e+005	1.505e+007		
First-order corrections to F and Theta					-2.2122	5.6024
Reduced values - Deltas were too large					-0.5000	1.2662
4	1.50000	19.4139	2.919e+005	9.472e+006		
First-order corrections to F and Theta					-0.8572	7.1666
Reduced values - Deltas were too large					-0.3427	2.8648
5	1.15733	22.2787	1.398e+005	2.457e+006		
First-order corrections to F and Theta					-0.2265	10.4619
Reduced values - Deltas were too large					-0.0620	2.8648
6	1.09532	25.1435	9.898e+004	1.331e+006		
First-order corrections to F and Theta					-0.1326	10.6941
Reduced values - Deltas were too large					-0.0355	2.8648
7	1.05979	28.0083	7.113e+004	7.063e+005		
First-order corrections to F and Theta					-0.0799	9.9116
Reduced values - Deltas were too large					-0.0231	2.8648
8	1.03671	30.8731	4.958e+004	3.154e+005		
First-order corrections to F and Theta					-0.0456	8.2881
Reduced values - Deltas were too large					-0.0158	2.8648
9	1.02094	33.7379	3.153e+004	6.316e+004		
First-order corrections to F and Theta					-0.0225	6.0039

```
Reduced values - Deltas were too large .....    -0.0107      2.8648

  10   1.01022    36.6027   1.553e+004  -8.474e+004
First-order corrections to F and Theta .....    -0.0075      3.2838
Reduced values - Deltas were too large .....    -0.0065      2.8648

  11   1.00368    39.4675   9.004e+002  -1.118e+005
First-order corrections to F and Theta .....     0.0005    - 0.3889
Second-order corrections to F and Theta .....    0.0005      0.3865

  12   1.00423    39.8539  -2.590e-001  -1.479e+001
First-order corrections to F and Theta .....     0.0000     -0.0000
```

plant_s5c.txt

```
GRA
HEAding follows -
EST. OF YIELD ACCELERATION (Search Type 2)
HBPP ISFSI - Plant Side - 3000 psf footing load

PROfile line data follow -
     1 1 Med dense to dense sand & gravel
           -60 -16
           380 -16

     2 2 Hard silt and silty clay
           -60  -6
           380  -6

     3 3 Dense to very dense silty sand (sat)
           -60   6
           380   6

     4 4 Dense to very dense silty sand (unsat)
           -60  12
            33  12
         47.56  21
           380  21

     5 5 Hard silty clay
         47.56  21
            50  22.5
            79  22.5
         82.75  25
           380  25

     6 6 Very stiff silt and clay
         82.75  25
         96.25  34
           265  34
           265  28.5
           285  28.5
           285  34
           380  34

     7 7 Medium dense clayey sand
         96.25  34
           106  40.5
           148  42
           210  44
           265  44
           265  34

     8 8 Footing load
           265  28.5
           265  34
           265  44
           285  44
           285  34
           285  28.5

     9 7 Medium dense clayey sand
           285  34
           285  44
           295  44
           380  44


MATerial property data follow (for first stage)
     1 Med dense to dense sand and gravel
          130 = unit weight
          Conventional shear strengths
               0  37
          Piezometric Line
               1
     2 Hard silt and silty clay
          128 = unit weight
          Conventional shear strengths
               0  30
```

```
          Piezometric Line
               1
       3 Dense to very dense silty sand (sat)
            128 = unit weight
            Conventional shear strengths
                 0  37
            Piezometric Line
               1
       4 Dense to very dense silty sand (unsat)
            125 = unit weight
            Conventional shear strengths
                 0  37
            No pore pressures
       5 Hard silty clay
            130 = unit weight
            Conventional shear strength
                 0  30
            No pore pressures
       6 Very stiff silt and clay
            123 = unit weight
            Conventional shear strength
                 0  30
            No pore pressures
       7 Medium dense clayey sand
            125 = unit weight
            Conventional shear strength
                 0  30
            No pore pressures
       8 Footing load
            193.5 = unit weight
            Conventional shear strength
                 1000000   0
            No pore pressures

 PIEzometric line data follow -
      1 Piezometric Line
             -60     6
             380     6


 DIS SURface pressures to follow (water)
             -60    12      0.0     0
              33    12      0.0     0
           47.56    21      0.0     0
              50  22.5      0.0     0
              79  22.5      0.0     0
           82.75    25      0.0     0
           96.25    34      0.0     0
             106  40.5      0.0     0
             148    42      0.0     0
             210    44      0.0     0
             260    44      0.0     0
             290    44      0.0     0
             295    44      0.0     0
             380    44      0.0     0

ANAlysis/computation data follow -
     Circle Search 2
     50  50
      70.0   415.0
      70.0   315.0
     170.0   315.0
     170.0   415.0
     5     331.1
     Point
     285  28.5


COMpute
```

```
TABLE NO. 1
COMPUTER PROGRAM DESIGNATION: UTEXAS4
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**********************************************************************

UTEXAS4 S/N:00107  - Version: 4.0.0.8 - Latest Revision: 07/27/2001
Licensed for use by: Larry Scheibel, Geomatrix Consultants
Time and date of run: Fri Aug 30 14:59:30 2002
Name of input data file: L:\Project\5000s\5117.015\Slope Stability\UTexas4\Plant
side\with mat\longterm\plant_s5c.txt

EST. OF YIELD ACCELERATION (Search Type 2)
HBPP ISFSI - Plant Side - 3000 psf footing load

TABLE NO. 3
**************************
* NEW PROFILE LINE DATA *
**************************

------------------------------------------------------------
----- Profile Line No. 1 - Material Type (Number): 1 -----
------------------------------------------------------------
Description: Med dense to dense sand & gravel

Point        X           Y

   1      -60.00      -16.00
   2      380.00      -16.00

------------------------------------------------------------
----- Profile Line No. 2 - Material Type (Number): 2 -----
------------------------------------------------------------
Description: Hard silt and silty clay

Point        X           Y

   1      -60.00       -6.00
   2      380.00       -6.00

------------------------------------------------------------
----- Profile Line No. 3 - Material Type (Number): 3 -----
------------------------------------------------------------
Description: Dense to very dense silty sand (sat)
```

```
UTEXAS4 S/N:00107  - Version: 4.0.0.8 - Latest Revision: 07/27/2001
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Time and date of run: Fri Aug 30 14:59:30 2002
Name of input data file: L:\Project\5000s\5117.015\Slope Stability\UTexas4\Plant
side\with mat\longterm\plant_s5c.txt

EST. OF YIELD ACCELERATION (Search Type 2)
HBPP ISFSI - Plant Side - 3000 psf footing load

TABLE NO. 38
************************************************
* FINAL SUMMARY OF COMPUTATIONS WITH FIXED-GRID *
************************************************


Number of circles attempted: 2500
Number of circles for which F calculated: 1170
Circle with Lowest Factor of Safety:
     X coordinate for center: 100.61
     Y coordinate for center: 388.47
     Radius of circle: 404.446
Factor of safety: 4.944
Side force inclination: 5.60
Time Required for Computations: 216.0 seconds
```

```
          Piezometric Line
               1
       3 Dense to very dense silty sand (sat)
          128 = unit weight
          Conventional shear strengths
               0  37
          Piezometric Line
               1
       4 Dense to very dense silty sand (unsat)
          125 = unit weight
          Conventional shear strengths
               0  37
          No pore pressures
       5 Hard silty clay
          130 = unit weight
          Conventional shear strength
               0  30
          No pore pressures
       6 Very stiff silt and clay
          123 = unit weight
          Conventional shear strength
               0  30
          No pore pressures
       7 Medium dense clayey sand
          125 = unit weight
          Conventional shear strength
               0  30
          No pore pressures
       8 Footing load
          193.5 = unit weight
          Conventional shear strength
              1000000   0
          No pore pressures

 PIEzometric line data follow -
      1 Piezometric Line
           -60    6
           380    6


 DIS SURface pressures to follow (water)
           -60   12      0.0    0
            33   12      0.0    0
         47.56   21      0.0    0
            50   22.5    0.0    0
            79   22.5    0.0    0
         82.75   25      0.0    0
         96.25   34      0.0    0
           106   40.5    0.0    0
           148   42      0.0    0
           210   44      0.0    0
           260   44      0.0    0
           290   44      0.0    0
           295   44      0.0    0
           380   44      0.0    0

SECond stage input activated
MATerial property data follow (for second stage)
    1 Med dense to dense sand and gravel
         130 = unit weight
         2-stage Linear strength envelope
              1500 37  1500 37
         Piezometric Line
              1
     2 Hard silt and silty clay
         128 = unit weight
         Conventional shear strengths
            3000   0
         Piezometric Line
              1
    3 Dense to very dense silty sand (sat)
         128 = unit weight
         2-stage Linear strength envelope
              1500 37  1500 37
```

```
      Piezometric Line
           1
    4 Dense to very dense silty sand (unsat)
      125 = unit weight
      2-stage Linear strength envelope
           0   37  0 37
      No pore pressures
    5 Hard silty clay
      130 = unit weight
      Conventional shear strength
        4000    0
      No pore pressures
    6 Very stiff silt and clay
      123 = unit weight
      Conventional shear strength
        2000    0
      No pore pressures
    7 Medium dense clayey sand
      125 = unit weight
      Conventional shear strength
        2000    0
      No pore pressures
    8 Footing load
      193.5 = unit weight
      Conventional shear strength
           1000000   0
      No pore pressures

 PIEzometric line data follow (for second stage)
     1 Piezometric Line
          -60    6
          380    6


 DIS SURface pressures to follow (water)
          -60   12      0.0    0
           33   12      0.0    0
        47.56   21      0.0    0
           50   22.5    0.0    0
           79   22.5    0.0    0
        82.75   25      0.0    0
        96.25   34      0.0    0
          106   40.5    0.0    0
          148   42      0.0    0
          210   44      0.0    0
          260   44      0.0    0
          290   44      0.0    0
          295   44      0.0    0
          380   44      0.0    0

ANAlysis/computation data follow -
     Circle
     100.61  388.47  404.45
TWO-stage computations

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.50g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.50

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.55g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
```

```
          Piezometric Line
               1
       4 Dense to very dense silty sand (unsat)
            125 = unit weight
            2-stage Linear strength envelope
                 0   37  0 37
            No pore pressures
       5 Hard silty clay
            130 = unit weight
            Conventional shear strength
              4000    0
            No pore pressures
       6 Very stiff silt and clay
            123 = unit weight
            Conventional shear strength
              2000    0
            No pore pressures
       7 Medium dense clayey sand
            125 = unit weight
            Conventional shear strength
              2000    0
            No pore pressures
       8 Footing load
           193.5 = unit weight
           Conventional shear strength
                1000000   0
           No pore pressures

 PIEzometric line data follow (for second stage)
      1 Piezometric Line
             -60    6
             380    6


 DIS SURface pressures to follow (water)
              -60    12      0.0    0
               33    12      0.0    0
            47.56    21      0.0    0
               50    22.5    0.0    0
               79    22.5    0.0    0
            82.75    25      0.0    0
            96.25    34      0.0    0
              106    40.5    0.0    0
              148    42      0.0    0
              210    44      0.0    0
              260    44      0.0    0
              290    44      0.0    0
              295    44      0.0    0
              380    44      0.0    0

 ANAlysis/computation data follow -
      Circle
      100.61  388.47  404.45
 TWO-stage computations

 COMpute
 HEAding follows -
 SEISMIC COEFFICIENT = 0.50g

 ANAlysis/computation data follow -
 Circle
 100.61  388.47  404.45
 TWO-stage computations
 SEIsmic Coefficient follows -
 0.50

 COMpute
 HEAding follows -
 SEISMIC COEFFICIENT = 0.55g

 ANAlysis/computation data follow -
 Circle
 100.61  388.47  404.45
 TWO-stage computations
```

```
        Piezometric Line
             1
    4 Dense to very dense silty sand (unsat)
        125 = unit weight
        2-stage Linear strength envelope
             0   37  0 37
        No pore pressures
    5 Hard silty clay
        130 = unit weight
        Conventional shear strength
          4000    0
        No pore pressures
    6 Very stiff silt and clay
        123 = unit weight
        Conventional shear strength
          2000    0
        No pore pressures
    7 Medium dense clayey sand
        125 = unit weight
        Conventional shear strength
          2000    0
        No pore pressures
    8 Footing load
        193.5 = unit weight
        Conventional shear strength
            1000000   0
        No pore pressures

PIEzometric line data follow (for second stage)
     1 Piezometric Line
           -60    6
           380    6


DIS SURface pressures to follow (water)
           -60   12      0.0    0
            33   12      0.0    0
         47.56   21      0.0    0
            50   22.5    0.0    0
            79   22.5    0.0    0
         82.75   25      0.0    0
         96.25   34      0.0    0
           106   40.5    0.0    0
           148   42      0.0    0
           210   44      0.0    0
           260   44      0.0    0
           290   44      0.0    0
           295   44      0.0    0
           380   44      0.0    0

ANAlysis/computation data follow -
     Circle
     100.61  388.47  404.45
TWO-stage computations

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.50g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.50

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.55g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
```

```
SEIsmic Coefficient follows -
0.55

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.60g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.60

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.63g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.63

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.64g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.64

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.65g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.65

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.66g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.66

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.67g

ANAlysis/computation data follow -
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.67

COMpute
HEAding follows -
SEISMIC COEFFICIENT = 0.70g

ANAlysis/computation data follow -
```

plant_s5c(dyn).txt

```
Circle
100.61  388.47  404.45
TWO-stage computations
SEIsmic Coefficient follows -
0.70

COMpute
```

```
TABLE NO. 1
COMPUTER PROGRAM DESIGNATION: UTEXAS4
Originally Coded By Stephen G. Wright
Version No. 4.0.0.8 - Last Revision Date: 07/27/2001
(C) Copyright 1985-2000 S. G. Wright - All rights reserved
**********************************************************************
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* SHOULD NOT BE USED FOR DESIGN PURPOSES UNLESS THEY HAVE            *
* BEEN VERIFIED BY INDEPENDENT ANALYSES, EXPERIMENTAL DATA           *
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UTEXAS4 S/N:00107  - Version: 4.0.0.8 - Latest Revision: 07/27/2001
Licensed for use by: Larry Scheibel, Geomatrix Consultants
Time and date of run: Fri Aug 30 18:02:01 2002
Name of input data file: L:\Project\5000s\5117.015\Slope Stability\UTexas4\Plant
side\with mat\longterm\plant_s5c(dyn).txt

EST. OF YIELD ACCELERATION (Dynamic Loading)
HBPP ISFSI - Plant Side - 3000 psf footing load

TABLE NO. 3
*************************
* NEW PROFILE LINE DATA *
*************************

------------------------------------------------------------
----- Profile Line No. 1 - Material Type (Number): 1 -----
------------------------------------------------------------
Description: Med dense to dense sand & gravel

Point        X           Y

   1      -60.00      -16.00
   2      380.00      -16.00

------------------------------------------------------------
----- Profile Line No. 2 - Material Type (Number): 2 -----
------------------------------------------------------------
Description: Hard silt and silty clay

Point        X           Y

   1      -60.00       -6.00
   2      380.00       -6.00

------------------------------------------------------------
----- Profile Line No. 3 - Material Type (Number): 3 -----
------------------------------------------------------------
Description: Dense to very dense silty sand (sat)
```

```
UTEXAS4 S/N:00107  - Version: 4.0.0.8 - Latest Revision: 07/27/2001
Licensed for use by: Larry Scheibel, Geomatrix Consultants
Time and date of run: Fri Aug 30 18:02:01 2002
Name of input data file: L:\Project\5000s\5117.015\Slope Stability\UTexas4\Plant
side\with mat\longterm\plant_s5c(dyn).txt

SEISMIC COEFFICIENT = 0.66g

TABLE NO. 51
22222222222222222222222222222222222222222222222222222222222222
2  Information for the Iterative Solution for the Factor of  2
2  Safety and Side Force Inclination by Spencer's Procedure  2
2  Second Stage of Multi-Stage Computations                  2
22222222222222222222222222222222222222222222222222222222222222
Allowable force imbalance for convergence:  15
Allowable moment imbalance for convergence: 2208
```

Iteration	Trial Factor of Safety	Trial Side Force Inclination (degrees)	Force Imbalance (lbs.)	Moment Imbalance (ft.-lbs.)	Delta-F	Delta Theta (degrees)
1	3.00000	17.1887	7.935e+005	2.282e+007		
First-order corrections to F and Theta					-6.2056	5.2595
Reduced values - Deltas were too large					-0.5000	0.4238
2	2.50000	17.6125	7.165e+005	2.034e+007		
First-order corrections to F and Theta					-3.8877	5.6214
Reduced values - Deltas were too large					-0.5000	0.7230
3	2.00000	18.3355	6.007e+005	1.648e+007		
First-order corrections to F and Theta					-2.0819	6.2661
Reduced values - Deltas were too large					-0.5000	1.5049
4	1.50000	19.8404	4.067e+005	9.575e+006		
First-order corrections to F and Theta					-0.7867	7.7347
Reduced values - Deltas were too large					-0.2914	2.8648
5	1.20863	22.7052	2.169e+005	2.935e+006		
First-order corrections to F and Theta					-0.2637	9.4156
Reduced values - Deltas were too large					-0.0802	2.8648
6	1.12841	25.5700	1.451e+005	1.333e+006		
First-order corrections to F and Theta					-0.1469	8.9181
Reduced values - Deltas were too large					-0.0472	2.8648
7	1.08121	28.4347	9.549e+004	4.985e+005		
First-order corrections to F and Theta					-0.0833	7.4175
Reduced values - Deltas were too large					-0.0322	2.8648
8	1.04906	31.2995	5.650e+004	3.533e+004		
First-order corrections to F and Theta					-0.0425	5.1882
Reduced values - Deltas were too large					-0.0235	2.8648
9	1.02559	34.1643	2.353e+004	-1.743e+005		
First-order corrections to F and Theta					-0.0149	2.4980

Attachment C

Excel spreadsheets for rotation of ground motions

Input and Output Excerpts

(see Table 7-7 for listing of files)

excerpt from SET1_FN_FLING_BC.ACC

Time history ma tched to spec trum::::SetTarg et:syn_soil_fn. target with fling
15999 0.0050

-2.29294E-04	-2.23550E-04	-2.29094E-04	-2.23487E-04	-2.29147E-04
-2.23613E-04	-2.29336E-04	-2.23855E-04	-2.29787E-04	-2.24390E-04
-2.30386E-04	-2.25157E-04	-2.31215E-04	-2.26102E-04	-2.32339E-04
-2.27288E-04	-2.33588E-04	-2.28632E-04	-2.35142E-04	-2.30249E-04
-2.36864E-04	-2.32066E-04	-2.38817E-04	-2.34145E-04	-2.41022E-04
-2.36413E-04	-2.43395E-04	-2.38807E-04	-2.45884E-04	-2.41495E-04
-2.48729E-04	-2.44246E-04	-2.51533E-04	-2.47175E-04	-2.54651E-04
-2.50273E-04	-2.57843E-04	-2.53486E-04	-2.61235E-04	-2.56783E-04
-2.64584E-04	-2.60206E-04	-2.68007E-04	-2.63681E-04	-2.71630E-04
-2.67283E-04	-2.75294E-04	-2.70832E-04	-2.78990E-04	-2.74559E-04
-2.82823E-04	-2.78402E-04	-2.86781E-04	-2.82455E-04	-2.91013E-04
-2.86592E-04	-2.95402E-04	-2.91181E-04	-3.00190E-04	-2.96126E-04
-3.05524E-04	-3.01670E-04	-3.11519E-04	-3.07897E-04	-3.18397E-04
-3.15247E-04	-3.26303E-04	-3.23762E-04	-3.35701E-04	-3.33895E-04
-3.46936E-04	-3.46075E-04	-3.60218E-04	-3.60523E-04	-3.76252E-04
-3.77984E-04	-3.95456E-04	-3.98869E-04	-4.18462E-04	-4.23901E-04
-4.45783E-04	-4.53595E-04	-4.78207E-04	-4.88927E-04	-5.16931E-04
-5.30885E-04	-5.62637E-04	-5.80529E-04	-6.16681E-04	-6.39193E-04
-6.80458E-04	-7.08262E-04	-7.55459E-04	-7.89637E-04	-8.43743E-04
-8.84872E-04	-9.46706E-04	-9.96004E-04	-1.06645E-03	-1.12451E-03
-1.20442E-03	-1.27246E-03	-1.36307E-03	-1.44256E-03	-1.54504E-03
-1.63649E-03	-1.75178E-03	-1.85657E-03	-1.98541E-03	-2.10406E-03
-2.24728E-03	-2.38042E-03	-2.53876E-03	-2.68733E-03	-2.86132E-03
-3.02554E-03	-3.21538E-03	-3.39566E-03	-3.60104E-03	-3.79655E-03
-4.01747E-03	-4.22747E-03	-4.46183E-03	-4.68422E-03	-4.92982E-03
-5.16166E-03	-5.41544E-03	-5.65526E-03	-5.91629E-03	-6.16168E-03
-6.42670E-03	-6.67408E-03	-6.93941E-03	-7.18543E-03	-7.44709E-03
-7.68743E-03	-7.94174E-03	-8.17253E-03	-8.41529E-03	-8.63254E-03
-8.86018E-03	-9.06052E-03	-9.26999E-03	-9.45059E-03	-9.63823E-03
-9.79415E-03	-9.95543E-03	-1.00840E-02	-1.02163E-02	-1.03145E-02
-1.04158E-02	-1.04819E-02	-1.05503E-02	-1.05828E-02	-1.06164E-02
-1.06143E-02	-1.06122E-02	-1.05744E-02	-1.05387E-02	-1.04666E-02
-1.04049E-02	-1.03237E-02	-1.02604E-02	-1.01772E-02	-1.01120E-02
-1.00269E-02	-9.95858E-03	-9.86912E-03	-9.79552E-03	-9.70049E-03
-9.62132E-03	-9.52000E-03	-9.43348E-03	-9.32491E-03	-9.23177E-03
-9.11617E-03	-9.01673E-03	-8.89766E-03	-8.79676E-03	-8.67611E-03
-8.57227E-03	-8.44963E-03	-8.34400E-03	-8.21873E-03	-8.11415E-03
-7.99109E-03	-7.88357E-03	-7.75852E-03	-7.65436E-03	-7.52993E-03
-7.42220E-03	-7.29536E-03	-7.18669E-03	-7.05691E-03	-6.94225E-03
-6.80785E-03	-6.69035E-03	-6.55364E-03	-6.43793E-03	-6.30227E-03
-6.18394E-03	-6.05374E-03	-5.94674E-03	-5.82127E-03	-5.71606E-03
-5.59048E-03	-5.47319E-03	-5.32766E-03	-5.19778E-03	-5.05088E-03
-4.92677E-03	-4.79185E-03	-4.68349E-03	-4.56200E-03	-4.46215E-03
-4.34717E-03	-4.26170E-03	-4.16951E-03	-4.09738E-03	-4.00697E-03
-3.92759E-03	-3.80086E-03	-3.66709E-03	-3.50959E-03	-3.37151E-03
-3.21811E-03	-3.10082E-03	-2.98585E-03	-2.89639E-03	-2.78173E-03
-2.66854E-03	-2.51629E-03	-2.37170E-03	-2.21641E-03	-2.09618E-03
-1.96766E-03	-1.86455E-03	-1.75294E-03	-1.66631E-03	-1.56121E-03
-1.47448E-03	-1.37473E-03	-1.31026E-03	-1.23749E-03	-1.17680E-03
-1.09511E-03	-1.03207E-03	-9.36637E-04	-8.29810E-04	-6.75218E-04

excerpt from SET1_FP.ACC

Time histor	y matched to sp	ectrum::::SetTa	rget:syn_soil_f	p.target
15999 0.005				
8.46349E-05	8.55744E-05	8.44642E-05	8.53374E-05	8.41158E-05
8.50263E-05	8.37813E-05	8.46820E-05	8.34312E-05	8.42517E-05
8.30216E-05	8.38036E-05	8.24864E-05	8.32060E-05	8.19110E-05
8.26452E-05	8.12517E-05	8.19433E-05	8.05349E-05	8.11835E-05
7.97321E-05	8.03734E-05	7.88864E-05	7.94605E-05	7.78865E-05
7.84114E-05	7.68426E-05	7.72888E-05	7.56130E-05	7.59186E-05
7.41799E-05	7.43994E-05	7.24948E-05	7.25528E-05	7.05370E-05
7.04333E-05	6.81603E-05	6.78435E-05	6.53544E-05	6.47248E-05
6.19081E-05	6.09499E-05	5.77815E-05	5.62669E-05	5.25411E-05
5.05152E-05	4.61940E-05	4.33388E-05	3.82816E-05	3.46168E-05
2.85895E-05	2.39241E-05	1.69037E-05	1.12671E-05	3.18731E-06
-3.63776E-06	-1.27980E-05	-2.07812E-05	-3.12391E-05	-4.07311E-05
-5.27745E-05	-6.40408E-05	-7.78796E-05	-9.10988E-05	-1.06902E-04
-1.22189E-04	-1.40207E-04	-1.57910E-04	-1.78268E-04	-1.98407E-04
-2.21317E-04	-2.44165E-04	-2.69868E-04	-2.95572E-04	-3.24267E-04
-3.53237E-04	-3.85198E-04	-4.17631E-04	-4.53016E-04	-4.89009E-04
-5.28026E-04	-5.67747E-04	-6.10376E-04	-6.53909E-04	-7.00359E-04
-7.47829E-04	-7.98333E-04	-8.49918E-04	-9.04444E-04	-9.60239E-04
-1.01889E-03	-1.07902E-03	-1.14231E-03	-1.20737E-03	-1.27549E-03
-1.34560E-03	-1.41895E-03	-1.49452E-03	-1.57345E-03	-1.65479E-03
-1.73960E-03	-1.82703E-03	-1.91814E-03	-2.01186E-03	-2.10938E-03
-2.21015E-03	-2.31469E-03	-2.42250E-03	-2.53440E-03	-2.64975E-03
-2.76910E-03	-2.89213E-03	-3.01936E-03	-3.15079E-03	-3.28673E-03
-3.42686E-03	-3.57110E-03	-3.71923E-03	-3.87123E-03	-4.02638E-03
-4.18469E-03	-4.34520E-03	-4.50792E-03	-4.67169E-03	-4.83587E-03
-4.99974E-03	-5.16383E-03	-5.32823E-03	-5.49240E-03	-5.65638E-03
-5.82005E-03	-5.98203E-03	-6.14264E-03	-6.30053E-03	-6.45600E-03
-6.60780E-03	-6.75591E-03	-6.89868E-03	-7.03662E-03	-7.16794E-03
-7.29306E-03	-7.41063E-03	-7.52095E-03	-7.62244E-03	-7.71597E-03
-7.79994E-03	-7.87540E-03	-7.94046E-03	-7.99618E-03	-8.04109E-03
-8.07591E-03	-8.09929E-03	-8.11259E-03	-8.11423E-03	-8.10559E-03
-8.08498E-03	-8.05396E-03	-8.01088E-03	-7.95803E-03	-7.89384E-03
-7.82461E-03	-7.75391E-03	-7.68384E-03	-7.61220E-03	-7.54055E-03
-7.46764E-03	-7.39516E-03	-7.32057E-03	-7.24504E-03	-7.16710E-03
-7.08862E-03	-7.00774E-03	-6.92602E-03	-6.84219E-03	-6.75753E-03
-6.67075E-03	-6.58326E-03	-6.49377E-03	-6.40332E-03	-6.31026E-03
-6.21593E-03	-6.11961E-03	-6.02244E-03	-5.92308E-03	-5.82267E-03
-5.72036E-03	-5.61722E-03	-5.51217E-03	-5.40641E-03	-5.29885E-03
-5.19077E-03	-5.08028E-03	-4.96946E-03	-4.85540E-03	-4.74185E-03
-4.62632E-03	-4.50868E-03	-4.39808E-03	-4.27120E-03	-4.11808E-03
-3.98763E-03	-3.87157E-03	-3.74710E-03	-3.62433E-03	-3.50280E-03
-3.37960E-03	-3.25829E-03	-3.13583E-03	-3.01472E-03	-2.89362E-03
-2.77430E-03	-2.65572E-03	-2.53882E-03	-2.42150E-03	-2.30554E-03
-2.18990E-03	-2.07509E-03	-1.95862E-03	-1.84255E-03	-1.72702E-03
-1.61431E-03	-1.50266E-03	-1.39269E-03	-1.28177E-03	-1.17212E-03
-1.06403E-03	-9.59938E-04	-8.59038E-04	-7.61140E-04	-6.62403E-04
-5.64054E-04	-4.66880E-04	-3.72070E-04	-2.77962E-04	-1.86575E-04
-9.50400E-05	-4.09637E-06	8.66820E-05	1.74719E-04	2.60264E-04
3.40280E-04	4.17713E-04	4.94380E-04	5.72779E-04	6.51274E-04
7.30083E-04	8.05910E-04	8.80383E-04	9.50802E-04	1.02031E-03

Set1:
Acceleration Time Histories

			deg
NPTS =	15999	ϕ	350
DT =	0.005		

Time (sec)	FN Fault Normal	FP Fault Parallel	a-a' (ϕ rotate)
0.000	-.229294E-03	.846349E-04	.123166E-03
0.005	-.223550E-03	.855744E-04	.123093E-03
0.010	-.229094E-03	.844642E-04	.122963E-03
0.015	-.223487E-03	.853374E-04	.122849E-03
0.020	-.229147E-03	.841158E-04	.122629E-03
0.025	-.223613E-03	.850263E-04	.122565E-03
0.030	-.229336E-03	.837813E-04	.122332E-03
0.035	-.223855E-03	.846820E-04	.122267E-03
0.040	-.229787E-03	.834312E-04	.122066E-03
0.045	-.224390E-03	.842517E-04	.121937E-03
0.050	-.230386E-03	.830216E-04	.121766E-03
0.055	-.225157E-03	.838036E-04	.121629E-03
0.060	-.231215E-03	.824864E-04	.121383E-03
0.065	-.226102E-03	.832060E-04	.121204E-03
0.070	-.232339E-03	.819110E-04	.121012E-03
0.075	-.227288E-03	.826452E-04	.120858E-03
0.080	-.233588E-03	.812517E-04	.120579E-03
0.085	-.228632E-03	.819433E-04	.120400E-03
0.090	-.235142E-03	.805349E-04	.120143E-03
0.095	-.230249E-03	.811835E-04	.119932E-03
0.100	-.236864E-03	.797321E-04	.119652E-03
0.105	-.232066E-03	.803734E-04	.119450E-03
0.110	-.238817E-03	.788864E-04	.119158E-03
0.115	-.234145E-03	.794605E-04	.118912E-03
0.120	-.241022E-03	.778865E-04	.118556E-03
0.125	-.236413E-03	.784114E-04	.118273E-03
0.130	-.243395E-03	.768426E-04	.117940E-03
0.135	-.238807E-03	.772888E-04	.117583E-03
0.140	-.245884E-03	.756130E-04	.117162E-03
0.145	-.241495E-03	.759186E-04	.116700E-03
0.150	-.248729E-03	.741799E-04	.116244E-03
0.155	-.244246E-03	.743994E-04	.115682E-03
0.160	-.251533E-03	.724948E-04	.115072E-03
0.165	-.247175E-03	.725528E-04	.114372E-03
0.170	-.254651E-03	.705370E-04	.113685E-03
0.175	-.250273E-03	.704333E-04	.112823E-03
0.180	-.257843E-03	.681603E-04	.111899E-03
0.185	-.253486E-03	.678435E-04	.110830E-03
0.190	-.261235E-03	.653544E-04	.109725E-03
0.195	-.256783E-03	.647248E-04	.108331E-03
0.200	-.264584E-03	.619081E-04	.106912E-03
0.205	-.260206E-03	.609499E-04	.105208E-03
0.210	-.268007E-03	.577815E-04	.103443E-03
0.215	-.263681E-03	.562669E-04	.101200E-03
0.220	-.271630E-03	.525411E-04	.989109E-04

Set1:

15999	0.0050						
1.23166E-04	1.23093E-04	1.22963E-04	1.22849E-04	1.22629E-04	1.22565E-04	1.22332E-04	1.22267E-04
1.22066E-04	1.21937E-04	1.21766E-04	1.21629E-04	1.21383E-04	1.21204E-04	1.21012E-04	1.20858E-04
1.20579E-04	1.20400E-04	1.20143E-04	1.19932E-04	1.19652E-04	1.19450E-04	1.19158E-04	1.18912E-04
1.18556E-04	1.18273E-04	1.17940E-04	1.17583E-04	1.17162E-04	1.16700E-04	1.16244E-04	1.15682E-04
1.15072E-04	1.14372E-04	1.13685E-04	1.12823E-04	1.11899E-04	1.10830E-04	1.09725E-04	1.08331E-04
1.06912E-04	1.05208E-04	1.03443E-04	1.01200E-04	9.89109E-05	9.61609E-05	9.32965E-05	8.97098E-05
8.61462E-05	8.17676E-05	7.72669E-05	7.19047E-05	6.64459E-05	6.01438E-05	5.36728E-05	4.61837E-05
3.86924E-05	3.00976E-05	2.13630E-05	1.13095E-05	1.08098E-06	-1.06834E-05	-2.26017E-05	-3.62491E-05
-4.99884E-05	-6.55901E-05	-8.14145E-05	-9.92898E-05	-1.17266E-04	-1.37412E-04	-1.57710E-04	-1.80360E-04
-2.03217E-04	-2.28477E-04	-2.54005E-04	-2.82234E-04	-3.10675E-04	-3.42024E-04	-3.73469E-04	-4.07970E-04
-4.42595E-04	-4.80355E-04	-5.18063E-04	-5.59073E-04	-5.99955E-04	-6.44280E-04	-6.88504E-04	-7.36198E-04
-7.83618E-04	-8.34656E-04	-8.85251E-04	-9.39641E-04	-9.93767E-04	-1.05191E-03	-1.10960E-03	-1.17150E-03
-1.23300E-03	-1.29886E-03	-1.36435E-03	-1.43438E-03	-1.50402E-03	-1.57831E-03	-1.65230E-03	-1.73080E-03
-1.80904E-03	-1.89239E-03	-1.97534E-03	-2.06330E-03	-2.15113E-03	-2.24413E-03	-2.33680E-03	-2.43484E-03
-2.53264E-03	-2.63627E-03	-2.73994E-03	-2.84942E-03	-2.95850E-03	-3.07307E-03	-3.18711E-03	-3.30595E-03
-3.42349E-03	-3.54510E-03	-3.66465E-03	-3.78731E-03	-3.90635E-03	-4.02747E-03	-4.14499E-03	-4.26525E-03
-4.38161E-03	-4.50048E-03	-4.61564E-03	-4.73221E-03	-4.84430E-03	-4.95707E-03	-5.06474E-03	-5.17250E-03
-5.27420E-03	-5.37473E-03	-5.46842E-03	-5.56002E-03	-5.64371E-03	-5.72470E-03	-5.79697E-03	-5.86556E-03
-5.92508E-03	-5.98070E-03	-6.02701E-03	-6.06875E-03	-6.10066E-03	-6.12783E-03	-6.14453E-03	-6.15608E-03
-6.15731E-03	-6.15327E-03	-6.13893E-03	-6.11900E-03	-6.08881E-03	-6.05295E-03	-6.00711E-03	-5.95640E-03
-5.89894E-03	-5.84342E-03	-5.78540E-03	-5.72930E-03	-5.67007E-03	-5.61304E-03	-5.55352E-03	-5.49560E-03
-5.43400E-03	-5.37374E-03	-5.31021E-03	-5.24815E-03	-5.18269E-03	-5.11899E-03	-5.05178E-03	-4.98640E-03
-4.91751E-03	-4.85005E-03	-4.77850E-03	-4.70780E-03	-4.63293E-03	-4.55938E-03	-4.48203E-03	-4.40593E-03
-4.32520E-03	-4.24581E-03	-4.16291E-03	-4.08118E-03	-3.99511E-03	-3.91079E-03	-3.82306E-03	-3.73627E-03
-3.64601E-03	-3.55622E-03	-3.46430E-03	-3.37387E-03	-3.27841E-03	-3.19324E-03	-3.08838E-03	-2.96114E-03
-2.85322E-03	-2.76153E-03	-2.65754E-03	-2.55841E-03	-2.45700E-03	-2.35748E-03	-2.25838E-03	-2.16305E-03
-2.06633E-03	-1.97258E-03	-1.87663E-03	-1.78328E-03	-1.68697E-03	-1.59253E-03	-1.49567E-03	-1.40175E-03
-1.30353E-03	-1.20483E-03	-1.10305E-03	-1.00498E-03	-9.07768E-04	-8.19814E-04	-7.34746E-04	-6.52859E-04
-5.68851E-04	-4.89044E-04	-4.06903E-04	-3.27499E-04	-2.46623E-04	-1.69297E-04	-9.20973E-05	-2.28383E-05
4.54244E-05	1.11136E-04	1.80258E-04	2.48084E-04	3.19742E-04	3.89760E-04	4.61416E-04	5.27411E-04
5.91151E-04	6.50086E-04	7.14393E-04	7.78965E-04	8.45729E-04	9.09155E-04	9.72883E-04	1.02965E-03
1.08045E-03	1.12206E-03	1.16816E-03	1.21394E-03	1.25278E-03	1.28267E-03	1.32216E-03	1.36375E-03
1.40380E-03	1.44201E-03	1.48601E-03	1.52691E-03	1.56744E-03	1.60387E-03	1.64422E-03	1.68935E-03
1.74575E-03	1.80532E-03	1.87475E-03	1.94046E-03	1.99405E-03	2.04028E-03	2.09390E-03	2.14399E-03
2.19624E-03	2.25305E-03	2.31642E-03	2.37348E-03	2.42997E-03	2.48253E-03	2.53786E-03	2.59881E-03

Set1:
Acceleration Time Histories

deg

NPTS = 15999
DT = 0.005

ϕ 31

Time (sec)	FN Fault Normal	FP Fault Parallel	b-b' (ϕ rotate)
0.000	-.229294E-03	.846349E-04	-.455488E-04
0.005	-.223550E-03	.855744E-04	-.417852E-04
0.010	-.229094E-03	.844642E-04	-.455922E-04
0.015	-.223487E-03	.853374E-04	-.419559E-04
0.020	-.229147E-03	.841158E-04	-.459181E-04
0.025	-.223613E-03	.850263E-04	-.422875E-04
0.030	-.229336E-03	.837813E-04	-.463022E-04
0.035	-.223855E-03	.846820E-04	-.427072E-04
0.040	-.229787E-03	.834312E-04	-.468345E-04
0.045	-.224390E-03	.842517E-04	-.433516E-04
0.050	-.230386E-03	.830216E-04	-.474942E-04
0.055	-.225157E-03	.838036E-04	-.441307E-04
0.060	-.231215E-03	.824864E-04	-.483799E-04
0.065	-.226102E-03	.832060E-04	-.451297E-04
0.070	-.232339E-03	.819110E-04	-.494520E-04
0.075	-.227288E-03	.826452E-04	-.462212E-04
0.080	-.233588E-03	.812517E-04	-.506604E-04
0.085	-.228632E-03	.819433E-04	-.475151E-04
0.090	-.235142E-03	.805349E-04	-.520752E-04
0.095	-.230249E-03	.811835E-04	-.489992E-04
0.100	-.236864E-03	.797321E-04	-.536503E-04
0.105	-.232066E-03	.803734E-04	-.506294E-04
0.110	-.238817E-03	.788864E-04	-.553810E-04
0.115	-.234145E-03	.794605E-04	-.524826E-04
0.120	-.241022E-03	.778865E-04	-.573738E-04
0.125	-.236413E-03	.784114E-04	-.545500E-04
0.130	-.243395E-03	.768426E-04	-.594908E-04
0.135	-.238807E-03	.772888E-04	-.567452E-04
0.140	-.245884E-03	.756130E-04	-.618266E-04
0.145	-.241495E-03	.759186E-04	-.593042E-04
0.150	-.248729E-03	.741799E-04	-.645204E-04
0.155	-.244246E-03	.743994E-04	-.620232E-04
0.160	-.251533E-03	.724948E-04	-.674089E-04
0.165	-.247175E-03	.725528E-04	-.651147E-04
0.170	-.254651E-03	.705370E-04	-.706930E-04
0.175	-.250273E-03	.704333E-04	-.685270E-04
0.180	-.257843E-03	.681603E-04	-.743742E-04
0.185	-.253486E-03	.678435E-04	-.724017E-04
0.190	-.261235E-03	.653544E-04	-.785263E-04
0.195	-.256783E-03	.647248E-04	-.767730E-04
0.200	-.264584E-03	.619081E-04	-.832052E-04
0.205	-.260206E-03	.609499E-04	-.817718E-04
0.210	-.268007E-03	.577815E-04	-.885054E-04
0.215	-.263681E-03	.562669E-04	-.875756E-04
0.220	-.271630E-03	.525411E-04	-.948633E-04

Set1:

15999	0.0050						
-4.55488E-05	-4.17852E-05	-4.55922E-05	-4.19559E-05	-4.59181E-05	-4.22875E-05	-4.63022E-05	-4.27072E-05
-4.68345E-05	-4.33516E-05	-4.74942E-05	-4.41307E-05	-4.83799E-05	-4.51297E-05	-4.94520E-05	-4.62212E-05
-5.06604E-05	-4.75151E-05	-5.20752E-05	-4.89992E-05	-5.36503E-05	-5.06294E-05	-5.53810E-05	-5.24826E-05
-5.73738E-05	-5.45500E-05	-5.94908E-05	-5.67452E-05	-6.18266E-05	-5.93042E-05	-6.45204E-05	-6.20232E-05
-6.74089E-05	-6.51147E-05	-7.06930E-05	-6.85270E-05	-7.43742E-05	-7.24017E-05	-7.85263E-05	-7.67730E-05
-8.32052E-05	-8.17718E-05	-8.85054E-05	-8.75756E-05	-9.48633E-05	-9.43610E-05	-1.02191E-04	-1.02340E-04
-1.10877E-04	-1.11736E-04	-1.21159E-04	-1.22881E-04	-1.33214E-04	-1.35817E-04	-1.47151E-04	-1.50724E-04
-1.63113E-04	-1.67782E-04	-1.81386E-04	-1.87430E-04	-2.02593E-04	-2.10265E-04	-2.27200E-04	-2.36666E-04
-2.55619E-04	-2.67100E-04	-2.88239E-04	-3.02105E-04	-3.25704E-04	-3.42037E-04	-3.68391E-04	-3.87532E-04
-4.16848E-04	-4.39038E-04	-4.71735E-04	-4.97459E-04	-5.33854E-04	-5.63413E-04	-6.03835E-04	-6.37488E-04
-6.82202E-04	-7.20272E-04	-7.69489E-04	-8.12325E-04	-8.66564E-04	-9.14440E-04	-9.74084E-04	-1.02752E-03
-1.09287E-03	-1.15229E-03	-1.22382E-03	-1.28968E-03	-1.36824E-03	-1.44161E-03	-1.52787E-03	-1.60914E-03
-1.70387E-03	-1.79403E-03	-1.89797E-03	-1.99760E-03	-2.11145E-03	-2.22144E-03	-2.34620E-03	-2.46748E-03
-2.60384E-03	-2.73732E-03	-2.88631E-03	-3.03269E-03	-3.19496E-03	-3.35495E-03	-3.53102E-03	-3.70505E-03
-3.89565E-03	-4.08483E-03	-4.29097E-03	-4.49566E-03	-4.71707E-03	-4.93689E-03	-5.17297E-03	-5.40665E-03
-5.65613E-03	-5.90187E-03	-6.16206E-03	-6.41697E-03	-6.68419E-03	-6.94407E-03	-7.21542E-03	-7.47985E-03
-7.75502E-03	-8.02196E-03	-8.29875E-03	-8.56500E-03	-8.83933E-03	-9.10137E-03	-9.36941E-03	-9.62331E-03
-9.88124E-03	-1.01225E-02	-1.03658E-02	-1.05902E-02	-1.08147E-02	-1.10187E-02	-1.12211E-02	-1.14011E-02
-1.15779E-02	-1.17302E-02	-1.18780E-02	-1.19999E-02	-1.21158E-02	-1.22049E-02	-1.22869E-02	-1.23410E-02
-1.23877E-02	-1.24058E-02	-1.24157E-02	-1.23969E-02	-1.23693E-02	-1.23129E-02	-1.22492E-02	-1.21570E-02
-1.20659E-02	-1.19635E-02	-1.18708E-02	-1.17666E-02	-1.16716E-02	-1.15653E-02	-1.14679E-02	-1.13579E-02
-1.12553E-02	-1.11395E-02	-1.10315E-02	-1.09100E-02	-1.07954E-02	-1.06676E-02	-1.05470E-02	-1.04131E-02
-1.02869E-02	-1.01489E-02	-1.00194E-02	-9.87747E-03	-9.74313E-03	-9.59741E-03	-9.45972E-03	-9.31003E-03
-9.17010E-03	-9.01902E-03	-8.87523E-03	-8.72079E-03	-8.57648E-03	-8.42020E-03	-8.27207E-03	-8.11204E-03
-7.96108E-03	-7.79647E-03	-7.64008E-03	-7.47183E-03	-7.31048E-03	-7.14527E-03	-6.97691E-03	-6.77579E-03
-6.60303E-03	-6.43649E-03	-6.27469E-03	-6.10483E-03	-5.94647E-03	-5.77620E-03	-5.61180E-03	-5.43187E-03
-5.26117E-03	-5.08171E-03	-4.91551E-03	-4.74438E-03	-4.58837E-03	-4.42523E-03	-4.27441E-03	-4.11607E-03
-3.97364E-03	-3.82632E-03	-3.68968E-03	-3.54409E-03	-3.40659E-03	-3.24561E-03	-3.08246E-03	-2.90626E-03
-2.74115E-03	-2.56950E-03	-2.41987E-03	-2.27417E-03	-2.14418E-03	-2.00049E-03	-1.85789E-03	-1.69618E-03
-1.54044E-03	-1.37980E-03	-1.23954E-03	-1.09489E-03	-9.63826E-04	-8.28530E-04	-7.08450E-04	-5.80993E-04
-4.67737E-04	-3.49988E-04	-2.51068E-04	-1.46387E-04	-4.78459E-05	6.17798E-05	1.59244E-04	2.72232E-04
3.87613E-04	5.26812E-04	6.48679E-04	7.64265E-04	8.79682E-04	1.01850E-03	1.13870E-03	1.27337E-03
1.41618E-03	1.57232E-03	1.70696E-03	1.83813E-03	1.95253E-03	2.08181E-03	2.19197E-03	2.28322E-03
2.34057E-03	2.38899E-03	2.40773E-03	2.45773E-03	2.55004E-03	2.65946E-03	2.73579E-03	2.83492E-03
2.94272E-03	3.05604E-03	3.15897E-03	3.28781E-03	3.41001E-03	3.54424E-03	3.67543E-03	3.79312E-03

Time history matched to spectrum::::SetTarget:syn_soil_fn.target with fling
15999 0.0050

3.26925E-04	3.22966E-04	3.26473E-04	3.22672E-04	3.26305E-04
3.22578E-04	3.26379E-04	3.22872E-04	3.26715E-04	3.23292E-04
3.27355E-04	3.24016E-04	3.28258E-04	3.25098E-04	3.29424E-04
3.26410E-04	3.30862E-04	3.27922E-04	3.32616E-04	3.29781E-04
3.34579E-04	3.31860E-04	3.36774E-04	3.34149E-04	3.39294E-04
3.36732E-04	3.42108E-04	3.39556E-04	3.45069E-04	3.42643E-04
3.48313E-04	3.45898E-04	3.51778E-04	3.49447E-04	3.55453E-04
3.53143E-04	3.59391E-04	3.57112E-04	3.63486E-04	3.61333E-04
3.67843E-04	3.65733E-04	3.72621E-04	3.70479E-04	3.77398E-04
3.75372E-04	3.82554E-04	3.80569E-04	3.88014E-04	3.86176E-04
3.93883E-04	3.92088E-04	4.00110E-04	3.98535E-04	4.06914E-04
4.05318E-04	4.14211E-04	4.12920E-04	4.22212E-04	4.21131E-04
4.30938E-04	4.30203E-04	4.40598E-04	4.40041E-04	4.51087E-04
4.50951E-04	4.62690E-04	4.63005E-04	4.75563E-04	4.76476E-04
4.89853E-04	4.91334E-04	5.05771E-04	5.08060E-04	5.23611E-04
5.26803E-04	5.43519E-04	5.47719E-04	5.65810E-04	5.70850E-04
5.90233E-04	5.96355E-04	6.17061E-04	6.24211E-04	6.46240E-04
6.54294E-04	6.77509E-04	6.86340E-04	7.10448E-04	7.19856E-04
7.44825E-04	7.54695E-04	7.80861E-04	7.91760E-04	8.19154E-04
8.30988E-04	8.59674E-04	8.72326E-04	9.02241E-04	9.15618E-04
9.46540E-04	9.61177E-04	9.94830E-04	1.01291E-03	1.05085E-03
1.07342E-03	1.11668E-03	1.14493E-03	1.19512E-03	1.23071E-03
1.28941E-03	1.33414E-03	1.40165E-03	1.45247E-03	1.52461E-03
1.57952E-03	1.65554E-03	1.71340E-03	1.79162E-03	1.85042E-03
1.92854E-03	1.98566E-03	2.06053E-03	2.11166E-03	2.17813E-03
2.21761E-03	2.27210E-03	2.30087E-03	2.34403E-03	2.35978E-03
2.38792E-03	2.38592E-03	2.39380E-03	2.36954E-03	2.35327E-03
2.30297E-03	2.25929E-03	2.18086E-03	2.10946E-03	2.00362E-03
1.90576E-03	1.77650E-03	1.65859E-03	1.51138E-03	1.37855E-03
1.22147E-03	1.08445E-03	9.28806E-04	7.99215E-04	6.56079E-04
5.44831E-04	4.27032E-04	3.44386E-04	2.56795E-04	2.06605E-04
1.53906E-04	1.42083E-04	1.26207E-04	1.45180E-04	1.59219E-04
2.04421E-04	2.30178E-04	2.77050E-04	2.99068E-04	3.32826E-04
3.44355E-04	3.78669E-04	3.87069E-04	4.10904E-04	4.08783E-04
4.22548E-04	4.18831E-04	4.38193E-04	4.27504E-04	4.32975E-04
4.20312E-04	4.22947E-04	3.98566E-04	3.96445E-04	3.69618E-04
3.54319E-04	3.18294E-04	3.05830E-04	2.68629E-04	2.51451E-04
2.14407E-04	1.97418E-04	1.61760E-04	1.52142E-04	1.21608E-04
1.11591E-04	8.45403E-05	8.18093E-05	6.09132E-05	6.41252E-05
5.02442E-05	6.08481E-05	5.28891E-05	6.93636E-05	6.99296E-05
9.50508E-05	1.01297E-04	1.32223E-04	1.47679E-04	1.84303E-04
1.92672E-04	2.18670E-04	2.31427E-04	2.68167E-04	2.79381E-04
3.15910E-04	3.34128E-04	3.65922E-04	3.91972E-04	4.66039E-04
5.13730E-04	5.72446E-04	6.20337E-04	6.86539E-04	7.25410E-04
7.98595E-04	8.50665E-04	8.99889E-04	9.23472E-04	9.83563E-04
1.02181E-03	1.07195E-03	1.10692E-03	1.16236E-03	1.18945E-03
1.25518E-03	1.31923E-03	1.39378E-03	1.43830E-03	1.51411E-03
1.57385E-03	1.65155E-03	1.70815E-03	1.78690E-03	1.84360E-03
1.91489E-03	1.96172E-03	2.03564E-03	2.08783E-03	2.14495E-03
2.17256E-03	2.22695E-03	2.26118E-03	2.31001E-03	2.33342E-03

Time history	matched to sp	ectrum::::SetTa	rget:syn_soil_f	p.target
15999 0.005				
2.64608E-05	2.41402E-05	2.63955E-05	2.41379E-05	2.64552E-05
2.41346E-05	2.64686E-05	2.42488E-05	2.65829E-05	2.43515E-05
2.66930E-05	2.45876E-05	2.69721E-05	2.47964E-05	2.72156E-05
2.51533E-05	2.76196E-05	2.55489E-05	2.80238E-05	2.60234E-05
2.85685E-05	2.65294E-05	2.91680E-05	2.72076E-05	2.98776E-05
2.79792E-05	3.06566E-05	2.87897E-05	3.15847E-05	2.97651E-05
3.25832E-05	3.08496E-05	3.37465E-05	3.20434E-05	3.49561E-05
3.33946E-05	3.63850E-05	3.47838E-05	3.78528E-05	3.63692E-05
3.94625E-05	3.80565E-05	4.13325E-05	3.99034E-05	4.32119E-05
4.19236E-05	4.52395E-05	4.39700E-05	4.74812E-05	4.63115E-05
4.98101E-05	4.86625E-05	5.22440E-05	5.12224E-05	5.48239E-05
5.38946E-05	5.75465E-05	5.67013E-05	6.04760E-05	5.95678E-05
6.33425E-05	6.26002E-05	6.64506E-05	6.57282E-05	6.94799E-05
6.88824E-05	7.27339E-05	7.20840E-05	7.59585E-05	7.54135E-05
7.92577E-05	7.87127E-05	8.24466E-05	8.19878E-05	8.57846E-05
8.52082E-05	8.89578E-05	8.84518E-05	9.21079E-05	9.14853E-05
9.50784E-05	9.45410E-05	9.80406E-05	9.74296E-05	1.00815E-04
1.00215E-04	1.03524E-04	1.02916E-04	1.06196E-04	1.05671E-04
1.08952E-04	1.08455E-04	1.11962E-04	1.11705E-04	1.15376E-04
1.15507E-04	1.19734E-04	1.20621E-04	1.25519E-04	1.27404E-04
1.33468E-04	1.36707E-04	1.44389E-04	1.49696E-04	1.59551E-04
1.67630E-04	1.80645E-04	1.92148E-04	2.08974E-04	2.25023E-04
2.46953E-04	2.68389E-04	2.96262E-04	3.24533E-04	3.59556E-04
3.95545E-04	4.38841E-04	4.83576E-04	5.35977E-04	5.90342E-04
6.52706E-04	7.17308E-04	7.89773E-04	8.64633E-04	9.47126E-04
1.03180E-03	1.12338E-03	1.21661E-03	1.31594E-03	1.41579E-03
1.52068E-03	1.62452E-03	1.73193E-03	1.83661E-03	1.94276E-03
2.04471E-03	2.14614E-03	2.24115E-03	2.33376E-03	2.41796E-03
2.49755E-03	2.56663E-03	2.62932E-03	2.68118E-03	2.72570E-03
2.75824E-03	2.78343E-03	2.79644E-03	2.80127E-03	2.79360E-03
2.77827E-03	2.75148E-03	2.71652E-03	2.67073E-03	2.62022E-03
2.56111E-03	2.49631E-03	2.42313E-03	2.34699E-03	2.26446E-03
2.18360E-03	2.10328E-03	2.02714E-03	1.95154E-03	1.88160E-03
1.81188E-03	1.74645E-03	1.68251E-03	1.62338E-03	1.56311E-03
1.50546E-03	1.44739E-03	1.39331E-03	1.33808E-03	1.28588E-03
1.23338E-03	1.18329E-03	1.12837E-03	1.07556E-03	1.02320E-03
9.72947E-04	9.19780E-04	8.69469E-04	8.16829E-04	7.66959E-04
7.18780E-04	6.71965E-04	6.20637E-04	5.73581E-04	5.25549E-04
4.74724E-04	4.19353E-04	3.68812E-04	3.16674E-04	2.64464E-04
2.11076E-04	1.58172E-04	1.04599E-04	6.04061E-05	1.44051E-05

Set3:
Acceleration Time Histories

			deg
NPTS =	15999	ϕ	350
DT =	0.005		

Time (sec)	FN Fault Normal	FP Fault Parallel	a-a' (ϕ rotate)
0.000	.326925E-03	.264608E-04	-.307111E-04
0.005	.322966E-03	.241402E-04	-.323090E-04
0.010	.326473E-03	.263955E-04	-.306969E-04
0.015	.322672E-03	.241379E-04	-.322602E-04
0.020	.326305E-03	.264552E-04	-.306090E-04
0.025	.322578E-03	.241346E-04	-.322472E-04
0.030	.326379E-03	.264686E-04	-.306086E-04
0.035	.322872E-03	.242488E-04	-.321857E-04
0.040	.326715E-03	.265829E-04	-.305545E-04
0.045	.323292E-03	.243515E-04	-.321575E-04
0.050	.327355E-03	.266930E-04	-.305571E-04
0.055	.324016E-03	.245876E-04	-.320507E-04
0.060	.328258E-03	.269721E-04	-.304391E-04
0.065	.325098E-03	.247964E-04	-.320330E-04
0.070	.329424E-03	.272156E-04	-.304018E-04
0.075	.326410E-03	.251533E-04	-.319094E-04
0.080	.330862E-03	.276196E-04	-.302536E-04
0.085	.327922E-03	.255489E-04	-.317823E-04
0.090	.332616E-03	.280238E-04	-.301601E-04
0.095	.329781E-03	.260234E-04	-.316378E-04
0.100	.334579E-03	.285685E-04	-.299646E-04
0.105	.331860E-03	.265294E-04	-.315005E-04
0.110	.336774E-03	.291680E-04	-.297554E-04
0.115	.334149E-03	.272076E-04	-.312301E-04
0.120	.339294E-03	.298776E-04	-.294941E-04
0.125	.336732E-03	.279792E-04	-.309187E-04
0.130	.342108E-03	.306566E-04	-.292155E-04
0.135	.339556E-03	.287897E-04	-.306109E-04
0.140	.345069E-03	.315847E-04	-.288157E-04
0.145	.342643E-03	.297651E-04	-.301865E-04
0.150	.348313E-03	.325832E-04	-.283957E-04
0.155	.345898E-03	.308496E-04	-.296836E-04
0.160	.351778E-03	.337465E-04	-.278518E-04
0.165	.349447E-03	.320434E-04	-.291243E-04
0.170	.355453E-03	.349561E-04	-.272988E-04
0.175	.353143E-03	.333946E-04	-.284354E-04
0.180	.359391E-03	.363850E-04	-.265753E-04
0.185	.357112E-03	.347838E-04	-.277565E-04
0.190	.363486E-03	.378528E-04	-.258409E-04
0.195	.361333E-03	.363692E-04	-.269282E-04
0.200	.367843E-03	.394625E-04	-.250123E-04
0.205	.365733E-03	.380565E-04	-.260305E-04
0.210	.372621E-03	.413325E-04	-.240004E-04
0.215	.370479E-03	.399034E-04	-.250359E-04
0.220	.377398E-03	.432119E-04	-.229791E-04

excerpt from S3AA.AC8

Set3:

15999	0.05						
-3.07111E-05	-3.23090E-05	-3.06969E-05	-3.22602E-05	-3.06090E-05	-3.22472E-05	-3.06086E-05	-3.21857E-05
-3.05545E-05	-3.21575E-05	-3.05571E-05	-3.20507E-05	-3.04391E-05	-3.20330E-05	-3.04018E-05	-3.19094E-05
-3.02536E-05	-3.17823E-05	-3.01601E-05	-3.16378E-05	-2.99646E-05	-3.15005E-05	-2.97554E-05	-3.12301E-05
-2.94941E-05	-3.09187E-05	-2.92155E-05	-3.06109E-05	-2.88157E-05	-3.01865E-05	-2.83957E-05	-2.96836E-05
-2.78518E-05	-2.91243E-05	-2.72988E-05	-2.84354E-05	-2.65753E-05	-2.77565E-05	-2.58409E-05	-2.69282E-05
-2.50123E-05	-2.60305E-05	-2.40004E-05	-2.50359E-05	-2.29791E-05	-2.38960E-05	-2.18776E-05	-2.27831E-05
-2.06181E-05	-2.14508E-05	-1.93437E-05	-2.01622E-05	-1.80281E-05	-1.87607E-05	-1.66689E-05	-1.73069E-05
-1.52547E-05	-1.58630E-05	-1.37591E-05	-1.44658E-05	-1.24514E-05	-1.30548E-05	-1.10680E-05	-1.16827E-05
-9.90613E-06	-1.04709E-05	-8.71636E-06	-9.41112E-06	-7.77616E-06	-8.47138E-06	-7.00851E-06	-7.80236E-06
-6.63213E-06	-7.48149E-06	-6.44278E-06	-7.56466E-06	-6.77476E-06	-8.00240E-06	-7.54332E-06	-9.03159E-06
-8.85890E-06	-1.04513E-05	-1.06004E-05	-1.24437E-05	-1.29351E-05	-1.49241E-05	-1.56970E-05	-1.78290E-05
-1.87855E-05	-2.09362E-05	-2.20405E-05	-2.42446E-05	-2.53345E-05	-2.74794E-05	-2.86213E-05	-3.05471E-05
-3.13662E-05	-3.26895E-05	-3.30603E-05	-3.35271E-05	-3.29250E-05	-3.22767E-05	-3.05554E-05	-2.84678E-05
-2.53515E-05	-2.13137E-05	-1.60088E-05	-9.58627E-06	-1.73110E-06	7.89424E-06	1.92971E-05	3.26410E-05
4.83669E-05	6.73837E-05	8.93475E-05	1.15255E-04	1.44693E-04	1.78701E-04	2.16722E-04	2.60051E-04
3.07903E-04	3.61604E-04	4.19967E-04	4.84811E-04	5.54509E-04	6.31044E-04	7.11771E-04	7.98589E-04
8.88915E-04	9.84508E-04	1.08292E-03	1.18553E-03	1.28994E-03	1.39724E-03	1.50461E-03	1.61374E-03
1.72121E-03	1.82840E-03	1.93200E-03	2.03330E-03	2.12868E-03	2.21915E-03	2.30136E-03	2.37799E-03
2.44490E-03	2.50423E-03	2.55283E-03	2.59267E-03	2.61993E-03	2.63723E-03	2.64145E-03	2.63553E-03
2.61545E-03	2.58556E-03	2.54454E-03	2.49547E-03	2.43371E-03	2.36440E-03	2.28613E-03	2.20241E-03
2.11493E-03	2.03135E-03	1.94823E-03	1.86996E-03	1.79522E-03	1.72456E-03	1.65417E-03	1.58973E-03
1.52737E-03	1.46838E-03	1.40921E-03	1.35267E-03	1.29605E-03	1.24351E-03	1.19116E-03	1.14166E-03
1.09187E-03	1.04202E-03	9.90375E-04	9.43467E-04	8.96639E-04	8.50535E-04	8.03153E-04	7.57772E-04
7.11643E-04	6.70628E-04	6.27475E-04	5.83119E-04	5.38448E-04	4.96448E-04	4.48134E-04	3.98302E-04
3.49002E-04	3.01285E-04	2.49310E-04	1.99145E-04	1.45203E-04	9.38260E-05	4.74435E-05	2.04306E-06
-4.95782E-05	-9.82008E-05	-1.47509E-04	-1.94942E-04	-2.44002E-04	-2.95735E-04	-3.49393E-04	-4.00048E-04
-4.53927E-04	-4.98812E-04	-5.38912E-04	-5.83194E-04	-6.29181E-04	-6.71370E-04	-7.19922E-04	-7.65175E-04
-8.12064E-04	-8.56867E-04	-8.95914E-04	-9.50131E-04	-1.02993E-03	-1.09580E-03	-1.15147E-03	-1.21486E-03
-1.28455E-03	-1.35541E-03	-1.41748E-03	-1.45675E-03	-1.50185E-03	-1.55660E-03	-1.60649E-03	-1.65422E-03
-1.70523E-03	-1.74791E-03	-1.80110E-03	-1.86380E-03	-1.91939E-03	-1.97233E-03	-2.03172E-03	-2.07228E-03
-2.10349E-03	-2.14647E-03	-2.18930E-03	-2.21656E-03	-2.25792E-03	-2.31267E-03	-2.35820E-03	-2.39600E-03
-2.43995E-03	-2.48322E-03	-2.52899E-03	-2.56186E-03	-2.58058E-03	-2.60520E-03	-2.63400E-03	-2.64739E-03
-2.67545E-03	-2.71811E-03	-2.74717E-03	-2.76851E-03	-2.80071E-03	-2.82725E-03	-2.84926E-03	-2.86841E-03
-2.89530E-03	-2.91574E-03	-2.90756E-03	-2.88826E-03	-2.88787E-03	-2.88122E-03	-2.86303E-03	-2.84224E-03
-2.82644E-03	-2.80630E-03	-2.76729E-03	-2.73530E-03	-2.75193E-03	-2.76641E-03	-2.75244E-03	-2.74855E-03

Set3:
Acceleration Time Histories

			deg
NPTS =	15999	ϕ	31
DT =	0.005		

Time (sec)	FN Fault Normal	FP Fault Parallel	b-b' (ϕ rotate)
0.000	.326925E-03	.264608E-04	.191060E-03
0.005	.322966E-03	.241402E-04	.187032E-03
0.010	.326473E-03	.263955E-04	.190771E-03
0.015	.322672E-03	.241379E-04	.186879E-03
0.020	.326305E-03	.264552E-04	.190736E-03
0.025	.322578E-03	.241346E-04	.186827E-03
0.030	.326379E-03	.264686E-04	.190786E-03
0.035	.322872E-03	.242488E-04	.187077E-03
0.040	.326715E-03	.265829E-04	.191057E-03
0.045	.323292E-03	.243515E-04	.187381E-03
0.050	.327355E-03	.266930E-04	.191481E-03
0.055	.324016E-03	.245876E-04	.187956E-03
0.060	.328258E-03	.269721E-04	.192185E-03
0.065	.325098E-03	.247964E-04	.188692E-03
0.070	.329424E-03	.272156E-04	.192994E-03
0.075	.326410E-03	.251533E-04	.189674E-03
0.080	.330862E-03	.276196E-04	.194081E-03
0.085	.327922E-03	.255489E-04	.190792E-03
0.090	.332616E-03	.280238E-04	.195331E-03
0.095	.329781E-03	.260234E-04	.192156E-03
0.100	.334579E-03	.285685E-04	.196809E-03
0.105	.331860E-03	.265294E-04	.193661E-03
0.110	.336774E-03	.291680E-04	.198453E-03
0.115	.334149E-03	.272076E-04	.195421E-03
0.120	.339294E-03	.298776E-04	.200359E-03
0.125	.336732E-03	.279792E-04	.197413E-03
0.130	.342108E-03	.306566E-04	.202477E-03
0.135	.339556E-03	.287897E-04	.199562E-03
0.140	.345069E-03	.315847E-04	.204797E-03
0.145	.342643E-03	.297651E-04	.201988E-03
0.150	.348313E-03	.325832E-04	.207324E-03
0.155	.345898E-03	.308496E-04	.204594E-03
0.160	.351778E-03	.337465E-04	.210105E-03
0.165	.349447E-03	.320434E-04	.207445E-03
0.170	.355453E-03	.349561E-04	.213035E-03
0.175	.353143E-03	.333946E-04	.210507E-03
0.180	.359391E-03	.363850E-04	.216288E-03
0.185	.357112E-03	.347838E-04	.213742E-03
0.190	.363486E-03	.378528E-04	.219655E-03
0.195	.361333E-03	.363692E-04	.217275E-03
0.200	.367843E-03	.394625E-04	.223279E-03
0.205	.365733E-03	.380565E-04	.220987E-03
0.210	.372621E-03	.413325E-04	.227343E-03
0.215	.370479E-03	.399034E-04	.225015E-03
0.220	.377398E-03	.432119E-04	.231414E-03

Set3:

15999	0.005						
1.91060E-04	1.87032E-04	1.90771E-04	1.86879E-04	1.90736E-04	1.86827E-04	1.90786E-04	1.87077E-04
1.91057E-04	1.87381E-04	1.91481E-04	1.87956E-04	1.92185E-04	1.88692E-04	1.92994E-04	1.89674E-04
1.94081E-04	1.90792E-04	1.95331E-04	1.92156E-04	1.96809E-04	1.93661E-04	1.98453E-04	1.95421E-04
2.00359E-04	1.97413E-04	2.02477E-04	1.99562E-04	2.04797E-04	2.01988E-04	2.07324E-04	2.04594E-04
2.10105E-04	2.07445E-04	2.13035E-04	2.10507E-04	2.16288E-04	2.13742E-04	2.19655E-04	2.17275E-04
2.23279E-04	2.20987E-04	2.27343E-04	2.25015E-04	2.31414E-04	2.29266E-04	2.35808E-04	2.33697E-04
2.40541E-04	2.38592E-04	2.45560E-04	2.43652E-04	2.50854E-04	2.49167E-04	2.56569E-04	2.54951E-04
2.62661E-04	2.61272E-04	2.69293E-04	2.67958E-04	2.76245E-04	2.75230E-04	2.83884E-04	2.82978E-04
2.91883E-04	2.91301E-04	3.00648E-04	3.00253E-04	3.10042E-04	3.10045E-04	3.20230E-04	3.20526E-04
3.31162E-04	3.31947E-04	3.43211E-04	3.44361E-04	3.56185E-04	3.57914E-04	3.70366E-04	3.72428E-04
3.85491E-04	3.88183E-04	4.01847E-04	4.05006E-04	4.19253E-04	4.22888E-04	4.37680E-04	4.41708E-04
4.56935E-04	4.61331E-04	4.77003E-04	4.81660E-04	4.98143E-04	5.03537E-04	5.20792E-04	5.27000E-04
5.45397E-04	5.52673E-04	5.72279E-04	5.80785E-04	6.01908E-04	6.12223E-04	6.36141E-04	6.50002E-04
6.77989E-04	6.96539E-04	7.29976E-04	7.54385E-04	7.94658E-04	8.26745E-04	8.75775E-04	9.17188E-04
9.75849E-04	1.02626E-03	1.09343E-03	1.15256E-03	1.22883E-03	1.29697E-03	1.38217E-03	1.45906E-03
1.55275E-03	1.63754E-03	1.73822E-03	1.82872E-03	1.93367E-03	2.02658E-03	2.13315E-03	2.22788E-03
2.33525E-03	2.42894E-03	2.53335E-03	2.62132E-03	2.71745E-03	2.79468E-03	2.87730E-03	2.93877E-03
3.00322E-03	3.04427E-03	3.08688E-03	3.10454E-03	3.12236E-03	3.11500E-03	3.10800E-03	3.07663E-03
3.04638E-03	2.99337E-03	2.94440E-03	2.87539E-03	2.81279E-03	2.73249E-03	2.66205E-03	2.57842E-03
2.50588E-03	2.42152E-03	2.35238E-03	2.27456E-03	2.21294E-03	2.14203E-03	2.08654E-03	2.02303E-03
1.97700E-03	1.92141E-03	1.88029E-03	1.82683E-03	1.78426E-03	1.73044E-03	1.69203E-03	1.64155E-03
1.60314E-03	1.55039E-03	1.50806E-03	1.45637E-03	1.41998E-03	1.36714E-03	1.32521E-03	1.27369E-03
1.23211E-03	1.17248E-03	1.12612E-03	1.06742E-03	1.01647E-03	9.52339E-04	9.02795E-04	8.38513E-04
7.86919E-04	7.26542E-04	6.77664E-04	6.15302E-04	5.70014E-04	5.13116E-04	4.64391E-04	4.02997E-04
3.58268E-04	3.02815E-04	2.59716E-04	2.06805E-04	1.66919E-04	1.16899E-04	8.75030E-05	4.83639E-05
2.01685E-05	-1.79910E-05	-4.03064E-05	-7.12946E-05	-8.95984E-05	-1.29051E-04	-1.58435E-04	-1.94026E-04
-2.16446E-04	-2.48043E-04	-2.58611E-04	-2.85017E-04	-3.03864E-04	-3.23230E-04	-3.16147E-04	-3.23764E-04
-3.25461E-04	-3.32552E-04	-3.22436E-04	-3.43732E-04	-3.64437E-04	-3.87079E-04	-4.02737E-04	-4.42205E-04
-4.62827E-04	-4.99030E-04	-5.19646E-04	-5.30535E-04	-5.32853E-04	-5.62461E-04	-5.62098E-04	-5.60970E-04
-5.55705E-04	-5.63196E-04	-5.58990E-04	-5.73763E-04	-5.70385E-04	-5.78765E-04	-5.77996E-04	-5.75524E-04
-5.55197E-04	-5.61408E-04	-5.49446E-04	-5.38407E-04	-5.36348E-04	-5.65609E-04	-5.69007E-04	-5.79107E-04
-5.84828E-04	-6.06891E-04	-6.17912E-04	-6.25184E-04	-6.03779E-04	-6.07366E-04	-6.01662E-04	-6.00092E-04
-6.06895E-04	-6.39054E-04	-6.44552E-04	-6.61792E-04	-6.75412E-04	-7.09357E-04	-7.36139E-04	-7.65818E-04
-7.93627E-04	-8.41287E-04	-8.23950E-04	-7.93103E-04	-7.87165E-04	-7.95008E-04	-7.68409E-04	-7.58707E-04
-7.37335E-04	-7.32044E-04	-7.22786E-04	-7.35997E-04	-7.67195E-04	-8.15950E-04	-8.29193E-04	-8.60219E-04

Attachment D

SHAKE

Input and Output Excerpts

(see Table 7-7 for listing of files)

```
16384        0.5
    8
    7    1   10       100.
   11 100. #1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
0.0001     0.000316  0.001     0.00316   0.01      0.0316    0.1       0.316
1.         3.16      10.
1.000      1.000     1.000     .94       .82       .64       .40       .21
.09        .04       .02
   11   1.  damping for Clay PI 15 (Vucetic & Dobry 1991)
0.0001     0.000316  0.001     0.00316   0.01      0.0316    0.1       0.316
1.         3.16      10.
1.7        1.7       1.7       2.6       4.5       7.8       11.7      16.3
20.2       23.0      23.0
   11 100. #2 modulus for Sand (20 to 50 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      0.999     0.991     0.953     0.830     0.620     0.364     0.181
0.071      0.025     0.010
   11   1.  damping for Sand (20 to 50 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.250      1.300     1.455     2.080     3.750     6.925     12.600    18.905
24.840     27.2      28.9
   11 100. #3 modulus for Sand (50 to 120 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      1.000     0.995     0.972     0.879     0.701     0.442     0.230
0.097      0.037     0.014
   11   1.  damping for Sand (50 to 120 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.090      1.145     1.300     1.665     2.865     5.415     10.465    16.560
22.915     25.5      27.0
   11 100. #4 modulus for Sand (120 to 250 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      1.000     0.996     0.980     0.910     0.756     0.510     0.283
0.122      0.050     0.019
   11   1.  damping for Sand (120 to 250 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
0.935      0.935     1.090     1.455     2.340     4.375     8.695     14.580
21.250     23.8      25.5
   11 100. #5 modulus for Sand (250 to 500 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      1.000     0.997     0.986     0.932     0.809     0.573     0.338
0.152      0.067     0.025
   11   1.  damping for Sand (250 to 500 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
0.800      0.800     0.900     1.145     1.875     3.490     7.185     12.705
19.270     22.4      24.0
   11 100. #6 modulus for Sand (> 500 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      1.000     0.998     0.991     0.955     0.860     0.658     0.417
```

```
0.207      0.083      0.032
   11    1.  damping for Sand (> 500 ft) (EPRI 1993)
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
0.570      0.625      0.625      0.850      1.280      2.500      5.520      10.260
16.770     20.2       22.5
   11  100. #7 modulus for Weathered Rock
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
1.000      1.000      1.000      0.990      0.960      0.900      0.75       0.55
0.34       0.2        0.12
   11    1.  damping for Weathered Rock
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
0.24       0.42       0.8        1.4        2.8        5.1        9.8        15.5
21.        25.        28.
    2
    1   11    1 ISFSI Pad, HBPP, ISFSI, 08/2002
    1    2    1       4.0                  .05        .130         1.      128.    1.
    2    2    1       4.0                  .05        .130         1.      128.    1.
    3    1    1       5.0                  .05        .130      1830.              1.
    4    1    1       5.0                  .05        .130      1830.              1.
    5    3    1       5.0                  .05        .130         1.      188.    1.
    6    3    1       5.0                  .05        .130         1.      188.    1.
    7    3    1       5.0                  .05        .130         1.      188.    1.
    8    3    1       5.0                  .05        .130         1.      188.    1.
    9    3    1       5.0                  .05        .130         1.      188.    1.
   10    3    1       5.0                  .05        .130         1.      188.    1.
   11                                      .05        .130      1500.              1.
    1
1599916384       .005    2(8E15.7) SET 1, Section A-A, HBPP, 08/2002
       1.                   20.
S1AA.AC8
    3
    1    0
    4
    0   30         1.       0.65
    5
    1    2    3    4    5    6    7    8    9   10   11   11
    0    1    1    1    1    1    1    1    1    1    1    0
    1    0    0    0    0    0    0    0    0    0    0    1
    0
```

```
          ********************************************
          ********************************************
          **                                        **
          ** SHAKE -- A COMPUTER PROGRAM FOR        **
          **          EARTHQUAKE RESPONSE ANALYSIS  **
          **          OF HORIZONTALLY LAYERED SITES **
          **                                        **
          **                                        **
          ** MS-DOS VERSION - CONVERTED TO IBM-PC BY **
          **                  Shyh-Shiun Lai, WCC   **
          **                  January 1985          **
          **                                        **
          ** (Modified to Use 16384 Points and 100  **
          **  Soil Layers, S.J. Chiou, August 1995) **
          **                                        **
          ********************************************
          ********************************************
 Output file name : PD1A.OUT
 Start time : 19``/``/`` --
 Start time : 19``/``/`` --

  MAX. NUMBER OF TERMS IN FOURIER TRANSFORM =     16384
  NECESSARY LENGTH OF BLANK COMMON X        =    102419
  EARTH PRESSURE AT REST FOR SAND           =     0.500
1******   OPTION  8  ***  READ RELATION BETWEEN SOIL PROPERTIES AND STRAIN

    CURVES FOR RELATION STRAIN VERSUS SHEAR MODULUS AND DAMPING

 (LINES SKIPPED)

 1******   OPTION  2  ***  READ SOIL PROFILE

      NEW SOIL PROFILE NO.  1      IDENTIFICATION   ISFSI Pad, HBPP, ISFSI, 08/2002

 0NUMBER OF LAYERS                 11          DEPTH TO BEDROCK         48.00
  NUMBER OF FIRST SUBMERGED LAYER   1          DEPTH TO WATER LEVEL      0.00
```

LAYER	TYPE	MAX-MOD	THICKNESS	DEPTH	EFF. PRESS.	MODULUS	DAMPING	UNIT WEIGTH	SHEAR VEL	SVMAX
1	2	1215.214	4.00	2.00	0.135	1215.214	0.0500	0.1300	548.634	548.634
2	2	2104.812	4.00	6.00	0.406	2104.812	0.0500	0.1300	722.043	722.043
3	1	13520.403	5.00	10.50	0.710	13520.403	0.0500	0.1300	1830.000	1830.000
4	1	13520.403	5.00	15.50	1.048	13520.403	0.0500	0.1300	1830.000	1830.000
5	3	5714.292	5.00	20.50	1.386	5714.292	0.0500	0.1300	1189.700	1189.700
6	3	6373.172	5.00	25.50	1.724	6373.172	0.0500	0.1300	1256.418	1256.418
7	3	6970.043	5.00	30.50	2.062	6970.043	0.0500	0.1300	1313.935	1313.935
8	3	7519.687	5.00	35.50	2.400	7519.687	0.0500	0.1300	1364.760	1364.760
9	3	8031.804	5.00	40.50	2.738	8031.804	0.0500	0.1300	1410.467	1410.467
10	3	8513.169	5.00	45.50	3.076	8513.169	0.0500	0.1300	1452.118	1452.118
11	BASE					9084.	0.050	0.1300	1500.	

```
  PERIOD = 0.15 FROM AVERAGE SHEARVEL. =   1319.

 MAXIMUM AMPLIFICATION =  13.57
 FOR FREQUENCY         =   7.08 C/SEC.
     PERIOD            =   0.14 SEC.

1******   OPTION  1  ***  READ INPUT MOTION

 EARTHQUAKE  -   Section A-A, HBPP, 08/2002

15999 ACCELERATION VALUES AT TIME INTERVAL    0.0050

    THE VALUES ARE LISTED ROW BY ROW AS READ FROM CARDS
    TRAILING ZEROS ARE ADDED TO GIVE A TOTAL OF16384 VALUES


 MAXIMUM ACCELERATION =  1.35422
 AT TIME              = 23.59 SEC

 THE VALUES WILL BE MULTIPLIED BY A FACTOR =  1.000
 TO GIVE NEW MAXIMUM ACCELERATION          =  1.35422

 MEAN SQUARE FREQUENCY =       2.77 C/SEC.


  MAX ACCELERATION =    1.38859 FOR FREQUENCIES REMOVED ABOVE      20.00 C/SEC.

1******   OPTION  3  ***  READ WHERE OBJECT MOTION IS GIVEN

   OBJECT MOTION IN LAYER NUMBER   1 OUTCROPPING

1******   OPTION  4  ***  OBTAIN STRAIN COMPATIBLE SOIL PROPERTIES

  MAXIMUM NUMBER OF ITERATIONS              =    30
  MAXIMUM ERROR IN PERCENT                  =  1.00
  FACTOR FOR EFFECTIVE STRAIN IN TIME DOMAIN =  0.65


    EARTHQUAKE   -  Section A-A, HBPP, 08/2002
    SOIL PROFILE -  ISFSI Pad, HBPP, ISFSI, 08/2002
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[LINES SKIPPED]

ITERATION NUMBER 11
THE CALCULATION HAS BEEN CARRIED OUT IN THE TIME DOMAIN WITH EFF. STRAIN = .65* MAX. STRAIN

LAYER	TYPE	DEPTH	EFF. STRAIN	NEW DAMP.	DAMP USED	ERROR	NEW G	G USED	ERROR	NEW Vs
1	2	2.0	0.03788	0.080	0.080	0.0	693.179	693.219	0.0	414.361
2	2	6.0	0.11378	0.133	0.133	0.1	720.890	721.737	-0.1	422.562
3	1	10.5	0.01181	0.050	0.050	0.0	10735.366	10735.486	0.0	1630.665
4	1	15.5	0.01985	0.065	0.065	0.0	9636.044	9636.209	0.0	1544.919
5	3	20.5	0.10916	0.110	0.109	0.1	2429.054	2430.288	-0.1	775.666
6	3	25.5	0.13434	0.121	0.121	0.1	2453.857	2455.932	-0.1	779.616
7	3	30.5	0.16000	0.131	0.131	0.1	2448.614	2452.051	-0.1	778.783
8	3	35.5	0.18707	0.139	0.139	0.2	2414.887	2420.841	-0.2	771.401
9	3	40.5	0.21735	0.148	0.147	0.3	2346.796	2357.548	-0.5	762.419
10	3	45.5	0.25025	0.156	0.155	0.4	2255.888	2274.387	-0.8	747.507

VALUES IN TIME DOMAIN

LAYER	TYPE	THICKNESS FT	DEPTH FT	MAX STRAIN PRCNT	MAX STRESS PSF	TIME SEC
1	2	4.0	2.0	0.05827	403.95	23.63
2	2	4.0	6.0	0.17505	1261.89	23.63
3	1	5.0	10.5	0.01816	1950.05	23.61
4	1	5.0	15.5	0.03055	2943.36	23.61
5	3	5.0	20.5	0.16794	4079.38	23.61
6	3	5.0	25.5	0.20668	5071.69	23.60
7	3	5.0	30.5	0.24615	6027.28	23.60
8	3	5.0	35.5	0.28780	6949.97	23.60
9	3	5.0	40.5	0.33439	7847.38	23.59
10	3	5.0	45.5	0.38500	8685.25	23.59

PERIOD = 0.22 FROM AVERAGE SHEARVEL. = 882.

MAXIMUM AMPLIFICATION = 4.69
FOR FREQUENCY = 4.04 C/SEC.
PERIOD = 0.25 SEC.

1****** OPTION 5 *** COMPUTE MOTION IN NEW SUBLAYERS

EARTHQUAKE - Section A-A, HBPP, 08/2002
SOIL DEPOSIT - ISFSI Pad, HBPP, ISFSI, 08/2002

LAYER	DEPTH FT	MAX. ACC. G	SEC	TIME C/SEC	MEAN SQ. FR. QUIET ZONE	ACC. RATIO ACC. RECORD	PUNCHED CARDS
OUTCR.	0.0	1.38859		23.57	2.77	0.041	2048
WITHIN	4.0	1.34776		23.57	2.53	0.042	0
WITHIN	8.0	1.38244		23.60	2.19	0.040	0
WITHIN	13.0	1.38299		23.60	2.16	0.040	0
WITHIN	18.0	1.37505		23.60	2.10	0.040	0
WITHIN	23.0	1.35648		23.59	1.88	0.039	0
WITHIN	28.0	1.37241		23.58	1.79	0.038	0
WITHIN	33.0	1.36978		23.58	1.81	0.037	0
WITHIN	38.0	1.33474		23.57	1.87	0.036	0
WITHIN	43.0	1.29950		23.56	1.99	0.036	0
WITHIN	48.0	1.30777		23.56	2.22	0.034	0
OUTCR.	48.0	1.46934		23.56	2.92	0.034	2048

ACCELERA	TION VALU	XMAX= ES AT OUT	1.3886 S CROPPING	ection A- LAYER 1	A, HBPP, #NAME?	Aug-02 Pad, HBPP	, ISFSI, 08	/2002
-0.000043	-0.000092	-0.000073	0.000011	0.000133	0.00025	0.000318	0.000313	1

[LINES SKIPPED]

ACCELERA	TION VALU	XMAX= ES AT OUT	1.4693 S CROPPING	ection A- LAYER 11	A, HBPP, #NAME?	Aug-02 Pad, HBPP	, ISFSI, 08	/2002
0.000018	0.000264	0.00045	0.000503	0.000404	0.00019	-0.000059	-0.000248	1
-0.000303	-0.000204	0.000013	0.000266	0.00046	0.000522	0.000429	0.000217	2
-0.000033	-0.000225	-0.000286	-0.000191	0.000023	0.000276	0.000471	0.000533	3
0.00044	0.000226	-0.000028	-0.000226	-0.000291	-0.0002	0.000012	0.000266	4
0.000462	0.000527	0.000435	0.000219	-0.000039	-0.000242	-0.000313	-0.000228	5
-0.000019	0.000233	0.00043	0.000495	0.0004	0.000181	-0.000083	-0.000293	6
-0.000373	-0.000295	-0.000092	0.000156	0.00035	0.000411	0.000313	0.000086	7
-0.000187	-0.000409	-0.000501	-0.000434	-0.000241	-0.000001	0.000185	0.00024	8
0.000132	-0.000106	-0.000393	-0.000631	-0.000739	-0.000688	-0.000508	-0.00028	9
-0.000104	-0.000061	-0.00018	-0.000432	-0.000736	-0.000991	-0.001118	-0.001084	10
-0.000919	-0.000705	-0.000541	-0.00051	-0.000643	-0.000912	-0.001235	-0.001511	11
-0.00166	-0.001646	-0.001501	-0.001304	-0.001157	-0.001142	-0.001294	-0.001583	12
-0.00193	-0.002232	-0.002407	-0.002419	-0.002297	-0.002122	-0.001996	-0.002004	13
-0.00218	-0.002496	-0.002873	-0.003205	-0.00341	-0.003448	-0.003349	-0.003192	14
-0.00308	-0.003097	-0.003283	-0.003607	-0.003992	-0.004333	-0.004543	-0.004585	15
-0.004485	-0.004323	-0.004202	-0.00421	-0.004384	-0.004698	-0.005071	-0.005399	16
-0.005592	-0.005612	-0.005484	-0.005288	-0.005127	-0.005092	-0.005221	-0.005488	17
-0.005815	-0.006095	-0.006239	-0.006205	-0.006018	-0.005757	-0.005529	-0.005423	18
-0.005481	-0.005679	-0.005938	-0.006154	-0.006237	-0.006145	-0.005904	-0.005593	19
-0.005321	-0.005178	-0.005208	-0.005386	-0.005632	-0.005838	-0.005912	-0.005811	20
-0.005557	-0.00523	-0.004938	-0.004775	-0.004785	-0.004945	-0.005173	-0.005363	21
-0.005418	-0.005295	-0.005015	-0.004659	-0.004337	-0.004144	-0.004126	-0.004262	22
-0.004472	-0.004646	-0.004688	-0.004552	-0.004257	-0.003885	-0.003544	-0.003332	23
-0.003296	-0.003415	-0.003609	-0.003768	-0.003794	-0.00364	-0.003328	-0.002939	24
-0.002583	-0.002362	-0.002322	-0.002445	-0.002648	-0.002819	-0.002858	-0.002714	25
-0.002405	-0.002014	-0.001654	-0.001425	-0.001379	-0.001497	-0.001699	-0.001871	26
-0.001911	-0.001768	-0.001461	-0.001072	-0.000714	-0.000491	-0.000456	-0.00059	27
-0.000811	-0.001004	-0.001065	-0.000941	-0.000647	-0.000268	0.000082	0.000297	28
0.000322	0.000176	-0.000058	-0.000264	-0.000334	-0.000215	0.000079	0.000461	29
0.000815	0.00103	0.00105	0.000891	0.000635	0.000403	0.000304	0.000396	30
0.000664	0.001024	0.001358	0.001553	0.001553	0.001373	0.001096	0.000846	31
0.000736	0.000825	0.0011	0.001476	0.001831	0.00205	0.002072	0.001909	32
0.001646	0.001404	0.001299	0.001392	0.00167	0.002048	0.002404	0.002622	33
0.00264	0.002472	0.002206	0.001966	0.001868	0.001974	0.002266	0.002655	34
0.003013	0.003218	0.003209	0.003004	0.002695	0.002417	0.002295	0.002397	35
0.002707	0.00313	0.003531	0.003779	0.003804	0.003622	0.003329	0.003066	36
0.002969	0.003113	0.003483	0.003982	0.004461	0.004777	0.004846	0.004675	37
0.004357	0.004042	0.003877	0.003951	0.004265	0.004727	0.005189	0.005503	38
0.005573	0.005398	0.005066	0.004727	0.004535	0.00459	0.004904	0.00539	39
0.005901	0.00628	0.006421	0.006308	0.006018	0.005695	0.005493	0.005517	40
0.005784	0.006217	0.006671	0.006993	0.007074	0.006895	0.006535	0.006141	41
0.00587	0.005837	0.006063	0.006472	0.006914	0.007227	0.007292	0.007083	42
0.006677	0.006229	0.005914	0.005867	0.006129	0.006638	0.007246	0.007777	43
0.008091	0.008132	0.007949	0.007677	0.007478	0.007484	0.007738	0.008178	44

```
16384       0.5
    8
    7    1   10      100.
   11 100. #1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
0.0001    0.000316  0.001     0.00316   0.01      0.0316    0.1       0.316
1.        3.16      10.
1.000     1.000     1.000     .94       .82       .64       .40       .21
.09       .04       .02
   11   1.  damping for Clay PI 15 (Vucetic & Dobry 1991)
0.0001    0.000316  0.001     0.00316   0.01      0.0316    0.1       0.316
1.        3.16      10.
1.7       1.7       1.7       2.6       4.5       7.8       11.7      16.3
20.2      23.0      23.0
   11 100. #2 modulus for Sand (20 to 50 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     0.999     0.991     0.953     0.830     0.620     0.364     0.181
0.071     0.025     0.010
   11   1.  damping for Sand (20 to 50 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.250     1.300     1.455     2.080     3.750     6.925     12.600    18.905
24.840    27.2      28.9
   11 100. #3 modulus for Sand (50 to 120 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     1.000     0.995     0.972     0.879     0.701     0.442     0.230
0.097     0.037     0.014
   11   1.  damping for Sand (50 to 120 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.090     1.145     1.300     1.665     2.865     5.415     10.465    16.560
22.915    25.5      27.0
   11 100. #4 modulus for Sand (120 to 250 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     1.000     0.996     0.980     0.910     0.756     0.510     0.283
0.122     0.050     0.019
   11   1.  damping for Sand (120 to 250 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
0.935     0.935     1.090     1.455     2.340     4.375     8.695     14.580
21.250    23.8      25.5
   11 100. #5 modulus for Sand (250 to 500 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     1.000     0.997     0.986     0.932     0.809     0.573     0.338
0.152     0.067     0.025
   11   1.  damping for Sand (250 to 500 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
0.800     0.800     0.900     1.145     1.875     3.490     7.185     12.705
19.270    22.4      24.0
   11 100. #6 modulus for Sand (> 500 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     1.000     0.998     0.991     0.955     0.860     0.658     0.417
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0.207      0.083      0.032
   11   1.  damping for Sand (> 500 ft) (EPRI 1993)
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
0.570      0.625      0.625      0.850      1.280      2.500      5.520      10.260
16.770     20.2       22.5
   11 100. #7 modulus for Weathered Rock
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
1.000      1.000      1.000      0.990      0.960      0.900      0.75       0.55
0.34       0.2        0.12
   11   1.  damping for Weathered Rock
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
0.24       0.42       0.8        1.4        2.8        5.1        9.8        15.5
21.        25.        28.
    2
    1   11    1 ISFSI Pad, HBPP, ISFSI, 08/2002
    1    2    1       4.0                  .05        .130         1.      128.   1.
    2    2    1       4.0                  .05        .130         1.      128.   1.
    3    1    1       5.0                  .05        .130      1830.              1.
    4    1    1       5.0                  .05        .130      1830.              1.
    5    3    1       5.0                  .05        .130         1.      188.   1.
    6    3    1       5.0                  .05        .130         1.      188.   1.
    7    3    1       5.0                  .05        .130         1.      188.   1.
    8    3    1       5.0                  .05        .130         1.      188.   1.
    9    3    1       5.0                  .05        .130         1.      188.   1.
   10    3    1       5.0                  .05        .130         1.      188.   1.
   11                                      .05        .130      1500.              1.
    1
1599916384       .005    2(8E15.7) SET 3, Section A-A, HBPP, 08/2002
       1.                   20.
S3AA.AC8
    3
    1    0
    4
    0   30         1.       0.65
    5
    1    2    3    4    5    6    7    8    9   10   11   11
    0    1    1    1    1    1    1    1    1    1    1    0
    1    0    0    0    0    0    0    0    0    0    0    1
    0
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          ******************************************
          ******************************************
          **                                      **
          ** SHAKE -- A COMPUTER PROGRAM FOR      **
          **          EARTHQUAKE RESPONSE ANALYSIS **
          **          OF HORIZONTALLY LAYERED SITES **
          **                                      **
          **                                      **
          ** MS-DOS VERSION - CONVERTED TO IBM-PC BY **
          **                  Shyh-Shiun Lai, WCC  **
          **                  January 1985         **
          **                                      **
          ** (Modified to Use 16384 Points and 100 **
          **  Soil Layers, S.J. Chiou, August 1995) **
          **                                      **
          ******************************************
          ******************************************
 Output file name : PD3A.OUT
 Start time : 19``/``/`` --
 Start time : 19``/``/`` --

  MAX. NUMBER OF TERMS IN FOURIER TRANSFORM =     16384
  NECESSARY LENGTH OF BLANK COMMON X        =    102419
  EARTH PRESSURE AT REST FOR SAND           =     0.500
1****** OPTION 8 *** READ RELATION BETWEEN SOIL PROPERTIES AND STRAIN

    CURVES FOR RELATION STRAIN VERSUS SHEAR MODULUS AND DAMPING

[LINES SKIPPED]

1****** OPTION 2 *** READ SOIL PROFILE

     NEW SOIL PROFILE NO. 1      IDENTIFICATION   ISFSI Pad, HBPP, ISFSI, 08/2002

0NUMBER OF LAYERS                 11          DEPTH TO BEDROCK        48.00
 NUMBER OF FIRST SUBMERGED LAYER   1          DEPTH TO WATER LEVEL     0.00

 LAYER  TYPE    MAX-MOD     THICKNESS    DEPTH      EFF. PRESS.    MODULUS      DAMPING   UNIT WEIGTH    SHEAR VEL     SVMAX

   1      2    1215.214        4.00        2.00        0.135     1215.214      0.0500      0.1300        548.634   548.634
   2      2    2104.812        4.00        6.00        0.406     2104.812      0.0500      0.1300        722.043   722.043
   3      1   13520.403        5.00       10.50        0.710    13520.403      0.0500      0.1300       1830.000  1830.000
   4      1   13520.403        5.00       15.50        1.048    13520.403      0.0500      0.1300       1830.000  1830.000
   5      3    5714.292        5.00       20.50        1.386     5714.292      0.0500      0.1300       1189.700  1189.700
   6      3    6373.172        5.00       25.50        1.724     6373.172      0.0500      0.1300       1256.418  1256.418
   7      3    6970.043        5.00       30.50        2.062     6970.043      0.0500      0.1300       1313.935  1313.935
   8      3    7519.687        5.00       35.50        2.400     7519.687      0.0500      0.1300       1364.760  1364.760
   9      3    8031.804        5.00       40.50        2.738     8031.804      0.0500      0.1300       1410.467  1410.467
  10      3    8513.169        5.00       45.50        3.076     8513.169      0.0500      0.1300       1452.118  1452.118
  11   BASE                                                      9084.         0.050       0.1300       1500.

  PERIOD = 0.15 FROM AVERAGE SHEARVEL. =   1319.

 MAXIMUM AMPLIFICATION =  13.57
 FOR FREQUENCY         =   7.08 C/SEC.
     PERIOD            =   0.14 SEC.

1****** OPTION 1 *** READ INPUT MOTION

 EARTHQUAKE -   Section A-A, HBPP, 08/2002

15999 ACCELERATION VALUES AT TIME INTERVAL    0.0050

    THE VALUES ARE LISTED ROW BY ROW AS READ FROM CARDS
    TRAILING ZEROS ARE ADDED TO GIVE A TOTAL OF16384 VALUES

 MAXIMUM ACCELERATION =  1.38731
 AT TIME              = 21.78 SEC

 THE VALUES WILL BE MULTIPLIED BY A FACTOR =  1.000
 TO GIVE NEW MAXIMUM ACCELERATION          =  1.38731

 MEAN SQUARE FREQUENCY =       2.22 C/SEC.


  MAX ACCELERATION =    1.31528 FOR FREQUENCIES REMOVED ABOVE      20.00 C/SEC.

1****** OPTION 3 *** READ WHERE OBJECT MOTION IS GIVEN

  OBJECT MOTION IN LAYER NUMBER   1 OUTCROPPING
```

1****** OPTION 4 *** OBTAIN STRAIN COMPATIBLE SOIL PROPERTIES

MAXIMUM NUMBER OF ITERATIONS = 30
MAXIMUM ERROR IN PERCENT = 1.00
FACTOR FOR EFFECTIVE STRAIN IN TIME DOMAIN = 0.65

EARTHQUAKE - Section A-A, HBPP, 08/2002
SOIL PROFILE - ISFSI Pad, HBPP, ISFSI, 08/2002

[LINES SKIPPED]

ITERATION NUMBER 8
THE CALCULATION HAS BEEN CARRIED OUT IN THE TIME DOMAIN WITH EFF. STRAIN = .65* MAX. STRAIN

LAYER	TYPE	DEPTH	EFF. STRAIN	NEW DAMP.	DAMP USED	ERROR	NEW G	G USED	ERROR	NEW Vs
1	2	2.0	0.03235	0.073	0.073	0.1	733.917	734.126	0.0	426.363
2	2	6.0	0.08763	0.120	0.119	0.4	825.233	829.766	-0.5	452.111
3	1	10.5	0.01084	0.047	0.047	0.0	10915.496	10915.104	0.0	1644.288
4	1	15.5	0.01771	0.061	0.061	0.0	9877.923	9877.389	0.0	1564.188
5	3	20.5	0.08744	0.099	0.099	0.1	2690.755	2694.798	-0.2	816.382
6	3	25.5	0.10571	0.108	0.107	0.2	2748.698	2753.993	-0.2	825.125
7	3	30.5	0.12233	0.116	0.116	0.3	2809.620	2816.782	-0.3	834.219
8	3	35.5	0.13832	0.123	0.122	0.3	2852.948	2863.000	-0.4	840.627
9	3	40.5	0.15401	0.129	0.128	0.4	2880.785	2894.489	-0.5	844.718
10	3	45.5	0.16974	0.134	0.133	0.5	2893.640	2912.495	-0.7	846.600

VALUES IN TIME DOMAIN

LAYER	TYPE	THICKNESS FT	DEPTH FT	MAX STRAIN PRCNT	MAX STRESS PSF	TIME SEC
1	2	4.0	2.0	0.04977	365.31	21.78
2	2	4.0	6.0	0.13482	1112.58	21.78
3	1	5.0	10.5	0.01668	1820.91	21.77
4	1	5.0	15.5	0.02724	2691.21	21.77
5	3	5.0	20.5	0.13452	3619.54	21.77
6	3	5.0	25.5	0.16262	4470.05	21.77
7	3	5.0	30.5	0.18821	5287.90	21.77
8	3	5.0	35.5	0.21280	6071.17	21.77
9	3	5.0	40.5	0.23693	6825.47	21.77
10	3	5.0	45.5	0.26114	7556.33	21.78

PERIOD = 0.21 FROM AVERAGE SHEARVEL. = 929.

MAXIMUM AMPLIFICATION = 5.45
FOR FREQUENCY = 4.40 C/SEC.
PERIOD = 0.23 SEC.

1****** OPTION 5 *** COMPUTE MOTION IN NEW SUBLAYERS

EARTHQUAKE - Section A-A, HBPP, 08/2002
SOIL DEPOSIT - ISFSI Pad, HBPP, ISFSI, 08/2002

LAYER	DEPTH FT	MAX. ACC. G	SEC	TIME C/SEC	MEAN SQ. FR. QUIET ZONE	ACC. RATIO ACC. RECORD	PUNCHED CARDS
OUTCR.	0.0	1.31528		21.77	2.22	0.179	2048
WITHIN	4.0	1.29295		21.77	2.06	0.177	0
WITHIN	8.0	1.26430		21.76	1.81	0.169	0
WITHIN	13.0	1.25911		21.76	1.79	0.168	0
WITHIN	18.0	1.24962		21.76	1.75	0.167	0
WITHIN	23.0	1.21638		21.75	1.61	0.161	0
WITHIN	28.0	1.19015		21.75	1.52	0.156	0
WITHIN	33.0	1.16505		21.74	1.50	0.155	0
WITHIN	38.0	1.13597		21.74	1.52	0.153	0
WITHIN	43.0	1.11391		21.73	1.56	0.152	0
WITHIN	48.0	1.10943		21.72	1.62	0.153	0
OUTCR.	48.0	1.28337		21.72	2.10	0.162	2048

XMAX= 1.3153 S ection A- A, HBPP, Aug-02
ACCELER. TION VALU ES AT OU CROPPIN(LAYER 1 #NAME? Pad, HBPF , ISFSI, 08 /2002

0.000397	0.00032	0.000112	-0.000149	-0.000363	-0.000451	-0.000378	-0.000173	1

[LINES SKIPPED]

XMAX= 1.2834 S ection A- A, HBPP, Aug-02
ACCELER. TION VALU ES AT OU CROPPIN(LAYER 11 #NAME? Pad, HBPF , ISFSI, 08 /2002

-0.000157	-0.000473	-0.000618	-0.000537	-0.000261	0.000106	0.000422	0.000567	1
0.000486	0.000208	-0.00016	-0.000478	-0.000624	-0.000542	-0.000265	0.000103	2
0.00042	0.000565	0.000483	0.000205	-0.000164	-0.000482	-0.000627	-0.000544	3
-0.000264	0.000106	0.000425	0.00057	0.000487	0.000207	-0.000163	-0.000482	4
-0.000626	-0.000542	-0.00026	0.000112	0.000431	0.000577	0.000493	0.000211	5
-0.00016	-0.000479	-0.000624	-0.000538	-0.000254	0.00012	0.00044	0.000586	6
0.0005	0.000217	-0.000156	-0.000476	-0.00062	-0.000533	-0.000248	0.000127	7
0.000449	0.000594	0.000507	0.000222	-0.000154	-0.000475	-0.000619	-0.000531	8
-0.000245	0.000131	0.000453	0.000597	0.000508	0.00022	-0.000158	-0.000482	9
-0.000627	-0.000539	-0.000252	0.000125	0.000446	0.000589	0.000498	0.000206	10
-0.000174	-0.0005	-0.000646	-0.000557	-0.000268	0.00011	0.000432	0.000575	11
0.000483	0.000191	-0.00019	-0.000514	-0.000657	-0.000564	-0.000269	0.000115	12
0.000444	0.000593	0.000507	0.000221	-0.000151	-0.000464	-0.000594	-0.000483	13
-0.000169	0.000238	0.000591	0.000766	0.000708	0.000453	0.000114	-0.000162	14
-0.00025	-0.000095	0.000267	0.000722	0.001124	0.001346	0.001335	0.001124	15
0.000829	0.000594	0.000546	0.000739	0.001134	0.001618	0.002043	0.00228	16
0.002276	0.002066	0.001762	0.001514	0.001444	0.001608	0.001968	0.002409	17
0.002782	0.00296	0.002889	0.002605	0.002223	0.001891	0.001736	0.001813	18
0.002083	0.002434	0.002717	0.002808	0.002654	0.002295	0.001849	0.001466	19
0.001272	0.001324	0.001583	0.001932	0.002221	0.002322	0.002181	0.001835	20
0.001401	0.00103	0.000847	0.000907	0.001171	0.001521	0.001806	0.001901	21
0.001749	0.001392	0.000946	0.000564	0.000373	0.000428	0.000689	0.001038	22
0.001323	0.001416	0.001263	0.000902	0.000453	0.000067	-0.000127	-0.000075	23
0.000184	0.000532	0.000816	0.000908	0.000754	0.000393	-0.000056	-0.00044	24
-0.000633	-0.000578	-0.000316	0.000034	0.00032	0.000414	0.000261	-0.000097	25
-0.000542	-0.00092	-0.001104	-0.00104	-0.00077	-0.000415	-0.000129	-0.000041	26
-0.000206	-0.000583	-0.001051	-0.001453	-0.00166	-0.001616	-0.001359	-0.001011	27
-0.000725	-0.000631	-0.000786	-0.001151	-0.001605	-0.001996	-0.002193	-0.002141	28
-0.001879	-0.001527	-0.001238	-0.001142	-0.001292	-0.00165	-0.002096	-0.002478	29
-0.002666	-0.002608	-0.002341	-0.001988	-0.001699	-0.001602	-0.001751	-0.002105	30
-0.002542	-0.002911	-0.003083	-0.003007	-0.002723	-0.002353	-0.002051	-0.001946	31
-0.002089	-0.002439	-0.002874	-0.00324	-0.003406	-0.00332	-0.00302	-0.002629	32
-0.002296	-0.002153	-0.002251	-0.002552	-0.002937	-0.003258	-0.003386	-0.003273	33
-0.00296	-0.002564	-0.002237	-0.002102	-0.00221	-0.00252	-0.002913	-0.003241	34
-0.003382	-0.003287	-0.002997	-0.002628	-0.002322	-0.002197	-0.002294	-0.002566	35
-0.002896	-0.003143	-0.003197	-0.003028	-0.002691	-0.002317	-0.002053	-0.002011	36
-0.002218	-0.002611	-0.003048	-0.003373	-0.003463	-0.003284	-0.002901	-0.002453	37
-0.002101	-0.001971	-0.0021	-0.002425	-0.002804	-0.003076	-0.003114	-0.00288	38
-0.002437	-0.001932	-0.00153	-0.001366	-0.001481	-0.001815	-0.002223	-0.002537	39
-0.00262	-0.002425	-0.002006	-0.001502	-0.001078	-0.000869	-0.000922	-0.001188	40
-0.001533	-0.001803	-0.001874	-0.001708	-0.001365	-0.000983	-0.000718	-0.00069	41
-0.000929	-0.001363	-0.001839	-0.002186	-0.002272	-0.002059	-0.001612	-0.001078	42
-0.00063	-0.0004	-0.000427	-0.000651	-0.000928	-0.001097	-0.001037	-0.000728	43
-0.000252	0.000226	0.000523	0.000504	0.000141	-0.000479	-0.001178	-0.00175	44

```
16384        0.5
    8
    7    1    10       100.
   11 100. #1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
0.0001     0.000316  0.001     0.00316   0.01      0.0316    0.1       0.316
1.         3.16      10.
1.000      1.000     1.000     .94       .82       .64       .40       .21
.09        .04       .02
   11    1.  damping for Clay PI 15 (Vucetic & Dobry 1991)
0.0001     0.000316  0.001     0.00316   0.01      0.0316    0.1       0.316
1.         3.16      10.
1.7        1.7       1.7       2.6       4.5       7.8       11.7      16.3
20.2       23.0      23.0
   11 100. #2 modulus for Sand (20 to 50 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      0.999     0.991     0.953     0.830     0.620     0.364     0.181
0.071      0.025     0.010
   11    1.  damping for Sand (20 to 50 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.250      1.300     1.455     2.080     3.750     6.925     12.600    18.905
24.840     27.2      28.9
   11 100. #3 modulus for Sand (50 to 120 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      1.000     0.995     0.972     0.879     0.701     0.442     0.230
0.097      0.037     0.014
   11    1.  damping for Sand (50 to 120 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.090      1.145     1.300     1.665     2.865     5.415     10.465    16.560
22.915     25.5      27.0
   11 100. #4 modulus for Sand (120 to 250 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      1.000     0.996     0.980     0.910     0.756     0.510     0.283
0.122      0.050     0.019
   11    1.  damping for Sand (120 to 250 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
0.935      0.935     1.090     1.455     2.340     4.375     8.695     14.580
21.250     23.8      25.5
   11 100. #5 modulus for Sand (250 to 500 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      1.000     0.997     0.986     0.932     0.809     0.573     0.338
0.152      0.067     0.025
   11    1.  damping for Sand (250 to 500 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
0.800      0.800     0.900     1.145     1.875     3.490     7.185     12.705
19.270     22.4      24.0
   11 100. #6 modulus for Sand (> 500 ft) (EPRI 1993)
0.0001     0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.         3.        10.
1.000      1.000     0.998     0.991     0.955     0.860     0.658     0.417
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 0.207      0.083      0.032
    11    1.  damping for Sand (> 500 ft) (EPRI 1993)
 0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
 1.         3.         10.
 0.570      0.625      0.625      0.850      1.280      2.500      5.520      10.260
16.770     20.2       22.5
    11  100. #7 modulus for Weathered Rock
 0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
 1.         3.         10.
 1.000      1.000      1.000      0.990      0.960      0.900      0.75       0.55
 0.34       0.2        0.12
    11    1.  damping for Weathered Rock
 0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
 1.         3.         10.
 0.24       0.42       0.8        1.4        2.8        5.1        9.8        15.5
21.        25.        28.
     2
     1   11     1 ISFSI Pad, HBPP, ISFSI, 08/2002
     1    2     1        4.0                 .05        .130         1.      128.    1.
     2    2     1        4.0                 .05        .130         1.      128.    1.
     3    1     1        5.0                 .05        .130      1830.              1.
     4    1     1        5.0                 .05        .130      1830.              1.
     5    3     1        5.0                 .05        .130         1.      188.    1.
     6    3     1        5.0                 .05        .130         1.      188.    1.
     7    3     1        5.0                 .05        .130         1.      188.    1.
     8    3     1        5.0                 .05        .130         1.      188.    1.
     9    3     1        5.0                 .05        .130         1.      188.    1.
    10    3     1        5.0                 .05        .130         1.      188.    1.
    11                                       .05        .130      1500.              1.
     1
1599916384       .005    2(8E15.7) SET 1, Section B-B, HBPP, 08/2002
       1.                   20.
S1BB.AC8
     3
     1    0
     4
     0   30         1.       0.65
     5
     1    2    3    4    5    6    7    8    9   10   11   11
     0    1    1    1    1    1    1    1    1    1    1    0
     1    0    0    0    0    0    0    0    0    0    0    1
     0
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          ******************************************
          ******************************************
          **                                      **
          ** SHAKE -- A COMPUTER PROGRAM FOR      **
          **          EARTHQUAKE RESPONSE ANALYSIS **
          **          OF HORIZONTALLY LAYERED SITES **
          **                                      **
          **                                      **
          ** MS-DOS VERSION - CONVERTED TO IBM-PC BY **
          **                  Shyh-Shiun Lai, WCC  **
          **                  January 1985         **
          **                                      **
          ** (Modified to Use 16384 Points and 100 **
          **  Soil Layers, S.J. Chiou, August 1995) **
          **                                      **
          ******************************************
          ******************************************
 Output file name : PD1B.OUT
 Start time : 19``/``/`` --
 Start time : 19``/``/`` --

  MAX. NUMBER OF TERMS IN FOURIER TRANSFORM =     16384
  NECESSARY LENGTH OF BLANK COMMON X        =    102419
  EARTH PRESSURE AT REST FOR SAND           =     0.500
1******   OPTION  8  ***  READ RELATION BETWEEN SOIL PROPERTIES AND STRAIN

    CURVES FOR RELATION STRAIN VERSUS SHEAR MODULUS AND DAMPING

 [LINES SKIPPED]

 1******   OPTION  2  ***  READ SOIL PROFILE

      NEW SOIL PROFILE NO.  1      IDENTIFICATION   ISFSI Pad, HBPP, ISFSI, 08/2002

 0NUMBER OF LAYERS                  11          DEPTH TO BEDROCK         48.00
  NUMBER OF FIRST SUBMERGED LAYER    1          DEPTH TO WATER LEVEL      0.00

  LAYER  TYPE    MAX-MOD     THICKNESS     DEPTH      EFF. PRESS.     MODULUS      DAMPING    UNIT WEIGTH     SHEAR VEL      SVMAX

    1      2    1215.214        4.00        2.00         0.135      1215.214       0.0500       0.1300         548.634     548.634
    2      2    2104.812        4.00        6.00         0.406      2104.812       0.0500       0.1300         722.043     722.043
    3      1   13520.403        5.00       10.50         0.710     13520.403       0.0500       0.1300        1830.000    1830.000
    4      1   13520.403        5.00       15.50         1.048     13520.403       0.0500       0.1300        1830.000    1830.000
    5      3    5714.292        5.00       20.50         1.386      5714.292       0.0500       0.1300        1189.700    1189.700
    6      3    6373.172        5.00       25.50         1.724      6373.172       0.0500       0.1300        1256.418    1256.418
    7      3    6970.043        5.00       30.50         2.062      6970.043       0.0500       0.1300        1313.935    1313.935
    8      3    7519.687        5.00       35.50         2.400      7519.687       0.0500       0.1300        1364.760    1364.760
    9      3    8031.804        5.00       40.50         2.738      8031.804       0.0500       0.1300        1410.467    1410.467
   10      3    8513.169        5.00       45.50         3.076      8513.169       0.0500       0.1300        1452.118    1452.118
   11   BASE                                                        9084.          0.050        0.1300        1500.

  PERIOD = 0.15 FROM AVERAGE SHEARVEL. =   1319.

 MAXIMUM AMPLIFICATION =  13.57
 FOR FREQUENCY         =   7.08 C/SEC.
     PERIOD            =   0.14 SEC.

1******   OPTION  1  ***  READ INPUT MOTION

 EARTHQUAKE  -   Section B-B, HBPP, 08/2002

15999 ACCELERATION VALUES AT TIME INTERVAL    0.0050

    THE VALUES ARE LISTED ROW BY ROW AS READ FROM CARDS
    TRAILING ZEROS ARE ADDED TO GIVE A TOTAL OF16384 VALUES

 MAXIMUM ACCELERATION =  1.98475
 AT TIME              = 23.24 SEC

 THE VALUES WILL BE MULTIPLIED BY A FACTOR =  1.000
 TO GIVE NEW MAXIMUM ACCELERATION          =  1.98475

 MEAN SQUARE FREQUENCY =       2.14 C/SEC.


 MAX ACCELERATION =    1.98970 FOR FREQUENCIES REMOVED ABOVE       20.00 C/SEC.

1******   OPTION  3  ***  READ WHERE OBJECT MOTION IS GIVEN

  OBJECT MOTION IN LAYER NUMBER   1 OUTCROPPING
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1******   OPTION  4  ***  OBTAIN STRAIN COMPATIBLE SOIL PROPERTIES

  MAXIMUM NUMBER OF ITERATIONS                =   30
  MAXIMUM ERROR IN PERCENT                    =  1.00
  FACTOR FOR EFFECTIVE STRAIN IN TIME DOMAIN  =  0.65


     EARTHQUAKE   -  Section B-B, HBPP, 08/2002
     SOIL PROFILE -  ISFSI Pad, HBPP, ISFSI, 08/2002

[LINES SKIPPED]

ITERATION NUMBER 10
  THE CALCULATION HAS BEEN CARRIED OUT IN THE TIME DOMAIN WITH EFF. STRAIN = .65* MAX. STRAIN
```

LAYER	TYPE	DEPTH	EFF. STRAIN	NEW DAMP.	DAMP USED	ERROR	NEW G	G USED	ERROR	NEW Vs
1	2	2.0	0.05255	0.096	0.096	0.0	608.603	608.654	0.0	388.261
2	2	6.0	0.14657	0.148	0.148	0.1	632.115	632.829	-0.1	395.689
3	1	10.5	0.01706	0.060	0.060	0.0	9957.425	9957.385	0.0	1570.470
4	1	15.5	0.02779	0.074	0.074	0.0	8924.480	8924.419	0.0	1486.783
5	3	20.5	0.15463	0.129	0.129	0.1	2045.075	2046.419	-0.1	711.723
6	3	25.5	0.19170	0.141	0.141	0.1	2016.606	2020.047	-0.2	706.752
7	3	30.5	0.23212	0.151	0.151	0.2	1948.135	1956.024	-0.4	694.650
8	3	35.5	0.27889	0.162	0.161	0.4	1835.389	1852.772	-0.9	674.249
9	3	40.5	0.32064	0.169	0.169	0.2	1788.292	1792.807	-0.3	665.542
10	3	45.5	0.34351	0.173	0.173	0.1	1830.673	1832.357	-0.1	673.382

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 VALUES IN TIME DOMAIN
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LAYER	TYPE	THICKNESS FT	DEPTH FT	MAX STRAIN PRCNT	MAX STRESS PSF	TIME SEC
1	2	4.0	2.0	0.08084	492.00	23.25
2	2	4.0	6.0	0.22548	1425.32	23.26
3	1	5.0	10.5	0.02624	2612.79	23.25
4	1	5.0	15.5	0.04276	3816.17	23.25
5	3	5.0	20.5	0.23790	4865.16	23.26
6	3	5.0	25.5	0.29492	5947.47	23.26
7	3	5.0	30.5	0.35711	6956.99	23.26
8	3	5.0	35.5	0.42907	7875.04	23.25
9	3	5.0	40.5	0.49329	8821.39	23.25
10	3	5.0	45.5	0.52847	9674.58	23.25

```
 PERIOD = 0.24 FROM AVERAGE SHEARVEL. =    814.

MAXIMUM AMPLIFICATION =  4.03
FOR FREQUENCY         =  3.60 C/SEC.
    PERIOD            =  0.28 SEC.

1******   OPTION  5  ***  COMPUTE MOTION IN NEW SUBLAYERS

 EARTHQUAKE - Section B-B, HBPP, 08/2002
 SOIL DEPOSIT -  ISFSI Pad, HBPP, ISFSI, 08/2002
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LAYER	DEPTH FT	MAX. ACC. G	SEC	TIME C/SEC	MEAN SQ. FR. QUIET ZONE	ACC. RATIO ACC. RECORD	PUNCHED CARDS
OUTCR.	0.0	1.98970		23.24	2.14	0.025	2048
WITHIN	4.0	1.97641		23.24	1.93	0.025	0
WITHIN	8.0	1.94693		23.24	1.66	0.023	0
WITHIN	13.0	1.94342		23.24	1.63	0.023	0
WITHIN	18.0	1.93937		23.24	1.59	0.023	0
WITHIN	23.0	1.92074		23.23	1.43	0.022	0
WITHIN	28.0	1.89016		23.23	1.40	0.022	0
WITHIN	33.0	1.83648		23.23	1.45	0.022	0
WITHIN	38.0	1.75792		23.23	1.52	0.023	0
WITHIN	43.0	1.74443		23.34	1.68	0.023	0
WITHIN	48.0	1.81702		23.34	1.88	0.021	0
OUTCR.	48.0	1.82178		23.34	2.47	0.024	2048

XMAX= 1.9897 S ection B- B, HBPP, Aug-02
ACCELER. TION VALU ES AT OU CROPPIN(LAYER 1 #NAME? Pad, HBPF, ISFSI, 08 /2002

0.000215	0.000109	-0.00005	-0.000205	-0.000297	-0.000292	-0.000192	-0.000036	1

[LINES SKIPPED]

XMAX= 1.8218 S ection B- B, HBPP, Aug-02
ACCELER. TION VALU ES AT OU CROPPIN(LAYER 11 #NAME? Pad, HBPF, ISFSI, 08 /2002

-0.000799	-0.000596	-0.000176	0.000302	0.000656	0.000749	0.000546	0.000123	1
-0.000359	-0.000717	-0.000814	-0.000612	-0.000188	0.000296	0.000654	0.000749	2
0.000544	0.000114	-0.000376	-0.00074	-0.00084	-0.000636	-0.000206	0.000286	3
0.000651	0.00075	0.000542	0.000107	-0.000392	-0.000763	-0.000866	-0.000661	4
-0.000225	0.000273	0.000643	0.000743	0.000531	0.000087	-0.000422	-0.000803	5
-0.000911	-0.000707	-0.000268	0.000235	0.000609	0.000707	0.000489	0.000034	6
-0.000488	-0.000881	-0.000997	-0.000796	-0.000358	0.000148	0.000521	0.000615	7
0.000386	-0.000084	-0.000625	-0.001035	-0.001165	-0.000973	-0.000539	-0.000037	8
0.000331	0.000414	0.000169	-0.000325	-0.00089	-0.001324	-0.001475	-0.001298	9
-0.000875	-0.000383	-0.000027	0.000038	-0.000231	-0.000754	-0.001352	-0.001819	10
-0.001999	-0.001847	-0.001445	-0.000974	-0.000641	-0.000605	-0.000912	-0.00148	11
-0.002126	-0.002642	-0.002868	-0.002758	-0.002395	-0.001962	-0.001672	-0.001685	12
-0.002049	-0.00268	-0.003395	-0.00398	-0.004272	-0.004224	-0.00392	-0.003545	13
-0.003316	-0.003397	-0.003835	-0.004546	-0.005341	-0.006001	-0.006361	-0.00637	14
-0.006112	-0.005777	-0.005585	-0.005703	-0.006181	-0.006933	-0.007767	-0.008461	15
-0.008843	-0.008861	-0.008601	-0.008254	-0.008044	-0.008142	-0.008599	-0.009328	16
-0.010135	-0.010791	-0.011121	-0.011072	-0.01073	-0.01029	-0.009981	-0.009978	17
-0.010335	-0.010965	-0.011668	-0.012212	-0.012418	-0.012229	-0.011732	-0.011128	18
-0.010652	-0.010487	-0.010694	-0.011189	-0.011774	-0.012215	-0.012331	-0.012064	19
-0.011501	-0.010842	-0.010324	-0.01013	-0.01032	-0.010805	-0.011381	-0.011809	20
-0.011903	-0.011601	-0.010992	-0.01028	-0.009708	-0.009462	-0.009605	-0.010048	21
-0.010583	-0.010967	-0.011011	-0.010651	-0.009978	-0.009202	-0.008571	-0.008277	22
-0.008385	-0.008804	-0.009323	-0.00969	-0.009711	-0.009319	-0.008606	-0.007783	23
-0.007105	-0.006771	-0.006851	-0.007254	-0.007767	-0.008133	-0.008151	-0.007752	24
-0.007023	-0.00618	-0.00548	-0.00513	-0.0052	-0.005603	-0.006124	-0.006505	25
-0.00654	-0.006157	-0.005445	-0.004617	-0.003935	-0.003602	-0.003691	-0.00411	26
-0.004641	-0.005022	-0.005044	-0.004638	-0.003895	-0.003039	-0.002336	-0.001996	27
-0.002092	-0.002528	-0.003079	-0.003476	-0.003505	-0.003094	-0.002341	-0.001474	28
-0.000772	-0.000451	-0.000587	-0.001084	-0.001707	-0.002175	-0.002264	-0.001895	29
-0.001162	-0.000299	0.000409	0.000737	0.000603	0.000104	-0.000524	-0.00099	30
-0.001064	-0.000661	0.000124	0.001051	0.001823	0.002201	0.002095	0.001591	31
0.000928	0.000399	0.000242	0.000553	0.001243	0.002078	0.002767	0.003075	32
0.002911	0.00237	0.001694	0.001178	0.001063	0.001437	0.002203	0.003112	33
0.003859	0.0042	0.004045	0.003495	0.002808	0.002299	0.002226	0.002686	34
0.003577	0.004633	0.005523	0.00597	0.005856	0.005266	0.004458	0.003765	35
0.003471	0.00371	0.004414	0.005341	0.00617	0.00662	0.00656	0.006055	36
0.005339	0.004733	0.004516	0.004823	0.005597	0.006606	0.007539	0.008113	37
0.008189	0.007814	0.007201	0.006645	0.006405	0.006605	0.007188	0.007936	38
0.008559	0.008811	0.008588	0.007971	0.007201	0.006588	0.006393	0.006727	39
0.007509	0.008486	0.009336	0.009777	0.009683	0.009121	0.008336	0.007656	40
0.00737	0.007629	0.008387	0.009429	0.010452	0.011182	0.011476	0.011369	41
0.011056	0.010806	0.010856	0.01131	0.012098	0.012999	0.013727	0.014038	42
0.013827	0.013162	0.012267	0.011423	0.010876	0.010729	0.010923	0.011253	43
0.011462	0.011342	0.010825	0.010006	0.009117	0.00843	0.008163	0.008387	44

```
16384       0.5
    8
    7    1   10      100.
   11 100. #1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
0.0001    0.000316  0.001     0.00316   0.01      0.0316    0.1       0.316
1.        3.16      10.
1.000     1.000     1.000     .94       .82       .64       .40       .21
.09       .04       .02
   11   1.  damping for Clay PI 15 (Vucetic & Dobry 1991)
0.0001    0.000316  0.001     0.00316   0.01      0.0316    0.1       0.316
1.        3.16      10.
1.7       1.7       1.7       2.6       4.5       7.8       11.7      16.3
20.2      23.0      23.0
   11 100. #2 modulus for Sand (20 to 50 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     0.999     0.991     0.953     0.830     0.620     0.364     0.181
0.071     0.025     0.010
   11   1.  damping for Sand (20 to 50 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.250     1.300     1.455     2.080     3.750     6.925     12.600    18.905
24.840    27.2      28.9
   11 100. #3 modulus for Sand (50 to 120 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     1.000     0.995     0.972     0.879     0.701     0.442     0.230
0.097     0.037     0.014
   11   1.  damping for Sand (50 to 120 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.090     1.145     1.300     1.665     2.865     5.415     10.465    16.560
22.915    25.5      27.0
   11 100. #4 modulus for Sand (120 to 250 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     1.000     0.996     0.980     0.910     0.756     0.510     0.283
0.122     0.050     0.019
   11   1.  damping for Sand (120 to 250 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
0.935     0.935     1.090     1.455     2.340     4.375     8.695     14.580
21.250    23.8      25.5
   11 100. #5 modulus for Sand (250 to 500 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     1.000     0.997     0.986     0.932     0.809     0.573     0.338
0.152     0.067     0.025
   11   1.  damping for Sand (250 to 500 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
0.800     0.800     0.900     1.145     1.875     3.490     7.185     12.705
19.270    22.4      24.0
   11 100. #6 modulus for Sand (> 500 ft) (EPRI 1993)
0.0001    0.0003    0.001     0.003     0.01      0.03      0.1       0.3
1.        3.        10.
1.000     1.000     0.998     0.991     0.955     0.860     0.658     0.417
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0.207      0.083      0.032
   11   1.  damping for Sand (> 500 ft) (EPRI 1993)
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
0.570      0.625      0.625      0.850      1.280      2.500      5.520      10.260
16.770     20.2       22.5
   11 100. #7 modulus for Weathered Rock
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
1.000      1.000      1.000      0.990      0.960      0.900      0.75       0.55
0.34       0.2        0.12
   11   1.  damping for Weathered Rock
0.0001     0.0003     0.001      0.003      0.01       0.03       0.1        0.3
1.         3.         10.
0.24       0.42       0.8        1.4        2.8        5.1        9.8        15.5
21.        25.        28.
    2
    1   11    1 ISFSI Pad, HBPP, ISFSI, 08/2002
    1    2    1       4.0                  .05        .130         1.      128.    1.
    2    2    1       4.0                  .05        .130         1.      128.    1.
    3    1    1       5.0                  .05        .130      1830.              1.
    4    1    1       5.0                  .05        .130      1830.              1.
    5    3    1       5.0                  .05        .130         1.      188.    1.
    6    3    1       5.0                  .05        .130         1.      188.    1.
    7    3    1       5.0                  .05        .130         1.      188.    1.
    8    3    1       5.0                  .05        .130         1.      188.    1.
    9    3    1       5.0                  .05        .130         1.      188.    1.
   10    3    1       5.0                  .05        .130         1.      188.    1.
   11                                      .05        .130      1500.              1.
    1
1599916384       .005    2(8E15.7) SET 3, Section B-B, HBPP, 08/2002
       1.                   20.
S3BB.AC8
    3
    1    0
    4
    0   30         1.       0.65
    5
    1    2    3    4    5    6    7    8    9   10   11   11
    0    1    1    1    1    1    1    1    1    1    1    0
    1    0    0    0    0    0    0    0    0    0    0    1
    0
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          ********************************************
          ********************************************
          **                                        **
          ** SHAKE -- A COMPUTER PROGRAM FOR        **
          **          EARTHQUAKE RESPONSE ANALYSIS  **
          **          OF HORIZONTALLY LAYERED SITES **
          **                                        **
          **                                        **
          ** MS-DOS VERSION - CONVERTED TO IBM-PC BY **
          **                  Shyh-Shiun Lai, WCC   **
          **                  January 1985          **
          **                                        **
          ** (Modified to Use 16384 Points and 100  **
          **  Soil Layers, S.J. Chiou, August 1995) **
          **                                        **
          ********************************************
          ********************************************
 Output file name : PD3B.OUT
 Start time : 19``/``/`` --
 Start time : 19``/``/`` --

  MAX. NUMBER OF TERMS IN FOURIER TRANSFORM =     16384
  NECESSARY LENGTH OF BLANK COMMON X        =    102419
  EARTH PRESSURE AT REST FOR SAND           =     0.500
1****** OPTION  8  ***  READ RELATION BETWEEN SOIL PROPERTIES AND STRAIN

   CURVES FOR RELATION STRAIN VERSUS SHEAR MODULUS AND DAMPING

 [LINES SKIPPED]

 1******  OPTION  2  ***  READ SOIL PROFILE

     NEW SOIL PROFILE NO.  1      IDENTIFICATION   ISFSI Pad, HBPP, ISFSI, 08/2002

0NUMBER OF LAYERS                  11          DEPTH TO BEDROCK         48.00
 NUMBER OF FIRST SUBMERGED LAYER    1          DEPTH TO WATER LEVEL      0.00

 LAYER  TYPE    MAX-MOD     THICKNESS     DEPTH      EFF. PRESS.     MODULUS      DAMPING   UNIT WEIGTH     SHEAR VEL     SVMAX

   1      2    1215.214        4.00        2.00         0.135      1215.214       0.0500       0.1300         548.634   548.634
   2      2    2104.812        4.00        6.00         0.406      2104.812       0.0500       0.1300         722.043   722.043
   3      1   13520.403        5.00       10.50         0.710     13520.403       0.0500       0.1300        1830.000  1830.000
   4      1   13520.403        5.00       15.50         1.048     13520.403       0.0500       0.1300        1830.000  1830.000
   5      3    5714.292        5.00       20.50         1.386      5714.292       0.0500       0.1300        1189.700  1189.700
   6      3    6373.172        5.00       25.50         1.724      6373.172       0.0500       0.1300        1256.418  1256.418
   7      3    6970.043        5.00       30.50         2.062      6970.043       0.0500       0.1300        1313.935  1313.935
   8      3    7519.687        5.00       35.50         2.400      7519.687       0.0500       0.1300        1364.760  1364.760
   9      3    8031.804        5.00       40.50         2.738      8031.804       0.0500       0.1300        1410.467  1410.467
  10      3    8513.169        5.00       45.50         3.076      8513.169       0.0500       0.1300        1452.118  1452.118
  11   BASE                                                        9084.          0.050        0.1300        1500.

  PERIOD = 0.15 FROM AVERAGE SHEARVEL. =   1319.

 MAXIMUM AMPLIFICATION =  13.57
 FOR FREQUENCY         =   7.08 C/SEC.
     PERIOD            =   0.14 SEC.

1******  OPTION  1  ***  READ INPUT MOTION

 EARTHQUAKE  -   Section B-B, HBPP, 08/2002

15999 ACCELERATION VALUES AT TIME INTERVAL    0.0050

    THE VALUES ARE LISTED ROW BY ROW AS READ FROM CARDS
    TRAILING ZEROS ARE ADDED TO GIVE A TOTAL OF16384 VALUES


 MAXIMUM ACCELERATION =  1.84707
 AT TIME              = 23.28 SEC

 THE VALUES WILL BE MULTIPLIED BY A FACTOR =  1.000
 TO GIVE NEW MAXIMUM ACCELERATION          =  1.84707

 MEAN SQUARE FREQUENCY =       1.84 C/SEC.


  MAX ACCELERATION =    1.82903 FOR FREQUENCIES REMOVED ABOVE      20.00 C/SEC.

1******  OPTION  3  ***  READ WHERE OBJECT MOTION IS GIVEN

  OBJECT MOTION IN LAYER NUMBER   1 OUTCROPPING
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1******   OPTION  4  ***  OBTAIN STRAIN COMPATIBLE SOIL PROPERTIES

  MAXIMUM NUMBER OF ITERATIONS                =    30
  MAXIMUM ERROR IN PERCENT                    =    1.00
  FACTOR FOR EFFECTIVE STRAIN IN TIME DOMAIN  =    0.65


     EARTHQUAKE   -  Section B-B, HBPP, 08/2002
     SOIL PROFILE -  ISFSI Pad, HBPP, ISFSI, 08/2002

[LINES SKIPPED]

ITERATION NUMBER 10
  THE CALCULATION HAS BEEN CARRIED OUT IN THE TIME DOMAIN WITH EFF. STRAIN = .65* MAX. STRAIN
```

LAYER	TYPE	DEPTH	EFF. STRAIN	NEW DAMP.	DAMP USED	ERROR	NEW G	G USED	ERROR	NEW Vs
1	2	2.0	0.04831	0.092	0.092	0.0	630.330	630.380	0.0	395.130
2	2	6.0	0.13132	0.142	0.142	0.1	670.621	671.214	-0.1	407.563
3	1	10.5	0.01502	0.057	0.057	0.0	10226.652	10226.465	0.0	1591.560
4	1	15.5	0.02407	0.070	0.070	0.0	9228.804	9228.522	0.0	1511.921
5	3	20.5	0.12618	0.118	0.118	0.0	2269.327	2269.740	0.0	749.730
6	3	25.5	0.15159	0.128	0.128	0.0	2305.314	2306.685	-0.1	755.651
7	3	30.5	0.17749	0.136	0.136	0.1	2309.085	2312.004	-0.1	756.269
8	3	35.5	0.20519	0.145	0.144	0.2	2280.711	2286.940	-0.3	751.608
9	3	40.5	0.23578	0.152	0.152	0.3	2220.634	2232.693	-0.5	741.643
10	3	45.5	0.26935	0.160	0.159	0.4	2135.084	2156.277	-1.0	727.217

VALUES IN TIME DOMAIN

LAYER	TYPE	THICKNESS FT	DEPTH FT	MAX STRAIN PRCNT	MAX STRESS PSF	TIME SEC
1	2	4.0	2.0	0.07432	468.47	23.29
2	2	4.0	6.0	0.20203	1354.87	23.30
3	1	5.0	10.5	0.02310	2362.73	23.29
4	1	5.0	15.5	0.03703	3417.48	23.29
5	3	5.0	20.5	0.19412	4405.17	23.30
6	3	5.0	25.5	0.23322	5376.37	23.30
7	3	5.0	30.5	0.27306	6305.13	23.30
8	3	5.0	35.5	0.31568	7199.70	23.31
9	3	5.0	40.5	0.36274	8055.23	23.31
10	3	5.0	45.5	0.41438	8847.41	23.31

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  PERIOD = 0.22 FROM AVERAGE SHEARVEL. =    857.

 MAXIMUM AMPLIFICATION =   4.52
 FOR FREQUENCY         =   3.93 C/SEC.
     PERIOD            =   0.25 SEC.

1******   OPTION  5  ***  COMPUTE MOTION IN NEW SUBLAYERS

   EARTHQUAKE - Section B-B, HBPP, 08/2002
  SOIL DEPOSIT -  ISFSI Pad, HBPP, ISFSI, 08/2002
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LAYER	DEPTH FT	MAX. ACC. G	SEC	TIME C/SEC	MEAN SQ. FR. QUIET ZONE	ACC. RATIO ACC. RECORD	PUNCHED CARDS
OUTCR.	0.0	1.82903		23.28	1.84	0.104	2048
WITHIN	4.0	1.77829		23.28	1.69	0.103	0
WITHIN	8.0	1.65649		23.28	1.46	0.104	0
WITHIN	13.0	1.64285		23.28	1.44	0.104	0
WITHIN	18.0	1.62481		23.28	1.41	0.103	0
WITHIN	23.0	1.55076		23.31	1.27	0.102	0
WITHIN	28.0	1.51259		23.31	1.20	0.100	0
WITHIN	33.0	1.47074		23.31	1.19	0.098	0
WITHIN	38.0	1.41789		23.23	1.21	0.097	0
WITHIN	43.0	1.43325		23.23	1.28	0.092	0
WITHIN	48.0	1.46200		23.22	1.38	0.089	0
OUTCR.	48.0	1.72280		23.22	1.82	0.100	2048

XMAX= 1.8290 S ection B- B, HBPP, Aug-02
ACCELER. TION VALU ES AT OU CROPPIN(LAYER 1 #NAME? Pad, HBPF, ISFSI, 08 /2002

0.000364	0.000269	0.00012	-0.000016	-0.000081	-0.000046	0.00008	0.000249	1

[LINES SKIPPED]

XMAX= 1.7228 S ection B- B, HBPP, Aug-02
ACCELER. TION VALU ES AT OU CROPPIN(LAYER 11 #NAME? Pad, HBPF, ISFSI, 08 /2002

-0.000517	-0.000447	-0.000146	0.000269	0.000639	0.000822	0.000748	0.000444	1
0.000029	-0.000339	-0.000517	-0.000434	-0.000121	0.000304	0.00068	0.000866	2
0.00079	0.000484	0.000064	-0.000306	-0.000485	-0.000402	-0.000089	0.000336	3
0.000711	0.000893	0.000812	0.0005	0.000076	-0.000295	-0.000474	-0.000388	4
-0.000072	0.000357	0.000733	0.000915	0.000832	0.000518	0.000092	-0.000281	5
-0.000458	-0.000369	-0.000049	0.000382	0.00076	0.000942	0.000858	0.000542	6
0.000115	-0.000258	-0.000434	-0.000342	-0.000018	0.000417	0.000797	0.000979	7
0.000894	0.000577	0.000148	-0.000223	-0.000397	-0.000301	0.000027	0.000466	8
0.000848	0.001032	0.000947	0.000629	0.000201	-0.00017	-0.00034	-0.00024	9
0.000093	0.000537	0.000922	0.001107	0.001021	0.000703	0.000274	-0.000095	10
-0.000263	-0.000159	0.000179	0.000626	0.001015	0.001201	0.001116	0.000798	11
0.000371	0.000005	-0.000156	-0.000043	0.000305	0.000765	0.001168	0.001369	12
0.001301	0.001003	0.0006	0.000262	0.000133	0.000282	0.000669	0.001169	13
0.001611	0.001851	0.001822	0.001562	0.001198	0.000899	0.00081	0.000997	14
0.001421	0.001955	0.002426	0.002691	0.002681	0.002435	0.002081	0.001787	15
0.001698	0.001879	0.00229	0.002799	0.003235	0.003453	0.003385	0.003071	16
0.00264	0.002264	0.002088	0.002179	0.002497	0.002912	0.003255	0.003382	17
0.003227	0.002834	0.002335	0.001902	0.001683	0.001744	0.002044	0.002452	18
0.002797	0.002933	0.002793	0.00242	0.001944	0.001536	0.001342	0.001426	19
0.001744	0.002164	0.002513	0.002646	0.002497	0.00211	0.001617	0.001192	20
0.000981	0.001048	0.001349	0.00175	0.002079	0.002188	0.002016	0.001605	21
0.001091	0.000648	0.000423	0.000481	0.000776	0.001175	0.001503	0.001613	22
0.001442	0.001033	0.000523	0.000086	-0.000131	-0.000064	0.000242	0.000652	23
0.000993	0.001116	0.00096	0.000569	0.000078	-0.000338	-0.000534	-0.000448	24
-0.000125	0.000296	0.000643	0.000768	0.000612	0.000221	-0.000265	-0.000671	25
-0.000849	-0.000739	-0.000388	0.000063	0.000437	0.000585	0.000442	0.000057	26
-0.000433	-0.00085	-0.001044	-0.000953	-0.000621	-0.000186	0.000177	0.000321	27
0.000182	-0.000192	-0.000664	-0.001058	-0.001229	-0.001114	-0.00076	-0.000305	28
0.000076	0.000237	0.000117	-0.000239	-0.000691	-0.001067	-0.001223	-0.001101	29
-0.000748	-0.000304	0.000059	0.000197	0.000054	-0.000319	-0.000782	-0.00116	30
-0.001309	-0.001175	-0.000809	-0.000355	0.000012	0.000145	-0.00001	-0.000403	31
-0.00089	-0.001294	-0.001467	-0.001353	-0.001	-0.000548	-0.00017	-0.000013	32
-0.000131	-0.000477	-0.000913	-0.001268	-0.001404	-0.001267	-0.000911	-0.000474	33
-0.000128	-0.000009	-0.00017	-0.000557	-0.001031	-0.001426	-0.001608	-0.00153	34
-0.001245	-0.000889	-0.000624	-0.000573	-0.00077	-0.00115	-0.001568	-0.001863	35
-0.001916	-0.001704	-0.001308	-0.000889	-0.000621	-0.000631	-0.000944	-0.001472	36
-0.002046	-0.002479	-0.002636	-0.002483	-0.002107	-0.001676	-0.001382	-0.001362	37
-0.001649	-0.002156	-0.002707	-0.003107	-0.00321	-0.00298	-0.002502	-0.001954	38
-0.001539	-0.001409	-0.001609	-0.002061	-0.002591	-0.002999	-0.003133	-0.002943	39
-0.002505	-0.001986	-0.001583	-0.001447	-0.001624	-0.00204	-0.002531	-0.002907	40
-0.003023	-0.002841	-0.002439	-0.001987	-0.001673	-0.00164	-0.001918	-0.002422	41
-0.002973	-0.003374	-0.003478	-0.00325	-0.002773	-0.002223	-0.001791	-0.001615	42
-0.001722	-0.002018	-0.00232	-0.002438	-0.002242	-0.001727	-0.001016	-0.000326	43
0.000114	0.000145	-0.000258	-0.000974	-0.001776	-0.002407	-0.002673	-0.002507	44

Attachment E

QUAD4MU

Input and Output Excerpts

(see Table 7-7 for listing of files)

HBSOILNW.DAT

```
 4          FOR HUMBOLDT BAY POWER PLANT, 08/2002
11     #1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
 0.0001  0.000316     0.001   0.00316      0.01    0.0316       0.1     0.316
     1.      3.16       10.
  1.000     1.000     1.000       .94       .82       .64       .40       .21
    .09       .04       .02
11     damping for Clay PI 15 (Vucetic & Dobry 1991)
 0.0001  0.000316     0.001   0.00316      0.01    0.0316       0.1     0.316
     1.      3.16       10.
   1.7       1.7       1.7       2.6       4.5       7.8      11.7      16.3
  20.2      23.0      23.0
11     #2 modulus for Sand (20 to 50 ft) (EPRI 1993)
 0.0001    0.0003     0.001     0.003      0.01      0.03       0.1       0.3
     1.        3.       10.
 1.000     0.999     0.991     0.953     0.830     0.620     0.364     0.181
 0.071     0.025     0.010
11     damping for Sand (20 to 50 ft) (EPRI 1993)
 0.0001    0.0003     0.001     0.003      0.01      0.03       0.1       0.3
     1.        3.       10.
 1.250     1.300     1.455     2.080     3.750     6.925    12.600    18.905
24.840    27.200    28.900
11     #3 modulus for Clay PI 15 (Vucetic and Dobry 1991)
 0.0001  0.000316     0.001   0.00316      0.01    0.0316       0.1     0.316
     1.      3.16       10.
  1.000     1.000     1.000       .94       .82       .64       .40       .21
    .09       .04       .02
11     damping for Clay PI 15 (Vucetic & Dobry 1991)
 0.0001  0.000316     0.001   0.00316      0.01    0.0316       0.1     0.316
     1.      3.16       10.
   1.7       1.7       1.7       2.6       4.5       7.8      11.7      16.3
  20.2      23.0      23.0
11     #4 modulus for Sand (50 to 120 ft) (EPRI 1993)
 0.0001    0.0003     0.001     0.003      0.01      0.03       0.1       0.3
     1.        3.       10.
 1.000     1.000     0.995     0.972     0.879     0.701     0.442     0.230
 0.097     0.037     0.014
11     damping for Sand (50 to 120 ft) (EPRI 1993)
 0.0001    0.0003     0.001     0.003      0.01      0.03       0.1       0.3
     1.        3.       10.
 1.090     1.145     1.300     1.665     2.865     5.415    10.465    16.560
22.915    25.500    27.000
```

PD1A.Q4I

```
FDLA: HUMBOLDT BAY, ISFSI, SITE 6, FOAE, 06/2003
UNITS (E for English, S for SI):                                  *** (A1)
***
E
      DEF         PRN       ROCKVP     ROCKVS    ROCKRHO          *** (5F10.0)
***
         1        0.65       6300.      1500.       130.
 NELM NDFT NSLP                                                   *** (3I5)
***
 1659 1740    2
NDMAX NSEQ NLEQ NIEQ NIEQ NUMB   EV ESAV                         *** (8I5)
***
12500012000    1    112000   10    1    0
.     DTEQ     EQMUL1     EQMUL2     DUMAX1     DUMAX2 NDRX NDRY NPLX NPLY     PRINPUT
*** (5F10.0,4I5,F10.0) ***
      0.005       1.0        1.0                    2    0    0    0          0.30
EARTHQUAKE INPUT FILE NAME(S) & FORMAT(S) (' for FREE FORMAT)  *** (A)
***
FDLA.011
(8F9.6)
 NOUT AOUT EOUT                                                   *** (3I5)
***
    0    1    1
 ACCELERATION OUTPUT FORMAT (E or C), FILE PREFIX, AND SUFFIX:  *** (A)
****
MULTIPLE
FDLA
Q4A
SEISMIC COEFF OUT(UT FORMAT (E OR C), FILE PREFIX, AND SUFFIX: **(A)
MULTIPLE
FDLA
OSC
NSEQ ESEQ   ***(2I5)
   60  316
NOSEQ
  100  101  112  124  125  137  150  162  164  177  190  203  216  217  230
  243  256  269  283  296  314  331  349  368  388  408  427  447  467
  487  486  506  526  546  565  585  586  604  624  623  643  663  662
  681  702  701  721  720  740  740  759  779  778  798  797  796  815  815
ELSEQ
   91  101  102  112  113  114  123  124  125  126  135  136  137  138  147
  148  149  150  151  159  160  161  162  163  171  172  173  174  175  183
  184  185  186  187  195  196  197  198  199  200  207  208  209  220  213
  212  219  220  221  222  223  224  231  232  233  234  235  236  243  244
  245  246  247  248  249  256  257  258  259  260  261  262  263  270  271
  272  273  274  275  276  277  278  285  286  287  288  289  290  291  292
  293  294  301  302  303  304  305  306  307  308  309  310  311  318  319
  320  321  322  323  324  325  326  327  328  329  336  337  338  339  340
  341  342  343  344  345  346  347  348  355  356  357  358  359  360  361
  362  363  364  365  366  367  374  375  376  377  378  379  380  381  382
  383  384  385  393  394  395  396  397  398  399  400  401  402  403  404
  412  413  414  415  416  417  418  419  420  421  422  423  431  432  433
  434  435  436  437  438  439  440  441  442  450  451  452  453  454  455
  456  457  458  459  468  469  470  471  472  473  474  475  476  477  478
  479  480  489  490  491  492  493  494  495  496  497  498  507  508  509
  510  511  512  513  514  515  516  526  527  528  529  530  531  532  533
  534  535  545  546  547  548  549  550  551  552  553  564  565  566  567
  568  569  570  571  572  582  584  585  586  587  588  589  598  602  603
  604  605  606  607  608  609  621  622  623  624  625  626  627  648  641
  642  643  644  645  646  659  660  661  662  663  664  678  679  680  681
  682  697  698  699  700  701  716  717  718  719  735  736  737  756
NSEQ ESEQ   ***(2I5)
   83  515
NOSEQ
  575  576  596  597  617  618  638  658  659  679  699  700  720  740  741
  761  781  782  802  822  842  843  863  883  903  904  924  944  964  965
  985 1005 1025 1026 1046 1066 1086 1106 1107 1127 1147 1167 1187 1207 1227
 1247 1268 1288 1308 1328 1348 1368 1388 1407 1427 1447 1467 1487 1507 1527
 1546 1569 1584 1585 1585 1585 1578 1582 1605 1628 1631 1644 1643 1656 1669
 1668 1681 1694 1693 1706 1705 1719 1717
ELSEQ
  545  564  565  583  584  585  602  603  604  621  622  623  624  640  641
  642  643  659  660  661  662  663  678  679  680  681  682  697  698  699
  700  701  702  716  717  718  719  720  721  735  736  737  738  739  740
  741  754  755  756  757  758  759  760  773  774  775  776  777  778  779
  792  793  794  795  796  797  798  799  811  812  813  814  815  816  817
  818  830  831  832  833  834  835  836  837  849  850  851  852  853  854
  855  856  857  868  869  870  871  872  873  874  875  876  887  888  889
  890  891  892  893  894  895  906  907  908  909  910  911  912  913  914
  915  925  926  927  928  929  930  931  932  933  934  944  945  946  947
  948  949  950  951  952  953  961  966  965  966  967  968  969  970  971
  972  973  982  983  984  985  986  987  988  989  990  991  992 1001 1002
 1003 1004 1005 1006 1007 1008 1009 1010 1011 1020 1021 1022 1023 1024 1025
 1026 1027 1028 1029 1030 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048
 1049 1050 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1077
 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1096 1097 1098 1099
 1100 1101 1102 1103 1104 1105 1106 1107 1115 1116 1117 1118 1119 1120 1121
 1122 1123 1124 1125 1126 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143
 1144 1145 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1172
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 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1210 1211 1212 1213 1214
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 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1342 1343 1344 1345 1346
 1347 1348 1349 1350 1351 1352 1359 1360 1361 1362 1363 1364 1365 1366 1367
 1368 1375 1376 1377 1378 1379 1380 1381 1382 1383 1390 1391 1392 1393 1394
 1395 1396 1397 1398 1405 1406 1407 1408 1409 1410 1411 1412 1419 1420 1421
 1422 1423 1424 1425 1426 1433 1434 1435 1436 1437 1438 1439 1440 1447 1448
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 1477 1478 1479 1480 1481 1489 1490 1491 1492 1493 1494 1495 1503 1504 1505
 1506 1507 1508 1516 1517 1518 1519 1520 1528 1529 1530 1531 1532 1540 1541
 1542 1543 1544 1552 1553 1554 1555 1564 1565 1566 1567 1576 1577 1578 1588
 1589 1590 1600 1601 1612
   N  NP1  NP2  NP3  NP4 TYPE      DCPS        PO         GHX          G          XL
LSTR  *** (615.5F10.0,I5) ***
    1    1    2   13   12    2    130.00      .47    1270.99    1016.79     .10000
    2    2    3   14   13    3    130.00      .47    2201.42    1761.14     .10000
    3    3    4   15   14    3    130.00      .47   13625.78   10900.62     .10000
    4    4    5   16   15    3    130.00      .47   13625.78   10900.62     .10000
    5    5    6   17   16    4    130.00      .47    5984.05    4787.24     .10000
    6    6    7   18   17    4    130.00      .47    6674.03    5339.23     .10000
    7    7    8   19   18    4    130.00      .47    7299.08    5839.27     .10000
    8    8    9   20   19    4    130.00      .47    7874.67    6299.74     .10000
    9    9   10   21   20    4    130.00      .47    8410.96    6728.77     .10000
   10   10   11   22   21    4    130.00      .47    8915.05    7132.04     .10000
   11   11   12   23   22    2    130.00      .47    1270.99    1016.79     .10000
   12   13   14   25   24    2    130.00      .47    2201.42    1761.14     .10000
   13   14   15   26   25    3    130.00      .47   13625.78   10900.62     .10000
   14   15   16   27   26    3    130.00      .47   13625.78   10900.62     .10000
   15   16   17   28   27    4    130.00      .47    5984.05    4787.24     .10000
   16   17   18   29   28    4    130.00      .47    6674.03    5339.23     .10000
   17   18   19   30   29    4    130.00      .47    7299.08    5839.27     .10000
   18   19   20   31   30    4    130.00      .47    7874.67    6299.74     .10000
   19   20   21   32   31    4    130.00      .47    8410.96    6728.77     .10000
   20   21   22   33   32    4    130.00      .47    8915.05    7132.04     .10000
   21   23   24   35   34    2    130.00      .47    1270.99    1016.79     .10000
   22   24   25   36   35    2    130.00      .47    2201.42    1761.14     .10000
   23   25   26   37   36    3    130.00      .47   13625.78   10900.62     .10000
   24   26   27   38   37    3    130.00      .47   13625.78   10900.62     .10000
   25   27   28   39   38    4    130.00      .47    5984.05    4787.24     .10000
   26   28   29   40   39    4    130.00      .47    6674.03    5339.23     .10000
   27   29   30   41   40    4    130.00      .47    7299.08    5839.27     .10000
   28   30   31   42   41    4    130.00      .47    7874.67    6299.74     .10000
   29   31   32   43   42    4    130.00      .47    8410.96    6728.77     .10000
   30   32   33   44   43    4    130.00      .47    8915.05    7132.04     .10000
   31   34   35   46   45    2    130.00      .47    1270.99    1016.79     .10000
   32   35   36   47   46    2    130.00      .47    2201.42    1761.14     .10000
   33   36   37   48   47    3    130.00      .47   13625.78   10900.62     .10000
   34   37   38   49   48    3    130.00      .47   13625.78   10900.62     .10000
   35   38   39   50   49    4    130.00      .47    5984.05    4787.24     .10000
   36   39   40   51   50    4    130.00      .47    6674.03    5339.23     .10000
   37   40   41   52   51    4    130.00      .47    7299.08    5839.27     .10000
   38   41   42   53   52    4    130.00      .47    7874.67    6299.74     .10000
   39   42   43   54   53    4    130.00      .47    8410.96    6728.77     .10000
   40   43   44   55   54    4    130.00      .47    8915.05    7132.04     .10000
   41   45   46   57   56    2    130.00      .47    1270.99    1016.79     .10000
   42   46   47   58   57    2    130.00      .47    2201.42    1761.14     .10000
   43   47   48   59   58    3    130.00      .47   13625.78   10900.62     .10000
   44   48   49   60   59    3    130.00      .47   13625.78   10900.62     .10000
   45   49   50   61   60    4    130.00      .47    5984.05    4787.24     .10000
   46   50   51   62   61    4    130.00      .47    6674.03    5339.23     .10000
   47   51   52   63   62    4    130.00      .47    7299.08    5839.27     .10000
   48   52   53   64   63    4    130.00      .47    7874.67    6299.74     .10000
   49   53   54   65   64    4    130.00      .47    8410.96    6728.77     .10000
   50   54   55   66   65    4    130.00      .47    8915.05    7132.04     .10000
   51   56   57   68   67    2    130.00      .47    1270.99    1016.79     .10000
   52   57   58   69   68    2    130.00      .47    2201.42    1761.14     .10000
   53   58   59   70   69    3    130.00      .47   13625.78   10900.62     .10000
   54   59   60   71   70    3    130.00      .47   13625.78   10900.62     .10000
   55   60   61   72   71    4    130.00      .47    5984.05    4787.24     .10000
   56   61   62   73   72    4    130.00      .47    6674.03    5339.23     .10000
   57   62   63   74   73    4    130.00      .47    7299.08    5839.27     .10000
   58   63   64   75   74    4    130.00      .47    7874.67    6299.74     .10000
   59   64   65   76   75    4    130.00      .47    8410.96    6728.77     .10000
   60   65   66   77   76    4    130.00      .47    8915.05    7132.04     .10000
   61   67   68   79   78    2    130.00      .47    1270.99    1016.79     .10000
   62   68   69   80   79    2    130.00      .47    2201.42    1761.14     .10000
   63   69   70   81   80    3    130.00      .47   13625.78   10900.62     .10000
   64   70   71   82   81    3    130.00      .47   13625.78   10900.62     .10000
   65   71   72   83   82    4    130.00      .47    5984.05    4787.24     .10000
   66   72   73   84   83    4    130.00      .47    6674.03    5339.23     .10000
   67   73   74   85   84    4    130.00      .47    7299.08    5839.27     .10000
   68   74   75   86   85    4    130.00      .47    7874.67    6299.74     .10000
   69   75   76   87   86    4    130.00      .47    8410.96    6728.77     .10000
   70   76   77   88   87    4    130.00      .47    8915.05    7132.04     .10000
   71   78   79   90   89    2    130.00      .47    1270.99    1016.79     .10000
   72   79   80   91   90    2    130.00      .47    2201.42    1761.14     .10000
   73   80   81   92   91    3    130.00      .47   13625.78   10900.62     .10000
   74   81   82   93   92    3    130.00      .47   13625.78   10900.62     .10000
   75   82   83   94   93    4    130.00      .47    5984.05    4787.24     .10000
   76   83   84   95   94    4    130.00      .47    6674.03    5339.23     .10000
   77   84   85   96   95    4    130.00      .47    7299.08    5839.27     .10000
   78   85   86   97   96    4    130.00      .47    7874.67    6299.74     .10000
   79   86   87   98   97    4    130.00      .47    8410.96    6728.77     .10000
   80   87   88   99   98    4    130.00      .47    8915.05    7132.04     .10000
   81   89   90  101  100    2    130.00      .47    1270.99    1016.79     .10000
   82   90   91  102  101    2    130.00      .47    2201.42    1761.14     .10000
   83   91   92  103  102    3    130.00      .47   13625.78   10900.62     .10000
   84   92   93  104  103    3    130.00      .47   13625.78   10900.62     .10000
   85   93   94  105  104    4    130.00      .47    5984.05    4787.24     .10000
   86   94   95  106  105    4    130.00      .47    6674.03    5339.23     .10000
   87   95   96  107  106    4    130.00      .47    7299.08    5839.27     .10000
   88   96   97  108  107    4    130.00      .47    7874.67    6299.74     .10000
   89   97   98  109  108    4    130.00      .47    8410.96    6728.77     .10000
   90   98   99  110  109    4    130.00      .47    8915.05    7132.04     .10000
   91  100  101  112  111    2    130.00      .47    1270.99    1016.79     .10000
   92  101  102  113  112    2    130.00      .47    2201.42    1761.14     .10000
   93  102  103  114  113    3    130.00      .47   13625.78   10900.62     .10000
   94  103  104  115  114    3    130.00      .47   13625.78   10900.62     .10000
   95  104  105  116  115    4    130.00      .47    5984.05    4787.24     .10000
   96  105  106  117  116    4    130.00      .47    6674.03    5339.23     .10000
   97  106  107  118  117    4    130.00      .47    7299.08    5839.27     .10000
   98  107  108  119  118    4    130.00      .47    7874.67    6299.74     .10000
   99  108  109  120  119    4    130.00      .47    8410.96    6728.77     .10000
  100  109  110  121  120    4    130.00      .47    8915.05    7132.04     .10000
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343	362	363	383	382	2	130.00	.33	6912.67	5530.13	.10000
344	363	364	384	383	2	130.00	.67	7901.11	6320.89	.10000
345	364	365	385	384	2	130.00	.67	7728.82	6182.42	.10000
346	365	366	386	385	2	130.00	.67	7934.30	6347.44	.10000
347	366	367	387	386	3	130.00	.67	13625.78	10900.62	.10000
348	367	368	388	387	3	130.00	.67	13625.78	10900.62	.10000
349	368	369	389	388	4	130.00	.67	12707.18	10165.75	.10000
350	369	370	390	389	4	130.00	.67	13046.32	10437.06	.10000
351	370	371	391	390	4	130.00	.67	13376.86	10701.49	.10000
352	371	372	392	391	4	130.00	.67	13699.42	10959.54	.10000
353	372	373	393	392	4	130.00	.67	14014.57	11211.65	.10000
354	373	374	394	393	4	130.00	.67	14322.78	11458.22	.10000
355	375	376	396	395	1	125.00	.33	5375.43	4300.34	.10000
356	376	377	397	396	1	125.00	.33	5375.43	4300.34	.10000
357	377	378	398	397	1	125.00	.33	5375.43	4300.34	.10000
358	378	379	399	398	1	125.00	.33	5375.43	4300.34	.10000
359	379	380	400	399	1	125.00	.33	5822.96	4658.39	.10000
360	380	381	401	400	1	125.00	.33	5822.96	4658.39	.10000
361	381	382	402	401	2	130.00	.33	5747.88	4598.24	.10000
362	382	383	403	402	2	130.00	.33	7104.88	5683.84	.10000
363	383	384	404	403	2	130.00	.67	8087.29	6469.83	.10000
364	384	385	405	404	2	130.00	.67	7897.94	6318.36	.10000
365	385	386	406	405	2	130.00	.67	8099.98	6479.92	.10000
366	386	387	407	406	3	130.00	.67	13625.78	10900.62	.10000
367	387	388	408	407	3	130.00	.67	13625.78	10900.62	.10000
368	388	389	409	408	4	130.00	.67	12931.16	10344.92	.10000
369	389	390	410	409	4	130.00	.67	13264.56	10611.65	.10000
370	390	391	411	410	4	130.00	.67	13589.79	10871.84	.10000
371	391	392	412	411	4	130.00	.67	13907.42	11125.94	.10000
372	392	393	413	412	4	130.00	.67	14217.96	11374.36	.10000
373	393	394	414	413	4	130.00	.67	14521.85	11617.48	.10000
374	395	396	416	415	1	125.00	.33	5375.43	4300.34	.10000
375	396	397	417	416	1	125.00	.33	5375.43	4300.34	.10000
376	397	398	418	417	1	125.00	.33	5375.43	4300.34	.10000
377	398	399	419	418	1	125.00	.33	5375.43	4300.34	.10000
378	399	400	420	419	1	125.00	.33	5375.43	4300.34	.10000
379	400	401	421	420	1	125.00	.33	5822.96	4658.39	.10000
380	401	402	422	421	2	130.00	.33	5747.88	4598.24	.10000
381	402	403	423	422	2	130.00	.33	7104.88	5683.84	.10000
382	403	404	424	423	2	130.00	.67	8087.29	6469.83	.10000
383	404	405	425	424	2	130.00	.67	7897.94	6318.36	.10000
384	405	406	426	425	2	130.00	.67	8099.98	6479.92	.10000
385	406	407	427	426	3	130.00	.67	13625.78	10900.62	.10000
386	407	408	428	427	3	130.00	.67	13625.78	10900.62	.10000
387	408	409	429	428	4	130.00	.67	12931.16	10344.92	.10000
388	409	410	430	429	4	130.00	.67	13264.56	10611.65	.10000
389	410	411	431	430	4	130.00	.67	13589.79	10871.84	.10000
390	411	412	432	431	4	130.00	.67	13907.42	11125.94	.10000
391	412	413	433	432	4	130.00	.67	14217.96	11374.36	.10000
392	413	414	434	433	4	130.00	.67	14521.85	11617.48	.10000
393	415	416	436	435	1	125.00	.33	5375.43	4300.34	.10000
394	416	417	437	436	1	125.00	.33	5375.43	4300.34	.10000
395	417	418	438	437	1	125.00	.33	5375.43	4300.34	.10000
396	418	419	439	438	1	125.00	.33	5375.43	4300.34	.10000
397	419	420	440	439	1	125.00	.33	5375.43	4300.34	.10000
398	420	421	441	440	1	125.00	.33	5822.96	4658.39	.10000
399	421	422	442	441	2	130.00	.33	5747.88	4598.24	.10000
400	422	423	443	442	2	130.00	.33	7104.88	5683.84	.10000
401	423	424	444	443	2	130.00	.67	8087.29	6469.83	.10000
402	424	425	445	444	2	130.00	.67	7897.94	6318.36	.10000
403	425	426	446	445	2	130.00	.67	8099.98	6479.92	.10000
404	426	427	447	446	3	130.00	.67	13625.78	10900.62	.10000
405	427	428	448	447	3	130.00	.67	13625.78	10900.62	.10000
406	428	429	449	448	4	130.00	.67	12931.16	10344.92	.10000
407	429	430	450	449	4	130.00	.67	13264.56	10611.65	.10000
408	430	431	451	450	4	130.00	.67	13589.79	10871.84	.10000
409	431	432	452	451	4	130.00	.67	13907.42	11125.94	.10000
410	432	433	453	452	4	130.00	.67	14217.96	11374.36	.10000
411	433	434	454	453	4	130.00	.67	14521.85	11617.48	.10000
412	435	436	456	455	1	125.00	.33	5375.43	4300.34	.10000
413	436	437	457	456	1	125.00	.33	5375.43	4300.34	.10000
414	437	438	458	457	1	125.00	.33	5375.43	4300.34	.10000
415	438	439	459	458	1	125.00	.33	5375.43	4300.34	.10000
416	439	440	460	459	1	125.00	.33	5375.43	4300.34	.10000
417	440	441	461	460	1	125.00	.33	5822.96	4658.39	.10000
418	441	442	462	461	2	130.00	.33	5747.88	4598.24	.10000
419	442	443	463	462	2	130.00	.33	7104.88	5683.84	.10000
420	443	444	464	463	2	130.00	.67	8087.29	6469.83	.10000
421	444	445	465	464	2	130.00	.67	7897.94	6318.36	.10000
422	445	446	466	465	2	130.00	.67	8099.98	6479.92	.10000
423	446	447	467	466	3	130.00	.67	13625.78	10900.62	.10000
424	447	448	468	467	3	130.00	.67	13625.78	10900.62	.10000
425	448	449	469	468	4	130.00	.67	12931.16	10344.92	.10000
426	449	450	470	469	4	130.00	.67	13264.56	10611.65	.10000
427	450	451	471	470	4	130.00	.67	13589.79	10871.84	.10000
428	451	452	472	471	4	130.00	.67	13907.42	11125.94	.10000
429	452	453	473	472	4	130.00	.67	14217.96	11374.36	.10000
430	453	454	474	473	4	130.00	.67	14521.85	11617.48	.10000
431	455	456	476	475	1	125.00	.33	5375.43	4300.34	.10000
432	456	457	477	476	1	125.00	.33	5375.43	4300.34	.10000
433	457	458	478	477	1	125.00	.33	5375.43	4300.34	.10000
434	458	459	479	478	1	125.00	.33	5375.43	4300.34	.10000
435	459	460	480	479	1	125.00	.33	5375.43	4300.34	.10000
436	460	461	481	480	1	125.00	.33	5822.96	4658.39	.10000
437	461	462	482	481	2	130.00	.33	5747.88	4598.24	.10000
438	462	463	483	482	2	130.00	.33	7104.88	5683.84	.10000
439	463	464	484	483	2	130.00	.67	8087.29	6469.83	.10000
440	464	465	485	484	2	130.00	.67	7897.94	6318.36	.10000
441	465	466	486	485	2	130.00	.67	8099.98	6479.92	.10000
442	466	467	487	486	3	130.00	.67	13625.78	10900.62	.10000
443	467	468	488	487	3	130.00	.67	13625.78	10900.62	.10000
444	468	469	489	488	4	130.00	.67	12931.16	10344.92	.10000
445	469	470	490	489	4	130.00	.67	13264.56	10611.65	.10000
446	470	471	491	490	4	130.00	.67	13589.79	10871.84	.10000
447	471	472	492	491	4	130.00	.67	13907.42	11125.94	.10000
448	472	473	493	492	4	130.00	.67	14217.96	11374.36	.10000
449	473	474	494	493	4	130.00	.67	14521.85	11617.48	.10000
450	475	476	496	495	1	125.00	.33	5375.43	4300.34	.10000

451	476	477	497	496	1	125.00	.33	3275.43	2620.34	.10000
452	477	478	498	497	1	125.00	.33	3275.43	2620.34	.10000
453	478	479	499	498	1	125.00	.33	3275.43	2620.34	.10000
454	479	480	500	499	1	125.00	.33	3275.43	2620.34	.10000
455	480	481	501	500	1	125.00	.33	5822.98	4658.39	.10000
456	481	482	502	501	2	130.00	.33	5747.80	4598.24	.10000
457	482	483	503	502	2	130.00	.33	7104.80	5683.84	.10000
458	483	484	504	503	2	130.00	.33	8087.29	6469.83	.10000
459	484	485	505	504	2	130.00	.47	7897.94	6318.36	.10000
460	485	486	506	505	2	130.00	.47	8099.90	6479.92	.10000
461	486	487	507	506	3	130.00	.47	13625.78	10900.62	.10000
462	487	488	508	507	3	130.00	.47	13625.78	10900.62	.10000
463	488	489	509	508	4	130.00	.47	12931.16	10344.92	.10000
464	489	490	510	509	4	130.00	.47	13264.56	10611.65	.10000
465	490	491	511	510	4	130.00	.47	13589.79	10871.84	.10000
466	491	492	512	511	4	130.00	.47	13907.42	11125.94	.10000
467	492	493	513	512	4	130.00	.47	14217.96	11374.36	.10000
468	493	494	514	513	4	130.00	.47	14521.85	11617.48	.10000
469	495	496	516	515	1	125.00	.33	3275.43	2620.34	.10000
470	496	497	517	516	1	125.00	.33	3275.43	2620.34	.10000
471	497	498	518	517	1	125.00	.33	3275.43	2620.34	.10000
472	498	499	519	518	1	125.00	.33	3275.43	2620.34	.10000
473	499	500	520	519	1	125.00	.33	3275.43	2620.34	.10000
474	500	501	521	520	1	125.00	.33	5822.98	4658.39	.10000
475	501	502	522	521	2	130.00	.33	5747.80	4598.24	.10000
476	502	503	523	522	2	130.00	.33	7104.80	5683.84	.10000
477	503	504	524	523	2	130.00	.47	8087.29	6469.83	.10000
478	504	505	525	524	2	130.00	.47	7897.94	6318.36	.10000
479	505	506	526	525	2	130.00	.47	8099.90	6479.92	.10000
480	506	507	527	526	3	130.00	.47	13625.78	10900.62	.10000
481	507	508	528	527	3	130.00	.47	13625.78	10900.62	.10000
482	508	509	529	528	4	130.00	.47	12931.16	10344.92	.10000
483	509	510	530	529	4	130.00	.47	13264.56	10611.65	.10000
484	510	511	531	530	4	130.00	.47	13589.79	10871.84	.10000
485	511	512	532	531	4	130.00	.47	13907.42	11125.94	.10000
486	512	513	533	532	4	130.00	.47	14217.96	11374.36	.10000
487	513	514	534	533	4	130.00	.47	14521.85	11617.48	.10000
488	515	516	536	535	1	125.00	.33	3275.43	2620.34	.10000
489	516	517	537	536	1	125.00	.33	3275.43	2620.34	.10000
490	517	518	538	537	1	125.00	.33	3275.43	2620.34	.10000
491	518	519	539	538	1	125.00	.33	3275.43	2620.34	.10000
492	519	520	540	539	1	125.00	.33	3275.43	2620.34	.10000
493	520	521	541	540	1	125.00	.33	5822.98	4658.39	.10000
494	521	522	542	541	2	130.00	.33	5747.80	4598.24	.10000
495	522	523	543	542	2	130.00	.33	7104.80	5683.84	.10000
496	523	524	544	543	2	130.00	.47	8087.29	6469.83	.10000
497	524	525	545	544	2	130.00	.47	7897.94	6318.36	.10000
498	525	526	546	545	2	130.00	.47	8099.90	6479.92	.10000
499	526	527	547	546	3	130.00	.47	13625.78	10900.62	.10000
500	527	528	548	547	3	130.00	.47	13625.78	10900.62	.10000
501	528	529	549	548	4	130.00	.47	12931.16	10344.92	.10000
502	529	530	550	549	4	130.00	.47	13264.56	10611.65	.10000
503	530	531	551	550	4	130.00	.47	13589.79	10871.84	.10000
504	531	532	552	551	4	130.00	.47	13907.42	11125.94	.10000
505	532	533	553	552	4	130.00	.47	14217.96	11374.36	.10000
506	533	534	554	553	4	130.00	.47	14521.85	11617.48	.10000
507	535	536	556	555	1	125.00	.33	3275.43	2620.34	.10000
508	536	537	557	556	1	125.00	.33	3275.43	2620.34	.10000
509	537	538	558	557	1	125.00	.33	3275.43	2620.34	.10000
510	538	539	559	558	1	125.00	.33	3275.43	2620.34	.10000
511	539	540	560	559	1	125.00	.33	3275.43	2620.34	.10000
512	540	541	561	560	1	125.00	.33	5822.98	4658.39	.10000
513	541	542	562	561	2	130.00	.33	5747.80	4598.24	.10000
514	542	543	563	562	2	130.00	.33	7104.80	5683.84	.10000
515	543	544	564	563	2	130.00	.47	8087.29	6469.83	.10000
516	544	545	565	564	2	130.00	.47	7897.94	6318.36	.10000
517	545	546	566	565	2	130.00	.47	8099.90	6479.92	.10000
518	546	547	567	566	3	130.00	.47	13625.78	10900.62	.10000
519	547	548	568	567	3	130.00	.47	13625.78	10900.62	.10000
520	548	549	569	568	4	130.00	.47	12931.16	10344.92	.10000
521	549	550	570	569	4	130.00	.47	13264.56	10611.65	.10000
522	550	551	571	570	4	130.00	.47	13589.79	10871.84	.10000
523	551	552	572	571	4	130.00	.47	13907.42	11125.94	.10000
524	552	553	573	572	4	130.00	.47	14217.96	11374.36	.10000
525	553	554	574	573	4	130.00	.47	14521.85	11617.48	.10000
526	555	556	576	575	1	125.00	.33	3275.43	2620.34	.10000
527	556	557	577	576	1	125.00	.33	3275.43	2620.34	.10000
528	557	558	578	577	1	125.00	.33	3275.43	2620.34	.10000
529	558	559	579	578	1	125.00	.33	3275.43	2620.34	.10000
530	559	560	580	579	1	125.00	.33	5822.98	4658.39	.10000
531	560	561	581	580	1	125.00	.33	5747.80	4598.24	.10000
532	561	562	582	581	2	130.00	.33	7104.80	5683.84	.10000
533	562	563	583	582	2	130.00	.47	8087.29	6469.83	.10000
534	563	564	584	583	2	130.00	.47	7897.94	6318.36	.10000
535	564	565	585	584	2	130.00	.47	8099.90	6479.92	.10000
536	565	566	586	585	2	130.00	.47	13625.78	10900.62	.10000
537	566	567	587	586	3	130.00	.47	13625.78	10900.62	.10000
538	567	568	588	587	3	130.00	.47	13625.78	10900.62	.10000
539	568	569	589	588	4	130.00	.47	12931.16	10344.92	.10000
540	569	570	590	589	4	130.00	.47	13264.56	10611.65	.10000
541	570	571	591	590	4	130.00	.47	13589.79	10871.84	.10000
542	571	572	592	591	4	130.00	.47	13907.42	11125.94	.10000
543	572	573	593	592	4	130.00	.47	14217.96	11374.36	.10000
544	573	574	594	593	4	130.00	.47	14521.85	11617.48	.10000
545	575	576	596	595	1	125.00	.33	3275.43	2620.34	.10000
546	576	577	597	596	1	125.00	.33	3275.43	2620.34	.10000
547	577	578	598	597	1	125.00	.33	3275.43	2620.34	.10000
548	578	579	599	598	1	125.00	.33	3275.43	2620.34	.10000
549	579	580	600	599	1	125.00	.33	3275.43	2620.34	.10000
550	580	581	601	600	1	125.00	.33	5822.98	4658.39	.10000
551	581	582	602	601	2	130.00	.33	5747.80	4598.24	.10000
552	582	583	603	602	2	130.00	.33	7104.80	5683.84	.10000
553	583	584	604	603	2	130.00	.47	8087.29	6469.83	.10000
554	584	585	605	604	2	130.00	.47	7897.94	6318.36	.10000
555	585	586	606	605	2	130.00	.47	8099.90	6479.92	.10000
556	586	587	607	606	3	130.00	.47	13625.78	10900.62	.10000
557	587	588	608	607	3	130.00	.47	13625.78	10900.62	.10000
558	588	589	609	608	4	130.00	.47	12931.16	10344.92	.10000
559	589	590	610	609	4	130.00	.47	13264.56	10611.65	.10000
560	590	591	611	610	4	130.00	.47	13589.79	10871.84	.10000
561	591	592	612	611	4	130.00	.47	13907.42	11125.94	.10000
562	592	593	613	612	4	130.00	.47	14217.96	11374.36	.10000
563	593	594	614	613	4	130.00	.47	14521.85	11617.48	.10000
564	595	596	616	615	1	125.00	.33	3275.43	2620.34	.10000
565	596	597	617	616	1	125.00	.33	3275.43	2620.34	.10000
566	597	598	618	617	1	125.00	.33	3275.43	2620.34	.10000
567	598	599	619	618	1	125.00	.33	3275.43	2620.34	.10000
568	599	600	620	619	1	125.00	.33	3275.43	2620.34	.10000
569	600	601	621	620	1	125.00	.33	5822.98	4658.39	.10000
570	601	602	622	621	2	130.00	.33	5747.80	4598.24	.10000
571	602	603	623	622	2	130.00	.33	7104.80	5683.84	.10000
572	603	604	624	623	2	130.00	.47	8087.29	6469.83	.10000
573	604	605	625	624	2	130.00	.47	7897.94	6318.36	.10000
574	605	606	626	625	2	130.00	.47	8099.90	6479.92	.10000
575	606	607	627	626	3	130.00	.47	13625.78	10900.62	.10000
576	607	608	628	627	3	130.00	.47	13625.78	10900.62	.10000
577	608	609	629	628	4	130.00	.47	12931.16	10344.92	.10000
578	609	610	630	629	4	130.00	.47	13264.56	10611.65	.10000
579	610	611	631	630	4	130.00	.47	13589.79	10871.84	.10000
580	611	612	632	631	4	130.00	.47	13907.42	11125.94	.10000
581	612	613	633	632	4	130.00	.47	14217.96	11374.36	.10000
582	613	614	634	633	4	130.00	.47	14521.85	11617.48	.10000
583	615	616	636	635	1	125.00	.33	3275.43	2620.34	.10000
584	616	617	637	636	1	125.00	.33	3275.43	2620.34	.10000
585	617	618	638	637	1	125.00	.33	3275.43	2620.34	.10000
586	618	619	639	638	1	125.00	.33	3275.43	2620.34	.10000
587	619	620	640	639	1	125.00	.33	3275.43	2620.34	.10000
588	620	621	641	640	1	125.00	.33	5822.98	4658.39	.10000
589	621	622	642	641	2	130.00	.33	5747.80	4598.24	.10000
590	622	623	643	642	2	130.00	.33	7104.80	5683.84	.10000
591	623	624	644	643	2	130.00	.47	8087.29	6469.83	.10000
592	624	625	645	644	2	130.00	.47	7897.94	6318.36	.10000
593	625	626	646	645	2	130.00	.47	8099.90	6479.92	.10000

594	626	627	647	646	3	130.00	.47	13625.78	10900.62	.10000
595	627	628	648	647	3	130.00	.47	13625.78	10900.62	.10000
596	628	629	649	648	4	130.00	.47	12931.16	10344.92	.10000
597	629	630	650	649	4	130.00	.47	13264.56	10611.65	.10000
598	630	631	651	650	4	130.00	.47	13589.79	10871.84	.10000
599	631	632	652	651	4	130.00	.47	13907.42	11125.94	.10000
600	632	633	653	652	4	130.00	.47	14217.96	11374.36	.10000
601	633	634	654	653	4	130.00	.47	14521.85	11617.48	.10000
602	635	636	656	655	1	125.00	.33	3275.43	2620.34	.10000
603	636	637	657	656	1	125.00	.33	3275.43	2620.34	.10000
604	637	638	658	657	1	125.00	.33	3275.43	2620.34	.10000
605	638	639	659	658	1	125.00	.33	3275.43	2620.34	.10000
606	639	640	660	659	1	125.00	.33	3275.43	2620.34	.10000
607	640	641	661	660	1	125.00	.33	5822.98	4658.39	.10000
608	641	642	662	661	2	130.00	.33	5747.80	4598.24	.10000
609	642	643	663	662	2	130.00	.33	7104.80	5683.84	.10000
610	643	644	664	663	2	130.00	.47	8087.29	6469.83	.10000
611	644	645	665	664	2	130.00	.47	7897.94	6318.36	.10000
612	645	646	666	665	2	130.00	.47	8099.90	6479.92	.10000
613	646	647	667	666	3	130.00	.47	13625.78	10900.62	.10000
614	647	648	668	667	3	130.00	.47	13625.78	10900.62	.10000
615	648	649	669	668	4	130.00	.47	12931.16	10344.92	.10000
616	649	650	670	669	4	130.00	.47	13264.56	10611.65	.10000
617	650	651	671	670	4	130.00	.47	13589.79	10871.84	.10000
618	651	652	672	671	4	130.00	.47	13907.42	11125.94	.10000
619	652	653	673	672	4	130.00	.47	14217.96	11374.36	.10000
620	653	654	674	673	4	130.00	.47	14521.85	11617.48	.10000
621	655	656	676	675	1	125.00	.33	3275.43	2620.34	.10000
622	656	657	677	676	1	125.00	.33	3275.43	2620.34	.10000
623	657	658	678	677	1	125.00	.33	3275.43	2620.34	.10000
624	658	659	679	678	1	125.00	.33	3275.43	2620.34	.10000
625	659	660	680	679	1	125.00	.33	3275.43	2620.34	.10000
626	660	661	681	680	1	125.00	.33	5822.98	4658.39	.10000
627	661	662	682	681	2	130.00	.33	5747.80	4598.24	.10000
628	662	663	683	682	2	130.00	.33	7104.80	5683.84	.10000
629	663	664	684	683	2	130.00	.47	8087.29	6469.83	.10000
630	664	665	685	684	2	130.00	.47	7897.94	6318.36	.10000
631	665	666	686	685	2	130.00	.47	8099.90	6479.92	.10000
632	666	667	687	686	3	130.00	.47	13625.78	10900.62	.10000
633	667	668	688	687	3	130.00	.47	13625.78	10900.62	.10000
634	668	669	689	688	4	130.00	.47	12931.16	10344.92	.10000
635	669	670	690	689	4	130.00	.47	13264.56	10611.65	.10000
636	670	671	691	690	4	130.00	.47	13589.79	10871.84	.10000
637	671	672	692	691	4	130.00	.47	13907.42	11125.94	.10000
638	672	673	693	692	4	130.00	.47	14217.96	11374.36	.10000
639	673	674	694	693	4	130.00	.47	14521.85	11617.48	.10000
640	675	676	696	695	1	125.00	.33	3275.43	2620.34	.10000
641	676	677	697	696	1	125.00	.33	3275.43	2620.34	.10000
642	677	678	698	697	1	125.00	.33	3275.43	2620.34	.10000
643	678	679	699	698	1	125.00	.33	3275.43	2620.34	.10000
644	679	680	700	699	1	125.00	.33	3275.43	2620.34	.10000
645	680	681	701	700	1	125.00	.33	5822.98	4658.39	.10000
646	681	682	702	701	2	130.00	.33	5747.80	4598.24	.10000
647	682	683	703	702	2	130.00	.33	7104.80	5683.84	.10000
648	683	684	704	703	2	130.00	.47	8087.29	6469.83	.10000
649	684	685	705	704	2	130.00	.47	7897.94	6318.36	.10000
650	685	686	706	705	2	130.00	.47	8099.90	6479.92	.10000
651	686	687	707	706	3	130.00	.47	13625.78	10900.62	.10000
652	687	688	708	707	3	130.00	.47	13625.78	10900.62	.10000
653	688	689	709	708	4	130.00	.47	12931.16	10344.92	.10000
654	689	690	710	709	4	130.00	.47	13264.56	10611.65	.10000
655	690	691	711	710	4	130.00	.47	13589.79	10871.84	.10000
656	691	692	712	711	4	130.00	.47	13907.42	11125.94	.10000
657	692	693	713	712	4	130.00	.47	14217.96	11374.36	.10000
658	693	694	714	713	4	130.00	.47	14521.85	11617.48	.10000
659	695	696	716	715	1	125.00	.33	3275.43	2620.34	.10000
660	696	697	717	716	1	125.00	.33	3275.43	2620.34	.10000
661	697	698	718	717	1	125.00	.33	3275.43	2620.34	.10000
662	698	699	719	718	1	125.00	.33	3275.43	2620.34	.10000
663	699	700	720	719	1	125.00	.33	3275.43	2620.34	.10000
664	700	701	721	720	1	125.00	.33	5822.98	4658.39	.10000
665	701	702	722	721	2	130.00	.33	5747.80	4598.24	.10000
666	702	703	723	722	2	130.00	.33	7104.80	5683.84	.10000
667	703	704	724	723	2	130.00	.47	8087.29	6469.83	.10000
668	704	705	725	724	2	130.00	.47	7897.94	6318.36	.10000
669	705	706	726	725	2	130.00	.47	8099.90	6479.92	.10000
670	706	707	727	726	3	130.00	.47	13625.78	10900.62	.10000
671	707	708	728	727	3	130.00	.47	13625.78	10900.62	.10000
672	708	709	729	728	4	130.00	.47	12931.16	10344.92	.10000
673	709	710	730	729	4	130.00	.47	13264.56	10611.65	.10000
674	710	711	731	730	4	130.00	.47	13589.79	10871.84	.10000
675	711	712	732	731	4	130.00	.47	13907.42	11125.94	.10000
676	712	713	733	732	4	130.00	.47	14217.96	11374.36	.10000
677	713	714	734	733	4	130.00	.47	14521.85	11617.48	.10000
678	715	716	736	735	1	125.00	.33	3275.43	2620.34	.10000
679	716	717	737	736	1	125.00	.33	3275.43	2620.34	.10000
680	717	718	738	737	1	125.00	.33	3275.43	2620.34	.10000
681	718	719	739	738	1	125.00	.33	3275.43	2620.34	.10000
682	719	720	740	739	1	125.00	.33	3275.43	2620.34	.10000
683	720	721	741	740	1	125.00	.33	5822.98	4658.39	.10000
684	721	722	742	741	2	130.00	.33	5747.80	4598.24	.10000
685	722	723	743	742	2	130.00	.33	7104.80	5683.84	.10000
686	723	724	744	743	2	130.00	.47	8087.29	6469.83	.10000
687	724	725	745	744	2	130.00	.47	7897.94	6318.36	.10000
688	725	726	746	745	2	130.00	.47	8099.90	6479.92	.10000
689	726	727	747	746	3	130.00	.47	13625.78	10900.62	.10000
690	727	728	748	747	3	130.00	.47	13625.78	10900.62	.10000
691	728	729	749	748	4	130.00	.47	12931.16	10344.92	.10000
692	729	730	750	749	4	130.00	.47	13264.56	10611.65	.10000
693	730	731	751	750	4	130.00	.47	13589.79	10871.84	.10000
694	731	732	752	751	4	130.00	.47	13907.42	11125.94	.10000
695	732	733	753	752	4	130.00	.47	14217.96	11374.36	.10000
696	733	734	754	753	4	130.00	.47	14521.85	11617.48	.10000
697	735	736	756	755	1	125.00	.33	3275.43	2620.34	.10000
698	736	737	757	756	1	125.00	.33	3275.43	2620.34	.10000
699	737	738	758	757	1	125.00	.33	3275.43	2620.34	.10000
700	738	739	759	758	1	125.00	.33	3275.43	2620.34	.10000
701	739	740	760	759	1	125.00	.33	3275.43	2620.34	.10000
702	740	741	761	760	1	125.00	.33	5822.98	4658.39	.10000
703	741	742	762	761	2	130.00	.33	5747.80	4598.24	.10000
704	742	743	763	762	2	130.00	.33	7104.80	5683.84	.10000
705	743	744	764	763	2	130.00	.47	8087.29	6469.83	.10000
706	744	745	765	764	2	130.00	.47	7897.94	6318.36	.10000
707	745	746	766	765	2	130.00	.47	8099.90	6479.92	.10000
708	746	747	767	766	3	130.00	.47	13625.78	10900.62	.10000
709	747	748	768	767	3	130.00	.47	13625.78	10900.62	.10000
710	748	749	769	768	4	130.00	.47	12931.16	10344.92	.10000
711	749	750	770	769	4	130.00	.47	13264.56	10611.65	.10000
712	750	751	771	770	4	130.00	.47	13589.79	10871.84	.10000
713	751	752	772	771	4	130.00	.47	13907.42	11125.94	.10000
714	752	753	773	772	4	130.00	.47	14217.96	11374.36	.10000
715	753	754	774	773	4	130.00	.47	14521.85	11617.48	.10000
716	755	756	776	775	1	125.00	.33	3275.43	2620.34	.10000
717	756	757	777	776	1	125.00	.33	3275.43	2620.34	.10000
718	757	758	778	777	1	125.00	.33	3275.43	2620.34	.10000
719	758	759	779	778	1	125.00	.33	3275.43	2620.34	.10000
720	759	760	780	779	1	125.00	.33	3275.43	2620.34	.10000
721	760	761	781	780	1	125.00	.33	5822.98	4658.39	.10000
722	761	762	782	781	2	130.00	.33	5747.80	4598.24	.10000
723	762	763	783	782	2	130.00	.33	7104.80	5683.84	.10000
724	763	764	784	783	2	130.00	.47	8087.29	6469.83	.10000
725	764	765	785	784	2	130.00	.47	7897.94	6318.36	.10000
726	765	766	786	785	2	130.00	.47	8099.90	6479.92	.10000
727	766	767	787	786	3	130.00	.47	13625.78	10900.62	.10000
728	767	768	788	787	3	130.00	.47	13625.78	10900.62	.10000
729	768	769	789	788	4	130.00	.47	12931.16	10344.92	.10000
730	769	770	790	789	4	130.00	.47	13264.56	10611.65	.10000
731	770	771	791	790	4	130.00	.47	13589.79	10871.84	.10000
732	771	772	792	791	4	130.00	.47	13907.42	11125.94	.10000
733	772	773	793	792	4	130.00	.47	14217.96	11374.36	.10000
734	773	774	794	793	4	130.00	.47	14521.85	11617.48	.10000
735	775	776	796	795	1	125.00	.33	3275.43	2620.34	.10000
736	776	777	797	796	1	125.00	.33	3275.43	2620.34	.10000

737	777	778	798	797	1	125.00	.33	3275.43	2620.34	.10000
738	778	779	799	798	1	125.00	.33	3275.43	2620.34	.10000
739	779	780	800	799	1	125.00	.33	3275.43	2620.34	.10000
740	780	781	801	800	1	125.00	.33	5822.98	4658.39	.10000
741	781	782	802	801	2	130.00	.33	5747.80	4598.24	.10000
742	782	783	803	802	2	130.00	.33	7104.80	5683.84	.10000
743	783	784	804	803	2	130.00	.47	8087.29	6469.83	.10000
744	784	785	805	804	2	130.00	.47	7897.94	6318.36	.10000
745	785	786	806	805	2	130.00	.47	8099.90	6479.92	.10000
746	786	787	807	806	3	130.00	.47	13625.78	10900.62	.10000
747	787	788	808	807	3	130.00	.47	13625.78	10900.62	.10000
748	788	789	809	808	4	130.00	.47	12931.16	10344.92	.10000
749	789	790	810	809	4	130.00	.47	13264.56	10611.65	.10000
750	790	791	811	810	4	130.00	.47	13589.79	10871.84	.10000
751	791	792	812	811	4	130.00	.47	13907.42	11125.94	.10000
752	792	793	813	812	4	130.00	.47	14217.96	11374.36	.10000
753	793	794	814	813	4	130.00	.47	14521.85	11617.48	.10000
754	795	796	816	815	1	125.00	.33	3275.43	2620.34	.10000
755	796	797	817	816	1	125.00	.33	3275.43	2620.34	.10000
756	797	798	818	817	1	125.00	.33	3275.43	2620.34	.10000
757	798	799	819	818	1	125.00	.33	3275.43	2620.34	.10000
758	799	800	820	819	1	125.00	.33	3275.43	2620.34	.10000
759	800	801	821	820	1	125.00	.33	5822.98	4658.39	.10000
760	801	802	822	821	2	130.00	.33	5747.80	4598.24	.10000
761	802	803	823	822	2	130.00	.33	7104.80	5683.84	.10000
762	803	804	824	823	2	130.00	.47	8087.29	6469.83	.10000
763	804	805	825	824	2	130.00	.47	7897.94	6318.36	.10000
764	805	806	826	825	2	130.00	.47	8099.90	6479.92	.10000
765	806	807	827	826	3	130.00	.47	13625.78	10900.62	.10000
766	807	808	828	827	3	130.00	.47	13625.78	10900.62	.10000
767	808	809	829	828	4	130.00	.47	12931.16	10344.92	.10000
768	809	810	830	829	4	130.00	.47	13264.56	10611.65	.10000
769	810	811	831	830	4	130.00	.47	13589.79	10871.84	.10000
770	811	812	832	831	4	130.00	.47	13907.42	11125.94	.10000
771	812	813	833	832	4	130.00	.47	14217.96	11374.36	.10000
772	813	814	834	833	4	130.00	.47	14521.85	11617.48	.10000
773	815	816	836	835	1	125.00	.33	3275.43	2620.34	.10000
774	816	817	837	836	1	125.00	.33	3275.43	2620.34	.10000
775	817	818	838	837	1	125.00	.33	3275.43	2620.34	.10000
776	818	819	839	838	1	125.00	.33	3275.43	2620.34	.10000
777	819	820	840	839	1	125.00	.33	3275.43	2620.34	.10000
778	820	821	841	840	1	125.00	.33	5822.98	4658.39	.10000
779	821	822	842	841	2	130.00	.33	5747.80	4598.24	.10000
780	822	823	843	842	2	130.00	.33	7104.80	5683.84	.10000
781	823	824	844	843	2	130.00	.47	8087.29	6469.83	.10000
782	824	825	845	844	2	130.00	.47	7897.94	6318.36	.10000
783	825	826	846	845	2	130.00	.47	8099.90	6479.92	.10000
784	826	827	847	846	3	130.00	.47	13625.78	10900.62	.10000
785	827	828	848	847	3	130.00	.47	13625.78	10900.62	.10000
786	828	829	849	848	4	130.00	.47	12931.16	10344.92	.10000
787	829	830	850	849	4	130.00	.47	13264.56	10611.65	.10000
788	830	831	851	850	4	130.00	.47	13589.79	10871.84	.10000
789	831	832	852	851	4	130.00	.47	13907.42	11125.94	.10000
790	832	833	853	852	4	130.00	.47	14217.96	11374.36	.10000
791	833	834	854	853	4	130.00	.47	14521.85	11617.48	.10000
792	835	836	856	855	1	125.00	.33	3275.43	2620.34	.10000
793	836	837	857	856	1	125.00	.33	3275.43	2620.34	.10000
794	837	838	858	857	1	125.00	.33	3275.43	2620.34	.10000
795	838	839	859	858	1	125.00	.33	3275.43	2620.34	.10000
796	839	840	860	859	1	125.00	.33	3275.43	2620.34	.10000
797	840	841	861	860	1	125.00	.33	5822.98	4658.39	.10000
798	841	842	862	861	2	130.00	.33	5747.80	4598.24	.10000
799	842	843	863	862	2	130.00	.33	7104.80	5683.84	.10000
800	843	844	864	863	2	130.00	.47	8087.29	6469.83	.10000
801	844	845	865	864	2	130.00	.47	7897.94	6318.36	.10000
802	845	846	866	865	2	130.00	.47	8099.90	6479.92	.10000
803	846	847	867	866	3	130.00	.47	13625.78	10900.62	.10000
804	847	848	868	867	3	130.00	.47	13625.78	10900.62	.10000
805	848	849	869	868	4	130.00	.47	12931.16	10344.92	.10000
806	849	850	870	869	4	130.00	.47	13264.56	10611.65	.10000
807	850	851	871	870	4	130.00	.47	13589.79	10871.84	.10000
808	851	852	872	871	4	130.00	.47	13907.42	11125.94	.10000
809	852	853	873	872	4	130.00	.47	14217.96	11374.36	.10000
810	853	854	874	873	4	130.00	.47	14521.85	11617.48	.10000
811	855	856	876	875	1	125.00	.33	3275.43	2620.34	.10000
812	856	857	877	876	1	125.00	.33	3275.43	2620.34	.10000
813	857	858	878	877	1	125.00	.33	3275.43	2620.34	.10000
814	858	859	879	878	1	125.00	.33	3275.43	2620.34	.10000
815	859	860	880	879	1	125.00	.33	3275.43	2620.34	.10000
816	860	861	881	880	1	125.00	.33	5822.98	4658.39	.10000
817	861	862	882	881	2	130.00	.33	5747.80	4598.24	.10000
818	862	863	883	882	2	130.00	.33	7104.80	5683.84	.10000
819	863	864	884	883	2	130.00	.47	8087.29	6469.83	.10000
820	864	865	885	884	2	130.00	.47	7897.94	6318.36	.10000
821	865	866	886	885	2	130.00	.47	8099.90	6479.92	.10000
822	866	867	887	886	3	130.00	.47	13625.78	10900.62	.10000
823	867	868	888	887	3	130.00	.47	13625.78	10900.62	.10000
824	868	869	889	888	4	130.00	.47	12931.16	10344.92	.10000
825	869	870	890	889	4	130.00	.47	13264.56	10611.65	.10000
826	870	871	891	890	4	130.00	.47	13589.79	10871.84	.10000
827	871	872	892	891	4	130.00	.47	13907.42	11125.94	.10000
828	872	873	893	892	4	130.00	.47	14217.96	11374.36	.10000
829	873	874	894	893	4	130.00	.47	14521.85	11617.48	.10000
830	875	876	896	895	1	125.00	.33	3275.43	2620.34	.10000
831	876	877	897	896	1	125.00	.33	3275.43	2620.34	.10000
832	877	878	898	897	1	125.00	.33	3275.43	2620.34	.10000
833	878	879	899	898	1	125.00	.33	3275.43	2620.34	.10000
834	879	880	900	899	1	125.00	.33	3275.43	2620.34	.10000
835	880	881	901	900	1	125.00	.33	5822.98	4658.39	.10000
836	881	882	902	901	2	130.00	.33	5747.80	4598.24	.10000
837	882	883	903	902	2	130.00	.33	7104.80	5683.84	.10000
838	883	884	904	903	2	130.00	.47	8087.29	6469.83	.10000
839	884	885	905	904	2	130.00	.47	7897.94	6318.36	.10000
840	885	886	906	905	2	130.00	.47	8099.90	6479.92	.10000
841	886	887	907	906	3	130.00	.47	13625.78	10900.62	.10000
842	887	888	908	907	3	130.00	.47	13625.78	10900.62	.10000
843	888	889	909	908	4	130.00	.47	12931.16	10344.92	.10000
844	889	890	910	909	4	130.00	.47	13264.56	10611.65	.10000
845	890	891	911	910	4	130.00	.47	13589.79	10871.84	.10000
846	891	892	912	911	4	130.00	.47	13907.42	11125.94	.10000
847	892	893	913	912	4	130.00	.47	14217.96	11374.36	.10000
848	893	894	914	913	4	130.00	.47	14521.85	11617.48	.10000
849	895	896	916	915	1	125.00	.33	3275.43	2620.34	.10000
850	896	897	917	916	1	125.00	.33	3275.43	2620.34	.10000
851	897	898	918	917	1	125.00	.33	3275.43	2620.34	.10000
852	898	899	919	918	1	125.00	.33	3275.43	2620.34	.10000
853	899	900	920	919	1	125.00	.33	3275.43	2620.34	.10000
854	900	901	921	920	1	125.00	.33	5822.98	4658.39	.10000
855	901	902	922	921	2	130.00	.33	5747.80	4598.24	.10000
856	902	903	923	922	2	130.00	.33	7104.80	5683.84	.10000
857	903	904	924	923	2	130.00	.47	8087.29	6469.83	.10000
858	904	905	925	924	2	130.00	.47	7897.94	6318.36	.10000
859	905	906	926	925	2	130.00	.47	8099.90	6479.92	.10000
860	906	907	927	926	3	130.00	.47	13625.78	10900.62	.10000
861	907	908	928	927	3	130.00	.47	13625.78	10900.62	.10000
862	908	909	929	928	4	130.00	.47	12931.16	10344.92	.10000
863	909	910	930	929	4	130.00	.47	13264.56	10611.65	.10000
864	910	911	931	930	4	130.00	.47	13589.79	10871.84	.10000
865	911	912	932	931	4	130.00	.47	13907.42	11125.94	.10000
866	912	913	933	932	4	130.00	.47	14217.96	11374.36	.10000
867	913	914	934	933	4	130.00	.47	14521.85	11617.48	.10000
868	915	916	936	935	1	125.00	.33	3275.43	2620.34	.10000
869	916	917	937	936	1	125.00	.33	3275.43	2620.34	.10000
870	917	918	938	937	1	125.00	.33	3275.43	2620.34	.10000
871	918	919	939	938	1	125.00	.33	3275.43	2620.34	.10000
872	919	920	940	939	1	125.00	.33	3275.43	2620.34	.10000
873	920	921	941	940	1	125.00	.33	5822.98	4658.39	.10000
874	921	922	942	941	2	130.00	.33	5747.80	4598.24	.10000
875	922	923	943	942	2	130.00	.33	7104.80	5683.84	.10000
876	923	924	944	943	2	130.00	.47	8087.29	6469.83	.10000
877	924	925	945	944	2	130.00	.47	7897.94	6318.36	.10000
878	925	926	946	945	2	130.00	.47	8099.90	6479.92	.10000
879	926	927	947	946	3	130.00	.47	13625.78	10900.62	.10000
880	927	928	948	947	3	130.00	.47	13625.78	10900.62	.10000
881	928	929	949	948	4	130.00	.47	12931.16	10344.92	.10000
882	929	930	950	949	4	130.00	.47	13264.56	10611.65	.10000
883	930	931	951	950	4	130.00	.47	13589.79	10871.84	.10000
884	931	932	952	951	4	130.00	.47	13907.42	11125.94	.10000
885	932	933	953	952	4	130.00	.47	14217.96	11374.36	.10000
886	933	934	954	953	4	130.00	.47	14521.85	11617.48	.10000
887	935	936	956	955	1	125.00	.33	3275.43	2620.34	.10000
888	936	937	957	956	1	125.00	.33	3275.43	2620.34	.10000
889	937	938	958	957	1	125.00	.33	3275.43	2620.34	.10000
890	938	939	959	958	1	125.00	.33	3275.43	2620.34	.10000
891	939	940	960	959	1	125.00	.33	3275.43	2620.34	.10000
892	940	941	961	960	1	125.00	.33	5822.98	4658.39	.10000
893	941	942	962	961	2	130.00	.33	5747.80	4598.24	.10000
894	942	943	963	962	2	130.00	.33	7104.80	5683.84	.10000
895	943	944	964	963	2	130.00	.47	8087.29	6469.83	.10000
896	944	945	965	964	2	130.00	.47	7897.94	6318.36	.10000
897	945	946	966	965	2	130.00	.47	8099.90	6479.92	.10000
898	946	947	967	966	3	130.00	.47	13625.78	10900.62	.10000
899	947	948	968	967	3	130.00	.47	13625.78	10900.62	.10000
900	948	949	969	968	4	130.00	.47	12931.16	10344.92	.10000
901	949	950	970	969	4	130.00	.47	13264.56	10611.65	.10000
902	950	951	971	970	4	130.00	.47	13589.79	10871.84	.10000
903	951	952	972	971	4	130.00	.47	13907.42	11125.94	.10000
904	952	953	973	972	4	130.00	.47	14217.96	11374.36	.10000
905	953	954	974	973	4	130.00	.47	14521.85	11617.48	.10000
906	955	956	976	975	1	125.00	.33	3275.43	2620.34	.10000
907	956	957	977	976	1	125.00	.33	3275.43	2620.34	.10000
908	957	958	978	977	1	125.00	.33	3275.43	2620.34	.10000
909	958	959	979	978	1	125.00	.33	3275.43	2620.34	.10000
910	959	960	980	979	1	125.00	.33	3275.43	2620.34	.10000
911	960	961	981	980	1	125.00	.33	5822.98	4658.39	.10000
912	961	962	982	981	2	130.00	.33	5747.80	4598.24	.10000
913	962	963	983	982	2	130.00	.33	7104.80	5683.84	.10000
914	963	964	984	983	2	130.00	.47	8087.29	6469.83	.10000
915	964	965	985	984	2	130.00	.47	7897.94	6318.36	.10000
916	965	966	986	985	2	130.00	.47	8099.90	6479.92	.10000
917	966	967	987	986	3	130.00	.47	13625.78	10900.62	.10000
918	967	968	988	987	3	130.00	.47	13625.78	10900.62	.10000
919	968	969	989	988	4	130.00	.47	12931.16	10344.92	.10000
920	969	970	990	989	4	130.00	.47	13264.56	10611.65	.10000
921	970	971	991	990	4	130.00	.47	13589.79	10871.84	.10000
922	971	972	992	991	4	130.00	.47	13907.42	11125.94	.10000
923	972	973	993	992	4	130.00	.47	14217.96	11374.36	.10000
924	973	974	994	993	4	130.00	.47	14521.85	11617.48	.10000
925	975	976	996	995	1	125.00	.33	3275.43	2620.34	.10000
926	976	977	997	996	1	125.00	.33	3275.43	2620.34	.10000
927	977	978	998	997	1	125.00	.33	3275.43	2620.34	.10000
928	978	979	999	998	1	125.00	.33	3275.43	2620.34	.10000
929	979	980	1000	999	1	125.00	.33	3275.43	2620.34	.10000
930	980	981	1001	1000	1	125.00	.33	5822.98	4658.39	.10000
931	981	982	1002	1001	2	130.00	.33	5747.80	4598.24	.10000
932	982	983	1003	1002	2	130.00	.33	7104.80	5683.84	.10000
933	983	984	1004	1003	2	130.00	.47	8087.29	6469.83	.10000
934	984	985	1005	1004	2	130.00	.47	7897.94	6318.36	.10000
935	985	986	1006	1005	2	130.00	.47	8099.90	6479.92	.10000
936	986	987	1007	1006	3	130.00	.47	13625.78	10900.62	.10000
937	987	988	1008	1007	3	130.00	.47	13625.78	10900.62	.10000
938	988	989	1009	1008	4	130.00	.47	12931.16	10344.92	.10000
939	989	990	1010	1009	4	130.00	.47	13264.56	10611.65	.10000
940	990	991	1011	1010	4	130.00	.47	13589.79	10871.84	.10000
941	991	992	1012	1011	4	130.00	.47	13907.42	11125.94	.10000
942	992	993	1013	1012	4	130.00	.47	14217.96	11374.36	.10000
943	993	994	1014	1013	4	130.00	.47	14521.85	11617.48	.10000
944	995	996	1016	1015	1	125.00	.33	3275.43	2620.34	.10000
945	996	997	1017	1016	1	125.00	.33	3275.43	2620.34	.10000
946	997	998	1018	1017	1	125.00	.33	3275.43	2620.34	.10000
947	998	999	1019	1018	1	125.00	.33	3275.43	2620.34	.10000
948	999	1000	1020	1019	1	125.00	.33	3275.43	2620.34	.10000
949	1000	1001	1021	1020	1	125.00	.33	5822.98	4658.39	.10000
950	1001	1002	1022	1021	2	130.00	.33	5747.80	4598.24	.10000
951	1002	1003	1023	1022	2	130.00	.33	7104.80	5683.84	.10000
952	1003	1004	1024	1023	2	130.00	.47	8087.29	6469.83	.10000
953	1004	1005	1025	1024	2	130.00	.47	7897.94	6318.36	.10000
954	1005	1006	1026	1025	2	130.00	.47	8099.90	6479.92	.10000
955	1006	1007	1027	1026	3	130.00	.47	13625.78	10900.62	.10000
956	1007	1008	1028	1027	3	130.00	.47	13625.78	10900.62	.10000
957	1008	1009	1029	1028	4	130.00	.47	12931.16	10344.92	.10000
958	1009	1010	1030	1029	4	130.00	.47	13264.56	10611.65	.10000
959	1010	1011	1031	1030	4	130.00	.47	13589.79	10871.84	.10000
960	1011	1012	1032	1031	4	130.00	.47	13907.42	11125.94	.10000
961	1012	1013	1033	1032	4	130.00	.47	14217.96	11374.36	.10000
962	1013	1014	1034	1033	4	130.00	.47	14521.85	11617.48	.10000
963	1015	1016	1036	1035	1	125.00	.33	3275.43	2620.34	.10000
964	1016	1017	1037	1036	1	125.00	.33	3275.43	2620.34	.10000
965	1017	1018	1038	1037	1	125.00	.33	3275.43	2620.34	.10000
966	1018	1019	1039	1038	1	125.00	.33	3275.43	2620.34	.10000
967	1019	1020	1040	1039	1	125.00	.33	3275.43	2620.34	.10000
968	1020	1021	1041	1040	1	125.00	.33	5822.98	4658.39	.10000
969	1021	1022	1042	1041	2	130.00	.33	5747.80	4598.24	.10000
970	1022	1023	1043	1042	2	130.00	.33	7104.80	5683.84	.10000
971	1023	1024	1044	1043	2	130.00	.47	8087.29	6469.83	.10000
972	1024	1025	1045	1044	2	130.00	.47	7897.94	6318.36	.10000
973	1025	1026	1046	1045	2	130.00	.47	8099.90	6479.92	.10000
974	1026	1027	1047	1046	3	130.00	.47	13625.78	10900.62	.10000
975	1027	1028	1048	1047	3	130.00	.47	13625.78	10900.62	.10000
976	1028	1029	1049	1048	4	130.00	.47	12931.16	10344.92	.10000
977	1029	1030	1050	1049	4	130.00	.47	13264.56	10611.65	.10000
978	1030	1031	1051	1050	4	130.00	.47	13589.79	10871.84	.10000
979	1031	1032	1052	1051	4	130.00	.47	13907.42	11125.94	.10000
980	1032	1033	1053	1052	4	130.00	.47	14217.96	11374.36	.10000
981	1033	1034	1054	1053	4	130.00	.47	14521.85	11617.48	.10000
982	1035	1036	1056	1055	1	125.00	.33	3275.43	2620.34	.10000
983	1036	1037	1057	1056	1	125.00	.33	3275.43	2620.34	.10000
984	1037	1038	1058	1057	1	125.00	.33	3275.43	2620.34	.10000
985	1038	1039	1059	1058	1	125.00	.33	3275.43	2620.34	.10000
986	1039	1040	1060	1059	1	125.00	.33	3275.43	2620.34	.10000
987	1040	1041	1061	1060	1	125.00	.33	5822.98	4658.39	.10000
988	1041	1042	1062	1061	2	130.00	.33	5747.80	4598.24	.10000
989	1042	1043	1063	1062	2	130.00	.33	7104.80	5683.84	.10000
990	1043	1044	1064	1063	2	130.00	.47	8087.29	6469.83	.10000
991	1044	1045	1065	1064	2	130.00	.47	7897.94	6318.36	.10000
992	1045	1046	1066	1065	2	130.00	.47	8099.90	6479.92	.10000
993	1046	1047	1067	1066	3	130.00	.47	13625.78	10900.62	.10000
994	1047	1048	1068	1067	3	130.00	.47	13625.78	10900.62	.10000
995	1048	1049	1069	1068	4	130.00	.47	12931.16	10344.92	.10000
996	1049	1050	1070	1069	4	130.00	.47	13264.56	10611.65	.10000
997	1050	1051	1071	1070	4	130.00	.47	13589.79	10871.84	.10000
998	1051	1052	1072	1071	4	130.00	.47	13907.42	11125.94	.10000
999	1052	1053	1073	1072	4	130.00	.47	14217.96	11374.36	.10000
1000	1053	1054	1074	1073	4	130.00	.47	14521.85	11617.48	.10000
1001	1055	1056	1076	1075	1	125.00	.33	3275.43	2620.34	.10000
1002	1056	1057	1077	1076	1	125.00	.33	3275.43	2620.34	.10000
1003	1057	1058	1078	1077	1	125.00	.33	3275.43	2620.34	.10000
1004	1058	1059	1079	1078	1	125.00	.33	3275.43	2620.34	.10000
1005	1059	1060	1080	1079	1	125.00	.33	3275.43	2620.34	.10000
1006	1060	1061	1081	1080	1	125.00	.33	5822.98	4658.39	.10000
1007	1061	1062	1082	1081	2	130.00	.33	5747.80	4598.24	.10000
1008	1062	1063	1083	1082	2	130.00	.33	7104.80	5683.84	.10000
1009	1063	1064	1084	1083	2	130.00	.47	8087.29	6469.83	.10000
1010	1064	1065	1085	1084	2	130.00	.47	7897.94	6318.36	.10000
1011	1065	1066	1086	1085	2	130.00	.47	8099.90	6479.92	.10000
1012	1066	1067	1087	1086	3	130.00	.47	13625.78	10900.62	.10000
1013	1067	1068	1088	1087	3	130.00	.47	13625.78	10900.62	.10000
1014	1068	1069	1089	1088	4	130.00	.47	12931.16	10344.92	.10000
1015	1069	1070	1090	1089	4	130.00	.47	13264.56	10611.65	.10000
1016	1070	1071	1091	1090	4	130.00	.47	13589.79	10871.84	.10000
1017	1071	1072	1092	1091	4	130.00	.47	13907.42	11125.94	.10000
1018	1072	1073	1093	1092	4	130.00	.47	14217.96	11374.36	.10000
1019	1073	1074	1094	1093	4	130.00	.47	14521.85	11617.48	.10000
1020	1075	1076	1096	1095	1	125.00	.33	3275.43	2620.34	.10000
1021	1076	1077	1097	1096	1	125.00	.33	3275.43	2620.34	.10000
1022	1077	1078	1098	1097	1	125.00	.33	3275.43	2620.34	.10000

1023	1078	1079	1099	1098	1	125.00	.33	3275.43	2620.34	.10000
1024	1079	1080	1100	1099	1	125.00	.33	3275.43	2620.34	.10000
1025	1080	1081	1101	1100	1	125.00	.33	5822.98	4658.39	.10000
1026	1081	1082	1102	1101	2	130.00	.33	5747.00	4598.24	.10000
1027	1082	1083	1103	1102	2	130.00	.33	7104.00	5683.04	.10000
1028	1083	1084	1104	1103	2	130.00	.47	8087.29	6469.83	.10000
1029	1084	1085	1105	1104	2	130.00	.47	7897.94	6318.36	.10000
1030	1085	1086	1106	1105	2	130.00	.47	8099.90	6479.92	.10000
1031	1086	1087	1107	1106	3	130.00	.47	13625.78	10900.62	.10000
1032	1087	1088	1108	1107	3	130.00	.47	13625.78	10900.62	.10000
1033	1088	1089	1109	1108	4	130.00	.47	12931.16	10344.92	.10000
1034	1089	1090	1110	1109	4	130.00	.47	13264.56	10611.65	.10000
1035	1090	1091	1111	1110	4	130.00	.47	13589.79	10871.84	.10000
1036	1091	1092	1112	1111	4	130.00	.47	13907.42	11125.94	.10000
1037	1092	1093	1113	1112	4	130.00	.47	14217.96	11374.36	.10000
1038	1093	1094	1114	1113	4	130.00	.47	14521.85	11617.48	.10000
1039	1095	1096	1116	1115	1	125.00	.33	3275.43	2620.34	.10000
1040	1096	1097	1117	1116	1	125.00	.33	3275.43	2620.34	.10000
1041	1097	1098	1118	1117	1	125.00	.33	3275.43	2620.34	.10000
1042	1098	1099	1119	1118	1	125.00	.33	3275.43	2620.34	.10000
1043	1099	1100	1120	1119	1	125.00	.33	3275.43	2620.34	.10000
1044	1100	1101	1121	1120	1	125.00	.33	5822.98	4658.39	.10000
1045	1101	1102	1122	1121	2	130.00	.33	5747.00	4598.24	.10000
1046	1102	1103	1123	1122	2	130.00	.33	7104.00	5683.04	.10000
1047	1103	1104	1124	1123	2	130.00	.47	8087.29	6469.83	.10000
1048	1104	1105	1125	1124	2	130.00	.47	7897.94	6318.36	.10000
1049	1105	1106	1126	1125	2	130.00	.47	8099.90	6479.92	.10000
1050	1106	1107	1127	1126	3	130.00	.47	13625.78	10900.62	.10000
1051	1107	1108	1128	1127	3	130.00	.47	13625.78	10900.62	.10000
1052	1108	1109	1129	1128	4	130.00	.47	12931.16	10344.92	.10000
1053	1109	1110	1130	1129	4	130.00	.47	13264.56	10611.65	.10000
1054	1110	1111	1131	1130	4	130.00	.47	13589.79	10871.84	.10000
1055	1111	1112	1132	1131	4	130.00	.47	13907.42	11125.94	.10000
1056	1112	1113	1133	1132	4	130.00	.47	14217.96	11374.36	.10000
1057	1113	1114	1134	1133	4	130.00	.47	14521.85	11617.48	.10000
1058	1115	1116	1136	1135	1	125.00	.33	3275.43	2620.34	.10000
1059	1116	1117	1137	1136	1	125.00	.33	3275.43	2620.34	.10000
1060	1117	1118	1138	1137	1	125.00	.33	3275.43	2620.34	.10000
1061	1118	1119	1139	1138	1	125.00	.33	3275.43	2620.34	.10000
1062	1119	1120	1140	1139	1	125.00	.33	3275.43	2620.34	.10000
1063	1120	1121	1141	1140	1	125.00	.33	5822.98	4658.39	.10000
1064	1121	1122	1142	1141	2	130.00	.33	5747.00	4598.24	.10000
1065	1122	1123	1143	1142	2	130.00	.33	7104.00	5683.04	.10000
1066	1123	1124	1144	1143	2	130.00	.47	8087.29	6469.83	.10000
1067	1124	1125	1145	1144	2	130.00	.47	7897.94	6318.36	.10000
1068	1125	1126	1146	1145	2	130.00	.47	8099.90	6479.92	.10000
1069	1126	1127	1147	1146	3	130.00	.47	13625.78	10900.62	.10000
1070	1127	1128	1148	1147	3	130.00	.47	13625.78	10900.62	.10000
1071	1128	1129	1149	1148	4	130.00	.47	12931.16	10344.92	.10000
1072	1129	1130	1150	1149	4	130.00	.47	13264.56	10611.65	.10000
1073	1130	1131	1151	1150	4	130.00	.47	13589.79	10871.84	.10000
1074	1131	1132	1152	1151	4	130.00	.47	13907.42	11125.94	.10000
1075	1132	1133	1153	1152	4	130.00	.47	14217.96	11374.36	.10000
1076	1133	1134	1154	1153	4	130.00	.47	14521.85	11617.48	.10000
1077	1135	1136	1156	1155	1	125.00	.33	3275.43	2620.34	.10000
1078	1136	1137	1157	1156	1	125.00	.33	3275.43	2620.34	.10000
1079	1137	1138	1158	1157	1	125.00	.33	3275.43	2620.34	.10000
1080	1138	1139	1159	1158	1	125.00	.33	3275.43	2620.34	.10000
1081	1139	1140	1160	1159	1	125.00	.33	3275.43	2620.34	.10000
1082	1140	1141	1161	1160	1	125.00	.33	5822.98	4658.39	.10000
1083	1141	1142	1162	1161	2	130.00	.33	5747.00	4598.24	.10000
1084	1142	1143	1163	1162	2	130.00	.33	7104.00	5683.04	.10000
1085	1143	1144	1164	1163	2	130.00	.47	8087.29	6469.83	.10000
1086	1144	1145	1165	1164	2	130.00	.47	7897.94	6318.36	.10000
1087	1145	1146	1166	1165	2	130.00	.47	8099.90	6479.92	.10000
1088	1146	1147	1167	1166	3	130.00	.47	13625.78	10900.62	.10000
1089	1147	1148	1168	1167	3	130.00	.47	13625.78	10900.62	.10000
1090	1148	1149	1169	1168	4	130.00	.47	12931.16	10344.92	.10000
1091	1149	1150	1170	1169	4	130.00	.47	13264.56	10611.65	.10000
1092	1150	1151	1171	1170	4	130.00	.47	13589.79	10871.84	.10000
1093	1151	1152	1172	1171	4	130.00	.47	13907.42	11125.94	.10000
1094	1152	1153	1173	1172	4	130.00	.47	14217.96	11374.36	.10000
1095	1153	1154	1174	1173	4	130.00	.47	14521.85	11617.48	.10000
1096	1155	1156	1176	1175	1	125.00	.33	3275.43	2620.34	.10000
1097	1156	1157	1177	1176	1	125.00	.33	3275.43	2620.34	.10000
1098	1157	1158	1178	1177	1	125.00	.33	3275.43	2620.34	.10000
1099	1158	1159	1179	1178	1	125.00	.33	3275.43	2620.34	.10000
1100	1159	1160	1180	1179	1	125.00	.33	3275.43	2620.34	.10000
1101	1160	1161	1181	1180	1	125.00	.33	5822.98	4658.39	.10000
1102	1161	1162	1182	1181	2	130.00	.33	5747.00	4598.24	.10000
1103	1162	1163	1183	1182	2	130.00	.33	7104.00	5683.04	.10000
1104	1163	1164	1184	1183	2	130.00	.47	8087.29	6469.83	.10000
1105	1164	1165	1185	1184	2	130.00	.47	7897.94	6318.36	.10000
1106	1165	1166	1186	1185	2	130.00	.47	8099.90	6479.92	.10000
1107	1166	1167	1187	1186	3	130.00	.47	13625.78	10900.62	.10000
1108	1167	1168	1188	1187	3	130.00	.47	13625.78	10900.62	.10000
1109	1168	1169	1189	1188	4	130.00	.47	12931.16	10344.92	.10000
1110	1169	1170	1190	1189	4	130.00	.47	13264.56	10611.65	.10000
1111	1170	1171	1191	1190	4	130.00	.47	13589.79	10871.84	.10000
1112	1171	1172	1192	1191	4	130.00	.47	13907.42	11125.94	.10000
1113	1172	1173	1193	1192	4	130.00	.47	14217.96	11374.36	.10000
1114	1173	1174	1194	1193	4	130.00	.47	14521.85	11617.48	.10000
1115	1175	1176	1196	1195	1	125.00	.33	3275.43	2620.34	.10000
1116	1176	1177	1197	1196	1	125.00	.33	3275.43	2620.34	.10000
1117	1177	1178	1198	1197	1	125.00	.33	3275.43	2620.34	.10000
1118	1178	1179	1199	1198	1	125.00	.33	3275.43	2620.34	.10000
1119	1179	1180	1200	1199	1	125.00	.33	3275.43	2620.34	.10000
1120	1180	1181	1201	1200	1	125.00	.33	5822.98	4658.39	.10000
1121	1181	1182	1202	1201	2	130.00	.33	5747.00	4598.24	.10000
1122	1182	1183	1203	1202	2	130.00	.33	7104.00	5683.04	.10000
1123	1183	1184	1204	1203	2	130.00	.47	8087.29	6469.83	.10000
1124	1184	1185	1205	1204	2	130.00	.47	7897.94	6318.36	.10000
1125	1185	1186	1206	1205	2	130.00	.47	8099.90	6479.92	.10000
1126	1186	1187	1207	1206	3	130.00	.47	13625.78	10900.62	.10000
1127	1187	1188	1208	1207	3	130.00	.47	13625.78	10900.62	.10000
1128	1188	1189	1209	1208	4	130.00	.47	12931.16	10344.92	.10000
1129	1189	1190	1210	1209	4	130.00	.47	13264.56	10611.65	.10000
1130	1190	1191	1211	1210	4	130.00	.47	13589.79	10871.84	.10000
1131	1191	1192	1212	1211	4	130.00	.47	13907.42	11125.94	.10000
1132	1192	1193	1213	1212	4	130.00	.47	14217.96	11374.36	.10000
1133	1193	1194	1214	1213	4	130.00	.47	14521.85	11617.48	.10000
1134	1195	1196	1216	1215	1	125.00	.33	3275.43	2620.34	.10000
1135	1196	1197	1217	1216	1	125.00	.33	3275.43	2620.34	.10000
1136	1197	1198	1218	1217	1	125.00	.33	3275.43	2620.34	.10000
1137	1198	1199	1219	1218	1	125.00	.33	3275.43	2620.34	.10000
1138	1199	1200	1220	1219	1	125.00	.33	3275.43	2620.34	.10000
1139	1200	1201	1221	1220	1	125.00	.33	5822.98	4658.39	.10000
1140	1201	1202	1222	1221	2	130.00	.33	5747.00	4598.24	.10000
1141	1202	1203	1223	1222	2	130.00	.33	7104.00	5683.04	.10000
1142	1203	1204	1224	1223	2	130.00	.47	8087.29	6469.83	.10000
1143	1204	1205	1225	1224	2	130.00	.47	7897.94	6318.36	.10000
1144	1205	1206	1226	1225	2	130.00	.47	8099.90	6479.92	.10000
1145	1206	1207	1227	1226	3	130.00	.47	13625.78	10900.62	.10000
1146	1207	1208	1228	1227	3	130.00	.47	13625.78	10900.62	.10000
1147	1208	1209	1229	1228	4	130.00	.47	12931.16	10344.92	.10000
1148	1209	1210	1230	1229	4	130.00	.47	13264.56	10611.65	.10000
1149	1210	1211	1231	1230	4	130.00	.47	13589.79	10871.84	.10000
1150	1211	1212	1232	1231	4	130.00	.47	13907.42	11125.94	.10000
1151	1212	1213	1233	1232	4	130.00	.47	14217.96	11374.36	.10000
1152	1213	1214	1234	1233	4	130.00	.47	14521.85	11617.48	.10000
1153	1215	1216	1236	1235	1	125.00	.33	3275.43	2620.34	.10000
1154	1216	1217	1237	1236	1	125.00	.33	3275.43	2620.34	.10000
1155	1217	1218	1238	1237	1	125.00	.33	3275.43	2620.34	.10000
1156	1218	1219	1239	1238	1	125.00	.33	3275.43	2620.34	.10000
1157	1219	1220	1240	1239	1	125.00	.33	3275.43	2620.34	.10000
1158	1220	1221	1241	1240	1	125.00	.33	5822.98	4658.39	.10000
1159	1221	1222	1242	1241	2	130.00	.33	5747.00	4598.24	.10000
1160	1222	1223	1243	1242	2	130.00	.33	7104.00	5683.04	.10000
1161	1223	1224	1244	1243	2	130.00	.47	8087.29	6469.83	.10000
1162	1224	1225	1245	1244	2	130.00	.47	7897.94	6318.36	.10000
1163	1225	1226	1246	1245	2	130.00	.47	8099.90	6479.92	.10000
1164	1226	1227	1247	1246	3	130.00	.47	13625.78	10900.62	.10000
1165	1227	1228	1248	1247	3	130.00	.47	13625.78	10900.62	.10000
1166	1228	1229	1249	1248	4	130.00	.47	12931.16	10344.92	.10000
1167	1229	1230	1250	1249	4	130.00	.47	13264.56	10611.65	.10000
1168	1230	1231	1251	1250	4	130.00	.47	13589.79	10871.84	.10000
1169	1231	1232	1252	1251	4	130.00	.47	13907.42	11125.94	.10000
1170	1232	1233	1253	1252	4	130.00	.47	14217.96	11374.36	.10000
1171	1233	1234	1254	1253	4	130.00	.47	14521.85	11617.48	.10000
1172	1235	1236	1256	1255	1	125.00	.33	3275.43	2620.34	.10000
1173	1236	1237	1257	1256	1	125.00	.33	3275.43	2620.34	.10000
1174	1237	1238	1258	1257	1	125.00	.33	3275.43	2620.34	.10000
1175	1238	1239	1259	1258	1	125.00	.33	3275.43	2620.34	.10000
1176	1239	1240	1260	1259	1	125.00	.33	3275.43	2620.34	.10000
1177	1240	1241	1261	1260	1	125.00	.33	5822.98	4658.39	.10000
1178	1241	1242	1262	1261	2	130.00	.33	5747.00	4598.24	.10000
1179	1242	1243	1263	1262	2	130.00	.33	7104.00	5683.04	.10000
1180	1243	1244	1264	1263	2	130.00	.47	8087.29	6469.83	.10000
1181	1244	1245	1265	1264	2	130.00	.47	7897.94	6318.36	.10000
1182	1245	1246	1266	1265	2	130.00	.47	8099.90	6479.92	.10000
1183	1246	1247	1267	1266	3	130.00	.47	13625.78	10900.62	.10000
1184	1247	1248	1268	1267	3	130.00	.47	13625.78	10900.62	.10000
1185	1248	1249	1269	1268	4	130.00	.47	12931.16	10344.92	.10000
1186	1249	1250	1270	1269	4	130.00	.47	13264.56	10611.65	.10000
1187	1250	1251	1271	1270	4	130.00	.47	13589.79	10871.84	.10000
1188	1251	1252	1272	1271	4	130.00	.47	13907.42	11125.94	.10000
1189	1252	1253	1273	1272	4	130.00	.47	14217.96	11374.36	.10000
1190	1253	1254	1274	1273	4	130.00	.47	14521.85	11617.48	.10000
1191	1255	1256	1276	1275	1	125.00	.33	3275.43	2620.34	.10000
1192	1256	1257	1277	1276	1	125.00	.33	3275.43	2620.34	.10000
1193	1257	1258	1278	1277	1	125.00	.33	3275.43	2620.34	.10000
1194	1258	1259	1279	1278	1	125.00	.33	3275.43	2620.34	.10000
1195	1259	1260	1280	1279	1	125.00	.33	3275.43	2620.34	.10000
1196	1260	1261	1281	1280	1	125.00	.33	5822.98	4658.39	.10000
1197	1261	1262	1282	1281	2	130.00	.33	5747.00	4598.24	.10000
1198	1262	1263	1283	1282	2	130.00	.33	7104.00	5683.04	.10000
1199	1263	1264	1284	1283	2	130.00	.47	8087.29	6469.83	.10000
1200	1264	1265	1285	1284	2	130.00	.47	7897.94	6318.36	.10000
1201	1265	1266	1286	1285	2	130.00	.47	8099.90	6479.92	.10000
1202	1266	1267	1287	1286	3	130.00	.47	13625.78	10900.62	.10000
1203	1267	1268	1288	1287	3	130.00	.47	13625.78	10900.62	.10000
1204	1268	1269	1289	1288	4	130.00	.47	12931.16	10344.92	.10000
1205	1269	1270	1290	1289	4	130.00	.47	13264.56	10611.65	.10000
1206	1270	1271	1291	1290	4	130.00	.47	13589.79	10871.84	.10000
1207	1271	1272	1292	1291	4	130.00	.47	13907.42	11125.94	.10000
1208	1272	1273	1293	1292	4	130.00	.47	14217.96	11374.36	.10000
1209	1273	1274	1294	1293	4	130.00	.47	14521.85	11617.48	.10000
1210	1275	1276	1296	1295	1	125.00	.33	3275.43	2620.34	.10000
1211	1276	1277	1297	1296	1	125.00	.33	3275.43	2620.34	.10000
1212	1277	1278	1298	1297	1	125.00	.33	3275.43	2620.34	.10000
1213	1278	1279	1299	1298	1	125.00	.33	3275.43	2620.34	.10000
1214	1279	1280	1300	1299	1	125.00	.33	3275.43	2620.34	.10000
1215	1280	1281	1301	1300	1	125.00	.33	5822.98	4658.39	.10000
1216	1281	1282	1302	1301	2	130.00	.33	5719.84	4575.87	.10000
1217	1282	1283	1303	1302	2	130.00	.33	7076.19	5660.95	.10000
1218	1283	1284	1304	1303	2	130.00	.47	8059.51	6447.61	.10000
1219	1284	1285	1305	1304	2	130.00	.47	7872.58	6298.06	.10000
1220	1285	1286	1306	1305	2	130.00	.47	8075.17	6460.13	.10000
1221	1286	1287	1307	1306	3	130.00	.47	13625.78	10900.62	.10000
1222	1287	1288	1308	1307	3	130.00	.47	13625.78	10900.62	.10000
1223	1288	1289	1309	1308	4	130.00	.47	12897.66	10318.13	.10000
1224	1289	1290	1310	1309	4	130.00	.47	13231.91	10585.53	.10000
1225	1290	1291	1311	1310	4	130.00	.47	13557.93	10846.34	.10000
1226	1291	1292	1312	1311	4	130.00	.47	13876.28	11101.03	.10000
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1230	1296	1297	1317	1316	1	125.00	.33	3275.43	2620.34	.10000
1231	1297	1298	1318	1317	1	125.00	.33	3275.43	2620.34	.10000
1232	1298	1299	1319	1318	1	125.00	.33	3275.43	2620.34	.10000
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1234	1300	1301	1321	1320	1	125.00	.33	5822.98	4658.39	.10000
1235	1301	1302	1322	1321	2	130.00	.33	5663.51	4530.81	.10000
1236	1302	1303	1323	1322	2	130.00	.33	7018.61	5614.89	.10000
1237	1303	1304	1324	1323	2	130.00	.47	8003.67	6402.94	.10000
1238	1304	1305	1325	1324	2	130.00	.47	7821.60	6257.28	.10000
1239	1305	1306	1326	1325	2	130.00	.47	8025.47	6420.38	.10000
1240	1306	1307	1327	1326	3	130.00	.47	13625.78	10900.62	.10000
1241	1307	1308	1328	1327	3	130.00	.47	13625.78	10900.62	.10000
1242	1308	1309	1329	1328	4	130.00	.47	12830.40	10264.32	.10000
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1246	1312	1313	1333	1332	4	130.00	.47	14126.38	11301.11	.10000
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1248	1315	1316	1336	1335	1	125.00	.33	3275.43	2620.34	.10000
1249	1316	1317	1337	1336	1	125.00	.33	3275.43	2620.34	.10000
1250	1317	1318	1338	1337	1	125.00	.33	3275.43	2620.34	.10000
1251	1318	1319	1339	1338	1	125.00	.33	3275.43	2620.34	.10000
1252	1319	1320	1340	1339	1	125.00	.33	3275.43	2620.34	.10000
1253	1320	1321	1341	1340	1	125.00	.33	5822.98	4658.39	.10000
1254	1321	1322	1342	1341	2	130.00	.33	5606.81	4485.29	.10000
1255	1322	1323	1343	1342	2	130.00	.33	6960.35	5568.44	.10000
1256	1323	1324	1344	1343	2	130.00	.47	7947.44	6357.95	.10000
1257	1324	1325	1345	1344	2	130.00	.47	7770.28	6216.22	.10000
1258	1325	1326	1346	1345	2	130.00	.47	7975.47	6380.37	.10000
1259	1326	1327	1347	1346	3	130.00	.47	13625.78	10900.62	.10000
1260	1327	1328	1348	1347	3	130.00	.47	13625.78	10900.62	.10000
1261	1328	1329	1349	1348	4	130.00	.47	12762.79	10210.24	.10000
1262	1329	1330	1350	1349	4	130.00	.47	13100.49	10480.39	.10000
1263	1330	1331	1351	1350	4	130.00	.47	13429.69	10743.75	.10000
1264	1331	1332	1352	1351	4	130.00	.47	13751.02	11000.82	.10000
1265	1332	1333	1353	1352	4	130.00	.47	14065.01	11252.00	.10000
1266	1333	1334	1354	1353	4	130.00	.47	14372.13	11497.71	.10000
1267	1335	1336	1356	1355	1	125.00	.33	3275.43	2620.34	.10000
1268	1336	1337	1357	1356	1	125.00	.33	3275.43	2620.34	.10000
1269	1337	1338	1358	1357	1	125.00	.33	3275.43	2620.34	.10000
1270	1338	1339	1359	1358	1	125.00	.33	3275.43	2620.34	.10000
1271	1339	1340	1360	1359	1	125.00	.33	3275.43	2620.34	.10000
1272	1340	1341	1361	1360	1	125.00	.33	5822.98	4658.39	.10000
1273	1341	1342	1362	1361	2	130.00	.33	5549.13	4439.30	.10000
1274	1342	1343	1363	1362	2	130.00	.33	6902.01	5521.61	.10000
1275	1343	1344	1364	1363	2	130.00	.47	7890.80	6312.64	.10000
1276	1344	1345	1365	1364	2	130.00	.47	7718.62	6174.89	.10000
1277	1345	1346	1366	1365	2	130.00	.47	7925.15	6340.12	.10000
1278	1346	1347	1367	1366	3	130.00	.47	13625.78	10900.62	.10000
1279	1347	1348	1368	1367	3	130.00	.47	13625.78	10900.62	.10000
1280	1348	1349	1369	1368	4	130.00	.47	12694.83	10155.86	.10000
1281	1349	1350	1370	1369	4	130.00	.47	13034.28	10427.42	.10000
1282	1350	1351	1371	1370	4	130.00	.47	13365.12	10692.09	.10000
1283	1351	1352	1372	1371	4	130.00	.47	13687.96	10950.37	.10000
1284	1352	1353	1373	1372	4	130.00	.47	14003.36	11202.69	.10000
1285	1353	1354	1374	1373	4	130.00	.47	14311.81	11449.45	.10000
1286	1355	1356	1376	1375	1	125.00	.33	3275.43	2620.34	.10000
1287	1356	1357	1377	1376	1	125.00	.33	3275.43	2620.34	.10000
1288	1357	1358	1378	1377	1	125.00	.33	3275.43	2620.34	.10000
1289	1358	1359	1379	1378	1	125.00	.33	3275.43	2620.34	.10000
1290	1359	1360	1380	1379	1	125.00	.33	3275.43	2620.34	.10000
1291	1360	1361	1381	1380	1	125.00	.33	5822.98	4658.39	.10000
1292	1361	1362	1382	1381	2	130.00	.33	5491.04	4392.84	.10000
1293	1362	1363	1383	1382	2	130.00	.33	6842.96	5474.37	.10000
1294	1363	1364	1384	1383	2	130.00	.47	7833.75	6267.00	.10000
1295	1364	1365	1385	1384	2	130.00	.47	7666.62	6133.29	.10000
1296	1365	1366	1386	1385	2	130.00	.47	7874.51	6299.60	.10000
1297	1366	1367	1387	1386	3	130.00	.47	13625.78	10900.62	.10000
1298	1367	1368	1388	1387	3	130.00	.47	13625.78	10900.62	.10000
1299	1368	1369	1389	1388	4	130.00	.47	12626.49	10101.19	.10000
1300	1369	1370	1390	1389	4	130.00	.47	12967.73	10374.19	.10000
1301	1370	1371	1391	1390	4	130.00	.47	13300.22	10640.18	.10000
1302	1371	1372	1392	1391	4	130.00	.47	13624.60	10899.68	.10000
1303	1372	1373	1393	1392	4	130.00	.47	13941.44	11153.15	.10000
1304	1373	1374	1394	1393	4	130.00	.47	14251.23	11400.98	.10000
1305	1375	1376	1396	1395	1	125.00	.33	3275.43	2620.34	.10000
1306	1376	1377	1397	1396	1	125.00	.33	3275.43	2620.34	.10000
1307	1377	1378	1398	1397	1	125.00	.33	3275.43	2620.34	.10000
1308	1378	1379	1399	1398	1	125.00	.33	3275.43	2620.34	.10000

1309	1379	1380	1399	1398	1	125.00	.33	3275.43	2620.34	.10000
1310	1380	1381	1400	1399	1	125.00	.33	5822.98	4658.39	.10000
1311	1381	1382	1401	1400	2	130.00	.33	5444.33	4355.31	.10000
1312	1382	1383	1402	1401	2	130.00	.33	6795.35	5436.28	.10000
1313	1383	1384	1403	1402	2	130.00	.47	7787.81	6230.25	.10000
1314	1384	1385	1404	1403	2	130.00	.47	7624.76	6099.81	.10000
1315	1385	1386	1405	1404	2	130.00	.47	7833.76	6267.01	.10000
1316	1386	1387	1406	1405	3	130.00	.47	13625.78	10900.62	.10000
1317	1387	1388	1407	1406	3	130.00	.47	13625.78	10900.62	.10000
1318	1388	1389	1408	1407	4	130.00	.47	12571.55	10057.24	.10000
1319	1389	1390	1409	1408	4	130.00	.47	12914.25	10331.40	.10000
1320	1390	1391	1410	1409	4	130.00	.47	13240.00	10590.47	.10000
1321	1391	1392	1411	1410	4	130.00	.47	13573.71	10858.97	.10000
1322	1392	1393	1412	1411	4	130.00	.47	13891.70	11113.36	.10000
1323	1393	1394	1413	1412	4	130.00	.47	14202.58	11362.06	.10000
1324	1395	1396	1414	1413	1	125.00	.33	3275.43	2620.34	.10000
1325	1396	1397	1415	1414	1	125.00	.33	3275.43	2620.34	.10000
1326	1397	1398	1416	1415	1	125.00	.33	3275.43	2620.34	.10000
1327	1398	1399	1417	1416	1	125.00	.33	3275.43	2620.34	.10000
1328	1399	1400	1418	1417	1	125.00	.33	5822.98	4658.39	.10000
1329	1400	1401	1419	1418	2	130.00	.33	5193.72	4154.98	.10000
1330	1401	1402	1420	1419	2	130.00	.33	6542.58	5234.07	.10000
1331	1402	1403	1421	1420	2	130.00	.47	7544.78	6035.83	.10000
1332	1403	1404	1422	1421	2	130.00	.47	7403.59	5922.87	.10000
1333	1404	1405	1423	1422	2	130.00	.47	7618.66	6094.93	.10000
1334	1405	1406	1424	1423	3	130.00	.47	13625.78	10900.62	.10000
1335	1406	1407	1425	1424	3	130.00	.47	13625.78	10900.62	.10000
1336	1407	1408	1426	1425	4	130.00	.47	12282.36	9825.87	.10000
1337	1408	1409	1427	1426	4	130.00	.47	12632.88	10106.30	.10000
1338	1409	1410	1428	1427	4	130.00	.47	12973.96	10379.17	.10000
1339	1410	1411	1429	1428	4	130.00	.47	13306.29	10645.03	.10000
1340	1411	1412	1430	1429	4	130.00	.47	13630.53	10904.42	.10000
1341	1412	1413	1431	1430	4	130.00	.47	13947.23	11157.78	.10000
1342	1414	1415	1432	1431	1	125.00	.33	3275.43	2620.34	.10000
1343	1415	1416	1433	1432	1	125.00	.33	3275.43	2620.34	.10000
1344	1416	1417	1434	1433	1	125.00	.33	3275.43	2620.34	.10000
1345	1417	1418	1435	1434	1	125.00	.33	5822.98	4658.39	.10000
1346	1418	1419	1436	1435	2	130.00	.33	4704.32	3763.45	.10000
1347	1419	1420	1437	1436	2	130.00	.33	6055.95	4844.76	.10000
1348	1420	1421	1438	1437	2	130.00	.47	7081.50	5665.20	.10000
1349	1421	1422	1439	1438	2	130.00	.47	6983.48	5586.78	.10000
1350	1422	1423	1440	1439	2	130.00	.47	7211.09	5768.87	.10000
1351	1423	1424	1441	1440	3	130.00	.47	13625.78	10900.62	.10000
1352	1424	1425	1442	1441	3	130.00	.47	13625.78	10900.62	.10000
1353	1425	1426	1443	1442	4	130.00	.47	11738.16	9390.53	.10000
1354	1426	1427	1444	1443	4	130.00	.47	12104.48	9683.58	.10000
1355	1427	1428	1445	1444	4	130.00	.47	12460.02	9968.02	.10000
1356	1428	1429	1446	1445	4	130.00	.47	12805.71	10244.56	.10000
1357	1429	1430	1447	1446	4	130.00	.47	13142.30	10513.84	.10000
1358	1430	1431	1448	1447	4	130.00	.47	13470.48	10776.38	.10000
1359	1432	1433	1449	1448	1	125.00	.33	3275.43	2620.34	.10000
1360	1433	1434	1450	1449	1	125.00	.33	3275.43	2620.34	.10000
1361	1434	1435	1451	1450	1	125.00	.33	5822.98	4658.39	.10000
1362	1435	1436	1452	1451	2	130.00	.33	4169.58	3335.66	.10000
1363	1436	1437	1453	1452	2	130.00	.33	5537.95	4430.36	.10000
1364	1437	1438	1454	1453	2	130.00	.47	6596.19	5276.95	.10000
1365	1438	1439	1455	1454	2	130.00	.47	6545.85	5236.68	.10000
1366	1439	1440	1456	1455	2	130.00	.47	6788.15	5430.52	.10000
1367	1440	1441	1457	1456	3	130.00	.47	13625.78	10900.62	.10000
1368	1441	1442	1458	1457	3	130.00	.47	13625.78	10900.62	.10000
1369	1442	1443	1459	1458	4	130.00	.47	11179.44	8943.55	.10000
1370	1443	1444	1460	1459	4	130.00	.47	11563.47	9250.77	.10000
1371	1444	1445	1461	1460	4	130.00	.47	11935.14	9548.12	.10000
1372	1445	1446	1462	1461	4	130.00	.47	12295.59	9836.47	.10000
1373	1446	1447	1463	1462	4	130.00	.47	12645.77	10116.61	.10000
1374	1447	1448	1464	1463	4	130.00	.47	12986.50	10389.20	.10000
1375	1449	1450	1466	1465	1	125.00	.33	3275.43	2620.34	.10000
1376	1450	1451	1467	1466	1	125.00	.33	5822.98	4658.39	.10000
1377	1451	1452	1468	1467	2	130.00	.33	3637.76	2910.20	.10000
1378	1452	1453	1469	1468	2	130.00	.33	5041.22	4032.97	.10000
1379	1453	1454	1470	1469	2	130.00	.47	6140.16	4912.13	.10000
1380	1454	1455	1471	1470	2	130.00	.47	6137.38	4909.90	.10000
1381	1455	1456	1472	1471	2	130.00	.47	6395.17	5116.14	.10000
1382	1456	1457	1473	1472	3	130.00	.47	13625.78	10900.62	.10000
1383	1457	1458	1474	1473	3	130.00	.47	13625.78	10900.62	.10000
1384	1458	1459	1475	1474	4	130.00	.47	10666.58	8533.26	.10000
1385	1459	1460	1476	1475	4	130.00	.47	11068.41	8854.73	.10000
1386	1460	1461	1477	1476	4	130.00	.47	11456.16	9164.93	.10000
1387	1461	1462	1478	1477	4	130.00	.47	11831.21	9464.97	.10000
1388	1462	1463	1479	1478	4	130.00	.47	12194.73	9755.78	.10000
1389	1463	1464	1480	1479	4	130.00	.47	12547.72	10038.18	.10000
1390	1465	1466	1481	1480	1	125.00	.33	3275.43	2620.34	.10000
1391	1466	1467	1482	1481	1	125.00	.33	5822.98	4658.39	.10000
1392	1467	1468	1483	1482	2	130.00	.33	3204.29	2563.43	.10000
1393	1468	1469	1484	1483	2	130.00	.33	4654.06	3723.25	.10000
1394	1469	1470	1485	1484	2	130.00	.47	5792.48	4633.99	.10000
1395	1470	1471	1486	1485	2	130.00	.47	5828.11	4662.49	.10000
1396	1471	1472	1487	1486	2	130.00	.47	6098.99	4879.19	.10000
1397	1472	1473	1488	1487	3	130.00	.47	13625.78	10900.62	.10000
1398	1473	1474	1489	1488	3	130.00	.47	13625.78	10900.62	.10000
1399	1474	1475	1490	1489	4	130.00	.47	10284.60	8227.68	.10000
1400	1475	1476	1491	1490	4	130.00	.47	10700.79	8560.63	.10000
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1402	1477	1478	1493	1492	4	130.00	.47	11488.02	9190.42	.10000
1403	1478	1479	1494	1493	4	130.00	.47	11862.06	9489.65	.10000
1404	1479	1480	1495	1494	4	130.00	.47	12224.66	9779.73	.10000
1405	1481	1482	1497	1496	1	125.00	.33	5822.98	4658.39	.10000
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1408	1484	1485	1500	1499	2	130.00	.47	5536.14	4428.91	.10000
1409	1485	1486	1501	1500	2	130.00	.47	5601.47	4481.18	.10000
1410	1486	1487	1502	1501	2	130.00	.47	5882.80	4706.24	.10000
1411	1487	1488	1503	1502	3	130.00	.47	13625.78	10900.62	.10000
1412	1488	1489	1504	1503	3	130.00	.47	13625.78	10900.62	.10000
1413	1489	1490	1505	1504	4	130.00	.47	10008.55	8006.84	.10000
1414	1490	1491	1506	1505	4	130.00	.47	10435.75	8348.60	.10000
1415	1491	1492	1507	1506	4	130.00	.47	10846.14	8676.91	.10000
1416	1492	1493	1508	1507	4	130.00	.47	11241.56	8993.25	.10000
1417	1493	1494	1509	1508	4	130.00	.47	11621.53	9298.83	.10000
1418	1494	1495	1510	1509	4	130.00	.47	11993.35	9594.68	.10000
1419	1496	1497	1512	1511	1	125.00	.33	5822.98	4658.39	.10000
1420	1497	1498	1513	1512	2	130.00	.33	2702.17	2161.73	.10000
1421	1498	1499	1514	1513	2	130.00	.33	4231.64	3385.31	.10000
1422	1499	1500	1515	1514	2	130.00	.47	5422.56	4338.05	.10000
1423	1500	1501	1516	1515	2	130.00	.47	5501.49	4401.19	.10000
1424	1501	1502	1517	1516	2	130.00	.47	5787.67	4630.14	.10000
1425	1502	1503	1518	1517	3	130.00	.47	13625.78	10900.62	.10000
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1427	1504	1505	1520	1519	4	130.00	.47	9887.88	7910.31	.10000
1428	1505	1506	1521	1520	4	130.00	.47	10320.08	8256.07	.10000
1429	1506	1507	1522	1521	4	130.00	.47	10734.89	8587.92	.10000
1430	1507	1508	1523	1522	4	130.00	.47	11134.26	8907.41	.10000
1431	1508	1509	1524	1523	4	130.00	.47	11519.79	9215.84	.10000
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1433	1511	1512	1527	1526	1	125.00	.33	5822.98	4658.39	.10000
1434	1512	1513	1528	1527	2	130.00	.33	2702.17	2161.73	.10000
1435	1513	1514	1529	1528	2	130.00	.33	4231.64	3385.31	.10000
1436	1514	1515	1530	1529	2	130.00	.47	5422.56	4338.05	.10000
1437	1515	1516	1531	1530	2	130.00	.47	5501.49	4401.19	.10000
1438	1516	1517	1532	1531	2	130.00	.47	5787.67	4630.14	.10000
1439	1517	1518	1533	1532	3	130.00	.47	13625.78	10900.62	.10000
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1441	1519	1520	1535	1534	4	130.00	.47	9887.88	7910.31	.10000
1442	1520	1521	1536	1535	4	130.00	.47	10320.08	8256.07	.10000
1443	1521	1522	1537	1536	4	130.00	.47	10734.89	8587.92	.10000
1444	1522	1523	1538	1537	4	130.00	.47	11134.26	8907.41	.10000
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1446	1524	1525	1540	1539	4	130.00	.47	11892.84	9514.27	.10000
1447	1526	1527	1542	1541	1	125.00	.33	5822.98	4658.39	.10000
1448	1527	1528	1543	1542	2	130.00	.33	2702.17	2161.73	.10000
1449	1528	1529	1544	1543	2	130.00	.33	4231.64	3385.31	.10000
1450	1529	1530	1545	1544	2	130.00	.47	5422.56	4338.05	.10000
1451	1530	1531	1546	1545	2	130.00	.47	5501.49	4401.19	.10000
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1453	1532	1533	1548	1547	3	130.00	.47	13625.78	10900.62	.10000
1454	1533	1534	1549	1548	3	130.00	.47	13625.78	10900.62	.10000
1455	1534	1535	1550	1549	4	130.00	.47	9887.88	7910.31	.10000
1456	1535	1536	1551	1550	4	130.00	.47	10320.08	8256.07	.10000
1457	1536	1537	1552	1551	4	130.00	.47	10734.89	8587.92	.10000
1458	1537	1538	1553	1552	4	130.00	.47	11134.26	8907.41	.10000
1459	1538	1539	1554	1553	4	130.00	.47	11519.79	9215.84	.10000
1460	1539	1540	1555	1554	4	130.00	.47	11892.84	9514.27	.10000
1461	1541	1542	1557	1556	1	125.00	.33	5822.98	4658.39	.10000
1462	1542	1543	1558	1557	2	130.00	.33	2702.17	2161.73	.10000
1463	1543	1544	1559	1558	2	130.00	.33	4231.64	3385.31	.10000
1464	1544	1545	1560	1559	2	130.00	.47	5422.56	4338.05	.10000
1465	1545	1546	1561	1560	2	130.00	.47	5501.49	4401.19	.10000
1466	1546	1547	1562	1561	2	130.00	.47	5787.67	4630.14	.10000
1467	1547	1548	1563	1562	3	130.00	.47	13625.78	10900.62	.10000
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1469	1549	1550	1565	1564	4	130.00	.47	9887.88	7910.31	.10000
1470	1550	1551	1566	1565	4	130.00	.47	10320.08	8256.07	.10000
1471	1551	1552	1567	1566	4	130.00	.47	10734.89	8587.92	.10000
1472	1552	1553	1568	1567	4	130.00	.47	11134.26	8907.41	.10000
1473	1553	1554	1569	1568	4	130.00	.47	11519.79	9215.84	.10000
1474	1554	1555	1570	1569	4	130.00	.47	11892.84	9514.27	.10000
1475	1556	1557	1572	1571	1	125.00	.33	5822.98	4658.39	.10000
1476	1557	1558	1573	1572	2	130.00	.33	2702.17	2161.73	.10000
1477	1558	1559	1574	1573	2	130.00	.33	4231.64	3385.31	.10000
1478	1559	1560	1575	1574	2	130.00	.47	5422.56	4338.05	.10000
1479	1560	1561	1576	1575	2	130.00	.47	5501.49	4401.19	.10000
1480	1561	1562	1577	1576	2	130.00	.47	5787.67	4630.14	.10000
1481	1562	1563	1578	1577	3	130.00	.47	13625.78	10900.62	.10000
1482	1563	1564	1579	1578	3	130.00	.47	13625.78	10900.62	.10000
1483	1564	1565	1580	1579	4	130.00	.47	9887.88	7910.31	.10000
1484	1565	1566	1581	1580	4	130.00	.47	10320.08	8256.07	.10000
1485	1566	1567	1582	1581	4	130.00	.47	10734.89	8587.92	.10000
1486	1567	1568	1583	1582	4	130.00	.47	11134.26	8907.41	.10000
1487	1568	1569	1584	1583	4	130.00	.47	11519.79	9215.84	.10000
1488	1569	1570	1585	1584	4	130.00	.47	11892.84	9514.27	.10000
1489	1571	1572	1586	1585	1	125.00	.33	5822.98	4658.39	.10000
1490	1572	1573	1587	1586	2	130.00	.33	2213.35	1770.68	.10000
1491	1573	1574	1588	1587	2	130.00	.33	3855.61	3084.49	.10000
1492	1574	1575	1589	1588	2	130.00	.47	5103.24	4082.59	.10000
1493	1575	1576	1590	1589	2	130.00	.47	5221.90	4177.52	.10000
1494	1576	1577	1591	1590	2	130.00	.47	5522.60	4418.08	.10000
1495	1577	1578	1592	1591	3	130.00	.47	13625.78	10900.62	.10000
1496	1578	1579	1593	1592	3	130.00	.47	13625.78	10900.62	.10000
1497	1579	1580	1594	1593	4	130.00	.47	9554.40	7643.52	.10000
1498	1580	1581	1595	1594	4	130.00	.47	10001.02	8000.81	.10000
1499	1581	1582	1596	1595	4	130.00	.47	10428.53	8342.82	.10000
1500	1582	1583	1597	1596	4	130.00	.47	10839.19	8671.35	.10000
1501	1583	1584	1598	1597	4	130.00	.47	11234.86	8987.88	.10000
1502	1584	1585	1599	1598	4	130.00	.47	11617.05	9293.64	.10000
1503	1586	1587	1600	1599	2	130.00	.33	1259.44	1007.55	.10000
1504	1587	1588	1601	1600	2	130.00	.33	2853.81	2283.04	.10000
1505	1588	1589	1602	1601	2	130.00	.47	4314.40	3451.32	.10000
1506	1589	1590	1603	1602	2	130.00	.47	4543.32	3634.66	.10000
1507	1590	1591	1604	1603	2	130.00	.47	4885.96	3908.77	.10000
1508	1591	1592	1605	1604	3	130.00	.47	13625.78	10900.62	.10000
1509	1592	1593	1606	1605	3	130.00	.47	13625.78	10900.62	.10000
1510	1593	1594	1607	1606	4	130.00	.47	8772.45	7017.96	.10000
1511	1594	1595	1608	1607	4	130.00	.47	9256.87	7405.50	.10000
1512	1595	1596	1609	1608	4	130.00	.47	9717.10	7773.74	.10000
1513	1596	1597	1610	1609	4	130.00	.47	10156.44	8125.12	.10000
1514	1597	1598	1611	1610	4	130.00	.47	10577.87	8462.29	.10000
1515	1598	1599	1612	1611	4	130.00	.47	10982.95	8786.36	.10000
1516	1600	1601	1614	1613	2	130.00	.33	1955.26	1564.21	.10000
1517	1601	1602	1615	1614	2	130.00	.47	3601.01	2880.81	.10000
1518	1602	1603	1616	1615	2	130.00	.47	3950.32	3160.26	.10000
1519	1603	1604	1617	1616	2	130.00	.47	4340.03	3472.02	.10000
1520	1604	1605	1618	1617	3	130.00	.47	13625.78	10900.62	.10000
1521	1605	1606	1619	1618	3	130.00	.47	13625.78	10900.62	.10000
1522	1606	1607	1620	1619	4	130.00	.47	8127.93	6502.34	.10000
1523	1607	1608	1621	1620	4	130.00	.47	8648.53	6918.82	.10000
1524	1608	1609	1622	1621	4	130.00	.47	9139.53	7311.62	.10000
1525	1609	1610	1623	1622	4	130.00	.47	9605.46	7684.37	.10000
1526	1610	1611	1624	1623	4	130.00	.47	10049.81	8039.85	.10000
1527	1611	1612	1625	1624	4	130.00	.47	10475.33	8380.26	.10000
1528	1613	1614	1627	1626	2	130.00	.33	1775.13	1420.11	.10000
1529	1614	1615	1628	1627	2	130.00	.47	3369.56	2695.65	.10000
1530	1615	1616	1629	1628	2	130.00	.47	3763.77	3011.02	.10000
1531	1616	1617	1630	1629	2	130.00	.47	4170.95	3336.76	.10000
1532	1617	1618	1631	1630	3	130.00	.47	13625.78	10900.62	.10000
1533	1618	1619	1632	1631	3	130.00	.47	13625.78	10900.62	.10000
1534	1619	1620	1633	1632	4	130.00	.47	7934.17	6347.33	.10000
1535	1620	1621	1634	1633	4	130.00	.47	8466.69	6773.35	.10000
1536	1621	1622	1635	1634	4	130.00	.47	8967.65	7174.12	.10000
1537	1622	1623	1636	1635	4	130.00	.47	9442.07	7553.65	.10000
1538	1623	1624	1637	1636	4	130.00	.47	9893.76	7915.01	.10000
1539	1624	1625	1638	1637	4	130.00	.47	10325.71	8260.57	.10000
1540	1626	1627	1640	1639	2	130.00	.33	1775.13	1420.11	.10000
1541	1627	1628	1641	1640	2	130.00	.47	3369.56	2695.65	.10000
1542	1628	1629	1642	1641	2	130.00	.47	3763.77	3011.02	.10000
1543	1629	1630	1643	1642	2	130.00	.47	4170.95	3336.76	.10000
1544	1630	1631	1644	1643	3	130.00	.47	13625.78	10900.62	.10000
1545	1631	1632	1645	1644	3	130.00	.47	13625.78	10900.62	.10000
1546	1632	1633	1646	1645	4	130.00	.47	7934.17	6347.33	.10000
1547	1633	1634	1647	1646	4	130.00	.47	8466.69	6773.35	.10000
1548	1634	1635	1648	1647	4	130.00	.47	8967.65	7174.12	.10000
1549	1635	1636	1649	1648	4	130.00	.47	9442.07	7553.65	.10000
1550	1636	1637	1650	1649	4	130.00	.47	9893.76	7915.01	.10000
1551	1637	1638	1651	1650	4	130.00	.47	10325.71	8260.57	.10000
1552	1639	1640	1653	1652	2	130.00	.33	1775.13	1420.11	.10000
1553	1640	1641	1654	1653	2	130.00	.47	3369.56	2695.65	.10000
1554	1641	1642	1655	1654	2	130.00	.47	3763.77	3011.02	.10000
1555	1642	1643	1656	1655	2	130.00	.47	4170.95	3336.76	.10000
1556	1643	1644	1657	1656	3	130.00	.47	13625.78	10900.62	.10000
1557	1644	1645	1658	1657	3	130.00	.47	13625.78	10900.62	.10000
1558	1645	1646	1659	1658	4	130.00	.47	7934.17	6347.33	.10000
1559	1646	1647	1660	1659	4	130.00	.47	8466.69	6773.35	.10000
1560	1647	1648	1661	1660	4	130.00	.47	8967.65	7174.12	.10000
1561	1648	1649	1662	1661	4	130.00	.47	9442.07	7553.65	.10000
1562	1649	1650	1663	1662	4	130.00	.47	9893.76	7915.01	.10000
1563	1650	1651	1664	1663	4	130.00	.47	10325.71	8260.57	.10000
1564	1652	1653	1666	1665	2	130.00	.33	1775.13	1420.11	.10000
1565	1653	1654	1667	1666	2	130.00	.47	3369.56	2695.65	.10000
1566	1654	1655	1668	1667	2	130.00	.47	3763.77	3011.02	.10000
1567	1655	1656	1669	1668	2	130.00	.47	4170.95	3336.76	.10000
1568	1656	1657	1670	1669	3	130.00	.47	13625.78	10900.62	.10000
1569	1657	1658	1671	1670	3	130.00	.47	13625.78	10900.62	.10000
1570	1658	1659	1672	1671	4	130.00	.47	7934.17	6347.33	.10000
1571	1659	1660	1673	1672	4	130.00	.47	8466.69	6773.35	.10000
1572	1660	1661	1674	1673	4	130.00	.47	8967.65	7174.12	.10000
1573	1661	1662	1675	1674	4	130.00	.47	9442.07	7553.65	.10000
1574	1662	1663	1676	1675	4	130.00	.47	9893.76	7915.01	.10000
1575	1663	1664	1677	1676	4	130.00	.47	10325.71	8260.57	.10000
1576	1665	1666	1679	1678	2	130.00	.33	1775.13	1420.11	.10000
1577	1666	1667	1680	1679	2	130.00	.47	3369.56	2695.65	.10000
1578	1667	1668	1681	1680	2	130.00	.47	3763.77	3011.02	.10000
1579	1668	1669	1682	1681	2	130.00	.47	4170.95	3336.76	.10000
1580	1669	1670	1683	1682	3	130.00	.47	13625.78	10900.62	.10000
1581	1670	1671	1684	1683	3	130.00	.47	13625.78	10900.62	.10000
1582	1671	1672	1685	1684	4	130.00	.47	7934.17	6347.33	.10000
1583	1672	1673	1686	1685	4	130.00	.47	8466.69	6773.35	.10000
1584	1673	1674	1687	1686	4	130.00	.47	8967.65	7174.12	.10000
1585	1674	1675	1688	1687	4	130.00	.47	9442.07	7553.65	.10000
1586	1675	1676	1689	1688	4	130.00	.47	9893.76	7915.01	.10000
1587	1676	1677	1690	1689	4	130.00	.47	10325.71	8260.57	.10000
1588	1678	1679	1692	1691	2	130.00	.33	1775.13	1420.11	.10000
1589	1679	1680	1693	1692	2	130.00	.47	3369.56	2695.65	.10000
1590	1680	1681	1694	1693	2	130.00	.47	3763.77	3011.02	.10000
1591	1681	1682	1695	1694	2	130.00	.47	4170.95	3336.76	.10000
1592	1682	1683	1696	1695	3	130.00	.47	13625.78	10900.62	.10000
1593	1683	1684	1697	1696	3	130.00	.47	13625.78	10900.62	.10000
1594	1684	1685	1698	1697	4	130.00	.47	7934.17	6347.33	.10000

1595	1685	1684	1699	1698	4	130.00	.47	8466.69	6773.35	.10000	
1596	1686	1687	1700	1699	4	130.00	.47	8967.65	7174.12	.10000	
1597	1687	1688	1701	1700	4	130.00	.47	9442.07	7553.65	.10000	
1598	1688	1689	1702	1701	4	130.00	.47	9893.96	7915.01	.10000	
1599	1689	1690	1703	1702	4	130.00	.47	10325.71	8260.57	.10000	
1600	1691	1692	1705	1704	2	130.00	.33	1775.13	1420.11	.10000	
1601	1692	1693	1706	1705	2	130.00	.47	3369.56	2695.65	.10000	
1602	1693	1694	1707	1706	2	130.00	.47	3763.77	3011.02	.10000	
1603	1694	1695	1708	1707	2	130.00	.47	4170.95	3336.76	.10000	
1604	1695	1696	1709	1708	3	130.00	.47	13625.78	10900.62	.10000	
1605	1696	1697	1710	1709	3	130.00	.47	13625.78	10900.62	.10000	
1606	1697	1698	1711	1710	4	130.00	.47	7934.17	6347.33	.10000	
1607	1698	1699	1712	1711	4	130.00	.47	8466.69	6773.35	.10000	
1608	1699	1700	1713	1712	4	130.00	.47	8967.65	7174.12	.10000	
1609	1700	1701	1714	1713	4	130.00	.47	9442.07	7553.65	.10000	
1610	1701	1702	1715	1714	4	130.00	.47	9893.96	7915.01	.10000	
1611	1702	1703	1716	1715	4	130.00	.47	10325.71	8260.57	.10000	
1612	1704	1705	1718	1717	2	130.00	.33	1775.13	1420.11	.10000	
1613	1705	1706	1719	1718	2	130.00	.47	3369.56	2695.65	.10000	
1614	1706	1707	1720	1719	2	130.00	.47	3763.77	3011.02	.10000	
1615	1707	1708	1721	1720	2	130.00	.47	4170.95	3336.76	.10000	
1616	1708	1709	1722	1721	3	130.00	.47	13625.78	10900.62	.10000	
1617	1709	1710	1723	1722	3	130.00	.47	13625.78	10900.62	.10000	
1618	1710	1711	1724	1723	4	130.00	.47	7934.17	6347.33	.10000	
1619	1711	1712	1725	1724	4	130.00	.47	8466.69	6773.35	.10000	
1620	1712	1713	1726	1725	4	130.00	.47	8967.65	7174.12	.10000	
1621	1713	1714	1727	1726	4	130.00	.47	9442.07	7553.65	.10000	
1622	1714	1715	1728	1727	4	130.00	.47	9893.96	7915.01	.10000	
1623	1715	1716	1729	1728	4	130.00	.47	10325.71	8260.57	.10000	
1624	1717	1718	1731	1730	2	130.00	.33	1775.13	1420.11	.10000	
1625	1718	1719	1732	1731	2	130.00	.47	3369.56	2695.65	.10000	
1626	1719	1720	1733	1732	2	130.00	.47	3763.77	3011.02	.10000	
1627	1720	1721	1734	1733	2	130.00	.47	4170.95	3336.76	.10000	
1628	1721	1722	1735	1734	3	130.00	.47	13625.78	10900.62	.10000	
1629	1722	1723	1736	1735	3	130.00	.47	13625.78	10900.62	.10000	
1630	1723	1724	1737	1736	4	130.00	.47	7934.17	6347.33	.10000	
1631	1724	1725	1738	1737	4	130.00	.47	8466.69	6773.35	.10000	
1632	1725	1726	1739	1738	4	130.00	.47	8967.65	7174.12	.10000	
1633	1726	1727	1740	1739	4	130.00	.47	9442.07	7553.65	.10000	
1634	1727	1728	1741	1740	4	130.00	.47	9893.96	7915.01	.10000	
1635	1728	1729	1742	1741	4	130.00	.47	10325.71	8260.57	.10000	
1636	1730	1731	1744	1743	2	130.00	.33	1775.13	1420.11	.10000	
1637	1731	1732	1745	1744	2	130.00	.47	3369.56	2695.65	.10000	
1638	1732	1733	1746	1745	2	130.00	.47	3763.77	3011.02	.10000	
1639	1733	1734	1747	1746	2	130.00	.47	4170.95	3336.76	.10000	
1640	1734	1735	1748	1747	3	130.00	.47	13625.78	10900.62	.10000	
1641	1735	1736	1749	1748	3	130.00	.47	13625.78	10900.62	.10000	
1642	1736	1737	1750	1749	4	130.00	.47	7934.17	6347.33	.10000	
1643	1737	1738	1751	1750	4	130.00	.47	8466.69	6773.35	.10000	
1644	1738	1739	1752	1751	4	130.00	.47	8967.65	7174.12	.10000	
1645	1739	1740	1753	1752	4	130.00	.47	9442.07	7553.65	.10000	
1646	1740	1741	1754	1753	4	130.00	.47	9893.96	7915.01	.10000	
1647	1741	1742	1755	1754	4	130.00	.47	10325.71	8260.57	.10000	
1648	1743	1744	1757	1756	2	130.00	.33	1775.13	1420.11	.10000	
1649	1744	1745	1758	1757	2	130.00	.47	3369.56	2695.65	.10000	
1650	1745	1746	1759	1758	2	130.00	.47	3763.77	3011.02	.10000	
1651	1746	1747	1760	1759	2	130.00	.47	4170.95	3336.76	.10000	
1652	1747	1748	1761	1760	3	130.00	.47	13625.78	10900.62	.10000	
1653	1748	1749	1762	1761	3	130.00	.47	13625.78	10900.62	.10000	
1654	1749	1750	1763	1762	4	130.00	.47	7934.17	6347.33	.10000	
1655	1750	1751	1764	1763	4	130.00	.47	8466.69	6773.35	.10000	
1656	1751	1752	1765	1764	4	130.00	.47	8967.65	7174.12	.10000	
1657	1752	1753	1766	1765	4	130.00	.47	9442.07	7553.65	.10000	
1658	1753	1754	1767	1766	4	130.00	.47	9893.96	7915.01	.10000	
1659	1754	1755	1768	1767	4	130.00	.47	10325.71	8260.57	.10000	

N	NORD	YORD	BC	OUT	XZIN	ZIIN	ZIN	XZIV
XIIV	XIV	*** (I5,2F10.8,2I5,6F10.8) ***						
1	-275.000	2.000	2					
2	-275.000	-2.000	2					
3	-275.000	-6.000	2					
4	-275.000	-11.000	2					
5	-275.000	-16.000	2					
6	-275.000	-21.000	2					
7	-275.000	-26.000	2					
8	-275.000	-31.000	2					
9	-275.000	-36.000	2					
10	-275.000	-41.000	2					
11	-275.000	-46.000	4					
12	-260.000	2.000						
13	-260.000	-2.000						
14	-260.000	-6.000						
15	-260.000	-11.000						
16	-260.000	-16.000						
17	-260.000	-21.000						
18	-260.000	-26.000						
19	-260.000	-31.000						
20	-260.000	-36.000						
21	-260.000	-41.000						
22	-260.000	-46.000	4					
23	-245.000	2.000		1				
24	-245.000	-2.000						
25	-245.000	-6.000						
26	-245.000	-11.000						
27	-245.000	-16.000						
28	-245.000	-21.000						
29	-245.000	-26.000						
30	-245.000	-31.000						
31	-245.000	-36.000						
32	-245.000	-41.000						
33	-245.000	-46.000	4					
34	-230.000	2.000		1				
35	-230.000	-2.000						
36	-230.000	-6.000						
37	-230.000	-11.000						
38	-230.000	-16.000						
39	-230.000	-21.000						
40	-230.000	-26.000						
41	-230.000	-31.000						
42	-230.000	-36.000						
43	-230.000	-41.000						
44	-230.000	-46.000	4					
45	-220.000	2.000		1				
46	-220.000	-2.000						
47	-220.000	-6.000						
48	-220.000	-11.000						
49	-220.000	-16.000						
50	-220.000	-21.000						
51	-220.000	-26.000						
52	-220.000	-31.000						
53	-220.000	-36.000						
54	-220.000	-41.000						
55	-220.000	-46.000	4					
56	-210.000	2.000						
57	-210.000	-2.000						
58	-210.000	-6.000						
59	-210.000	-11.000						
60	-210.000	-16.000						
61	-210.000	-21.000						
62	-210.000	-26.000						
63	-210.000	-31.000						
64	-210.000	-36.000						
65	-210.000	-41.000						
66	-210.000	-46.000	4					
67	-200.000	2.000						
68	-200.000	-2.000						
69	-200.000	-6.000						
70	-200.000	-11.000						
71	-200.000	-16.000						
72	-200.000	-21.000						
73	-200.000	-26.000						
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1315	150.000	41.500
1316	150.000	41.000
1317	150.000	37.000
1318	150.000	33.000
1319	150.000	29.000
1320	150.000	24.000
1321	150.000	19.000
1322	150.000	14.000
1323	150.000	8.000
1324	150.000	2.000
1325	150.000	-2.000
1326	150.000	-6.000
1327	150.000	-11.000
1328	150.000	-16.000
1329	150.000	-21.000
1330	150.000	-26.000
1331	150.000	-31.000
1332	150.000	-36.000
1333	150.000	-41.000
1334	150.000	-46.000
1335	155.000	42.500
1336	155.000	41.000
1337	155.000	37.000
1338	155.000	33.000
1339	155.000	29.000
1340	155.000	24.000
1341	155.000	19.000
1342	155.000	14.000
1343	155.000	8.000
1344	155.000	2.000
1345	155.000	-2.000
1346	155.000	-6.000
1347	155.000	-11.000
1348	155.000	-16.000
1349	155.000	-21.000
1350	155.000	-26.000
1351	155.000	-31.000
1352	155.000	-36.000
1353	155.000	-41.000
1354	155.000	-46.000
1355	160.000	42.000
1356	160.000	41.000
1357	160.000	37.000
1358	160.000	33.000
1359	160.000	29.000
1360	160.000	24.000
1361	160.000	19.000
1362	160.000	14.000
1363	160.000	8.000
1364	160.000	2.000
1365	160.000	-2.000
1366	160.000	-6.000
1367	160.000	-11.000
1368	160.000	-16.000
1369	160.000	-21.000
1370	160.000	-26.000
1371	160.000	-31.000
1372	160.000	-36.000
1373	160.000	-41.000
1374	160.000	-46.000
1375	165.000	41.500
1376	165.000	41.000
1377	165.000	37.000
1378	165.000	33.000
1379	165.000	29.000
1380	165.000	24.000
1381	165.000	19.000
1382	165.000	14.000
1383	165.000	8.000
1384	165.000	2.000
1385	165.000	-2.000
1386	165.000	-6.000
1387	165.000	-11.000
1388	165.000	-16.000
1389	165.000	-21.000
1390	165.000	-26.000
1391	165.000	-31.000
1392	165.000	-36.000
1393	165.000	-41.000
1394	165.000	-46.000
1395	168.000	41.000
1396	168.000	37.000
1397	168.000	33.000
1398	168.000	29.000
1399	168.000	24.000
1400	168.000	19.000
1401	168.000	14.000
1402	168.000	8.000
1403	168.000	2.000
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1405	168.000	-6.000
1406	168.000	-11.000
1407	168.000	-16.000
1408	168.000	-21.000
1409	168.000	-26.000
1410	168.000	-31.000
1411	168.000	-36.000
1412	168.000	-41.000
1413	168.000	-46.000
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1417	174.250	24.000
1418	174.250	19.000
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1422	174.250	-2.000
1423	174.250	-6.000
1424	174.250	-11.000
1425	174.250	-16.000
1426	174.250	-21.000
1427	174.250	-26.000
1428	174.250	-31.000
1429	174.250	-36.000
1430	174.250	-41.000
1431	174.250	-46.000
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1433	180.250	29.000
1434	180.250	24.000
1435	180.250	19.000
1436	180.250	14.000
1437	180.250	8.000
1438	180.250	2.000
1439	180.250	-2.000
1440	180.250	-6.000
1441	180.250	-11.000
1442	180.250	-16.000
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1444	180.250	-26.000
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1446	180.250	-36.000
1447	180.250	-41.000
1448	180.250	-46.000
1449	186.250	29.000
1450	186.250	24.000
1451	186.250	19.000
1452	186.250	14.000
1453	186.250	8.000
1454	186.250	2.000
1455	186.250	-2.000
1456	186.250	-6.000
1457	186.250	-11.000
1458	186.250	-16.000
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1473	190.750	-11.000
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1492	193.750	-31.000
1493	193.750	-36.000
1494	193.750	-41.000
1495	193.750	-46.000
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1504	196.000	-16.000
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1506	196.000	-26.000
1507	196.000	-31.000
1508	196.000	-36.000
1509	196.000	-41.000
1510	196.000	-46.000
1511	202.000	22.500
1512	202.000	19.000
1513	202.000	14.000
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1518	202.000	-11.000
1519	202.000	-16.000
1520	202.000	-21.000
1521	202.000	-26.000
1522	202.000	-31.000
1523	202.000	-36.000
1524	202.000	-41.000
1525	202.000	-46.000
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1532	208.000	-6.000
1533	208.000	-11.000
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1536	208.000	-26.000
1537	208.000	-31.000
1538	208.000	-36.000
1539	208.000	-41.000
1540	208.000	-46.000
1541	214.000	22.500
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1545	214.000	2.000
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1549	214.000	-16.000
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1551	214.000	-26.000
1552	214.000	-31.000
1553	214.000	-36.000
1554	214.000	-41.000
1555	214.000	-46.000
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1579	225.000	-16.000
1580	225.000	-21.000
1581	225.000	-26.000
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1583	225.000	-36.000
1584	225.000	-41.000
1585	225.000	-46.000
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1595	231.500	-26.000
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1597	231.500	-36.000
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1609	239.000	-31.000
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1617	242.000	-6.000
1618	242.000	-11.000
1619	242.000	-16.000
1620	242.000	-21.000
1621	242.000	-26.000
1622	242.000	-31.000
1623	242.000	-36.000
1624	242.000	-41.000
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1631	248.000	-11.000
1632	248.000	-16.000
1633	248.000	-21.000
1634	248.000	-26.000
1635	248.000	-31.000
1636	248.000	-36.000
1637	248.000	-41.000
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1640	254.000	8.000
1641	254.000	2.000
1642	254.000	-2.000
1643	254.000	-6.000
1644	254.000	-11.000
1645	254.000	-16.000
1646	254.000	-21.000
1647	254.000	-26.000
1648	254.000	-31.000
1649	254.000	-36.000

1650	254.000	-41.000	
1651	254.000	-46.000	4
1652	258.000	12.000	
1653	260.000	8.000	
1654	260.000	2.000	
1655	260.000	-2.000	
1656	260.000	-6.000	
1657	260.000	-11.000	
1658	260.000	-16.000	
1659	260.000	-21.000	
1660	260.000	-26.000	
1661	260.000	-31.000	
1662	260.000	-36.000	
1663	260.000	-41.000	
1664	260.000	-46.000	4
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1666	270.000	8.000	
1667	270.000	2.000	
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1669	270.000	-6.000	
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1671	270.000	-16.000	
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1675	270.000	-36.000	
1676	270.000	-41.000	
1677	270.000	-46.000	4
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1679	280.000	8.000	
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1689	280.000	-41.000	
1690	280.000	-46.000	4
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1694	290.000	-2.000	
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1700	290.000	-31.000	
1701	290.000	-36.000	
1702	290.000	-41.000	
1703	290.000	-46.000	4
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1705	300.000	8.000	
1706	300.000	2.000	
1707	300.000	-2.000	
1708	300.000	-6.000	
1709	300.000	-11.000	
1710	300.000	-16.000	
1711	300.000	-21.000	
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1713	300.000	-31.000	
1714	300.000	-36.000	
1715	300.000	-41.000	
1716	300.000	-46.000	4
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1718	315.000	8.000	
1719	315.000	2.000	
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1721	315.000	-6.000	
1722	315.000	-11.000	
1723	315.000	-16.000	
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1726	315.000	-31.000	
1727	315.000	-36.000	
1728	315.000	-41.000	
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1733	330.000	-2.000	
1734	330.000	-6.000	
1735	330.000	-11.000	
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1739	330.000	-31.000	
1740	330.000	-36.000	
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1748	345.000	-11.000	
1749	345.000	-16.000	
1750	345.000	-21.000	
1751	345.000	-26.000	
1752	345.000	-31.000	
1753	345.000	-36.000	
1754	345.000	-41.000	
1755	345.000	-46.000	4
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1757	360.000	8.000	2
1758	360.000	2.000	2
1759	360.000	-2.000	2
1760	360.000	-6.000	2
1761	360.000	-11.000	2
1762	360.000	-16.000	2
1763	360.000	-21.000	2
1764	360.000	-26.000	2
1765	360.000	-31.000	2
1766	360.000	-36.000	2
1767	360.000	-41.000	2
1768	360.000	-46.000	4

excerpt from PD1A.O11

XMAX= 1.4693 Section A-A, HBPP, 08/2002
ACCELERATION VALUES AT OUTCROPPING LAYER 11 - ISFSI Pad, HBPP, ISFSI, 08/2002

0.000018	0.000264	0.000450	0.000503	0.000404	0.000190	-0.000059	-0.000248		1
-0.000303	-0.000204	0.000013	0.000266	0.000460	0.000522	0.000429	0.000217		2
-0.000033	-0.000225	-0.000286	-0.000191	0.000023	0.000276	0.000471	0.000533		3
0.000440	0.000226	-0.000028	-0.000226	-0.000291	-0.000200	0.000012	0.000166		4
0.000462	0.000527	0.000435	0.000219	-0.000039	-0.000242	-0.000313	-0.000228		5
-0.000019	0.000233	0.000430	0.000495	0.000400	0.000181	-0.000083	-0.000293		6
-0.000373	-0.000295	-0.000092	0.000156	0.000350	0.000411	0.000313	0.000086		7
-0.000187	-0.000409	-0.000501	-0.000434	-0.000241	-0.000001	0.000185	0.000240		8
0.000132	-0.000106	-0.000393	-0.000631	-0.000739	-0.000688	-0.000508	-0.000280		9
-0.000104	-0.000061	-0.000180	-0.000432	-0.000736	-0.000991	-0.001118	-0.001084		10
-0.000919	-0.000705	-0.000541	-0.000510	-0.000643	-0.000912	-0.001235	-0.001511		11
-0.001660	-0.001646	-0.001501	-0.001304	-0.001157	-0.001142	-0.001294	-0.001583		12
-0.001930	-0.002232	-0.002407	-0.002419	-0.002297	-0.002122	-0.001996	-0.002004		13
-0.002180	-0.002496	-0.002873	-0.003205	-0.003410	-0.003448	-0.003349	-0.003192		14
-0.003080	-0.003097	-0.003283	-0.003607	-0.003992	-0.004133	-0.004543	-0.004585		15
-0.004485	-0.004323	-0.004202	-0.004210	-0.004384	-0.004698	-0.005071	-0.005399		16
-0.005592	-0.005612	-0.005484	-0.005288	-0.005127	-0.005092	-0.005221	-0.005488		17
-0.005815	-0.006095	-0.006239	-0.006205	-0.006018	-0.005757	-0.005529	-0.005423		18
-0.005481	-0.005679	-0.005938	-0.006154	-0.006237	-0.006145	-0.005904	-0.005593		19
-0.005321	-0.005178	-0.005208	-0.005386	-0.005632	-0.005838	-0.005912	-0.005811		20
-0.005557	-0.005230	-0.004938	-0.004775	-0.004785	-0.004945	-0.005173	-0.005363		21
-0.005418	-0.005295	-0.005015	-0.004659	-0.004337	-0.004144	-0.004126	-0.004262		22
-0.004472	-0.004646	-0.004688	-0.004552	-0.004257	-0.003885	-0.003544	-0.003332		23
-0.003296	-0.003415	-0.003609	-0.003768	-0.003794	-0.003640	-0.003328	-0.002939		24
-0.002583	-0.002362	-0.002322	-0.002445	-0.002648	-0.002819	-0.002858	-0.002714		25
-0.002405	-0.002014	-0.001654	-0.001425	-0.001379	-0.001497	-0.001699	-0.001871		26
-0.001911	-0.001768	-0.001461	-0.001072	-0.000714	-0.000491	-0.000456	-0.000590		27
-0.000811	-0.001004	-0.001065	-0.000941	-0.000647	-0.000268	0.000082	0.000297		28
0.000322	0.000176	-0.000058	-0.000264	-0.000334	-0.000215	0.000079	0.000461		29
0.000815	0.001030	0.001050	0.000891	0.000635	0.000403	0.000304	0.000396		30
0.000664	0.001024	0.001358	0.001553	0.001553	0.001373	0.001096	0.000846		31
0.000736	0.000825	0.001100	0.001476	0.001831	0.002050	0.002072	0.001909		32
0.001646	0.001404	0.001299	0.001392	0.001670	0.002048	0.002404	0.002622		33
0.002640	0.002472	0.002206	0.001966	0.001868	0.001974	0.002266	0.002655		34
0.003013	0.003218	0.003209	0.003004	0.002695	0.002417	0.002295	0.002397		35
0.002707	0.003130	0.003531	0.003779	0.003804	0.003622	0.003329	0.003066		36
0.002969	0.003113	0.003483	0.003982	0.004461	0.004777	0.004846	0.004675		37
0.004357	0.004042	0.003877	0.003951	0.004265	0.004727	0.005189	0.005501		38
0.005573	0.005398	0.005066	0.004727	0.004535	0.004590	0.004904	0.005390		39
0.005901	0.006280	0.006421	0.006308	0.006018	0.005695	0.005493	0.005517		40
0.005784	0.006217	0.006671	0.006991	0.007074	0.006895	0.006535	0.006141		41
0.005870	0.005837	0.006063	0.006472	0.006914	0.007227	0.007292	0.007083		42
0.006677	0.006229	0.005914	0.005867	0.006129	0.006638	0.007246	0.007777		43
0.008091	0.008132	0.007949	0.007677	0.007478	0.007484	0.007738	0.008178		44
0.008649	0.008965	0.008964	0.008578	0.007850	0.006929	0.006019	0.005315		45
0.004940	0.004913	0.005142	0.005477	0.005753	0.005860	0.005772	0.005557		46
0.005336	0.005245	0.005369	0.005716	0.006201	0.006685	0.007009	0.007058		47
0.006786	0.006237	0.005522	0.004786	0.004157	0.003722	0.003496	0.003445		48
0.003500	0.003595	0.003685	0.003763	0.003850	0.003977	0.004167	0.004418		49
0.004701	0.004974	0.005188	0.005316	0.005345	0.005286	0.005154	0.004963		50
0.004708	0.004380	0.003963	0.003462	0.002908	0.002364	0.001913	0.001642		51
0.001604	0.001814	0.002225	0.002755	0.003297	0.003758	0.004077	0.004242		52
0.004276	0.004223	0.004121	0.003986	0.003809	0.003568	0.003249	0.002870		53
0.002486	0.002186	0.002061	0.002170	0.002511	0.003008	0.003528	0.003915		54
0.004044	0.003867	0.003434	0.002881	0.002394	0.002149	0.002251	0.002705		55
0.003413	0.004203	0.004891	0.005333	0.005467	0.005319	0.004978	0.004555		56
0.004132	0.003744	0.003379	0.003013	0.002646	0.002343	0.002235	0.002480		57
0.003211	0.004453	0.006090	0.007851	0.009377	0.010312	0.010425	0.009688		58
0.008313	0.006701	0.005326	0.004596	0.004720	0.005639	0.007047	0.008492		59
0.009532	0.009882	0.009517	0.008677	0.007775	0.007246	0.007385	0.008225		60
0.009517	0.010810	0.011612	0.011571	0.010616	0.009003	0.007245	0.005948		61
0.005602	0.006408	0.008194	0.010455	0.012513	0.013722	0.013686	0.012374		62
0.010132	0.007559	0.005308	0.003885	0.003493	0.004000	0.005023	0.006090		63
0.006832	0.007119	0.007098	0.007118	0.007569	0.008701	0.010488	0.012601		64
0.014483	0.015533	0.015304	0.013668	0.010867	0.007457	0.004132	0.001517		65
-0.000019	-0.000449	-0.000062	0.000681	0.001333	0.001637	0.001617	0.001552		66
0.001847	0.002854	0.004687	0.007148	0.009739	0.011810	0.012756	0.012223		67
0.010224	0.007160	0.003693	0.000572	-0.001597	-0.002493	-0.002152	-0.000899		68
0.000773	0.002386	0.003602	0.004296	0.004523	0.004438	0.004179	0.003793		69
0.003212	0.002307	0.000977	-0.000756	-0.002713	-0.004570	-0.005970	-0.006635		70
-0.006492	-0.005698	-0.004611	-0.003654	-0.003159	-0.003225	-0.003674	-0.004092		71
-0.003989	-0.002993	-0.001031	0.001600	0.004266	0.006181	0.006635	0.005244		72
0.002078	-0.002319	-0.007093	-0.011313	-0.014257	-0.015602	-0.015506	-0.014509		73
-0.013332	-0.012602	-0.012647	-0.013377	-0.014342	-0.014898	-0.014466	-0.012744		74
-0.009845	-0.006275	-0.002786	-0.000138	0.001112	0.000788	-0.000901	-0.003450		75
-0.006265	-0.008855	-0.010998	-0.012759	-0.014431	-0.016357	-0.018762	-0.021614		76
-0.024599	-0.027198	-0.028859	-0.029165	-0.027995	-0.025551	-0.022308	-0.018859		77
-0.015736	-0.013260	-0.011478	-0.010191	-0.009076	-0.007836	-0.006138	-0.004669		78
-0.003126	-0.002101	-0.001959	-0.002903	-0.004915	-0.007759	-0.011075	-0.014473		79
-0.017662	-0.020494	-0.022977	-0.025206	-0.027292	-0.029272	-0.031092	-0.032614		80
-0.033686	-0.034207	-0.034202	-0.033820	-0.033310	-0.032931	-0.032878	-0.033205		81
-0.033815	-0.034490	-0.034967	-0.035020	-0.034526	-0.033489	-0.032017	-0.030264		82
-0.028371	-0.026426	-0.024449	-0.022433	-0.020381	-0.018356	-0.016483	-0.014928		83
-0.013829	-0.013236	-0.013060	-0.013087	-0.013033	-0.012655	-0.011849	-0.010732		84
-0.009639	-0.009048	-0.009437	-0.011129	-0.014158	-0.018216	-0.022704	-0.026872		85
-0.030004	-0.031610	-0.031548	-0.030048	-0.027633	-0.024965	-0.022655	-0.021113		86
-0.020452	-0.020502	-0.020891	-0.021182	-0.020998	-0.020130	-0.018565	-0.016474		87
-0.014134	-0.011873	-0.009981	-0.008690	-0.008138	-0.008387	-0.009406	-0.011081		88
-0.013192	-0.015432	-0.017411	-0.018727	-0.019026	-0.018103	-0.015947	-0.012774		89
-0.008967	-0.005000	-0.001293	0.001867	0.004408	0.006433	0.008163	0.009789		90
0.011388	0.012838	0.013864	0.014111	0.013311	0.011397	0.008589	0.005364		91
0.002347	0.000120	-0.000935	-0.000772	0.000316	0.001885	0.003343	0.004332		92
0.004781	0.004929	0.005245	0.006204	0.008088	0.010810	0.013896	0.016589		93
0.018101	0.017875	0.015830	0.012425	0.008591	0.005455	0.004026	0.004867		94
0.007929	0.012540	0.017628	0.022033	0.024883	0.025837	0.025182	0.023698		95
0.022377	0.022060	0.023145	0.025430	0.028189	0.030401	0.031121	0.029807		96
0.026543	0.022041	0.017463	0.014069	0.012841	0.014177	0.017767	0.022662		97
0.027552	0.031110	0.032369	0.030946	0.027125	0.021731	0.015877	0.010653		98
0.006857	0.004833	0.004461	0.005275	0.006671	0.008118	0.009321	0.010279		99
0.011242	0.012568	0.014562	0.017319	0.020647	0.024070	0.026936	0.028574		100
0.028487	0.026498	0.022839	0.018134	0.013278	0.009246	0.006866	0.006608		101
0.008450	0.011857	0.015891	0.019421	0.021402	0.021139	0.018480	0.013863		102
0.008216	0.002717	-0.001518	-0.003733	-0.003739	-0.001947	0.000751	0.003265		103
0.004632	0.004306	0.002325	-0.000708	-0.003816	-0.005955	-0.006340	-0.004693		104
-0.001339	0.002888	0.006881	0.009570	0.010212	0.008569	0.004928	-0.000024		105

excerpt from PD1A.Q4O

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          ***************************************************
          ***************************************************
          ** QUAD4MU  A COMPUTER PROGRAM FOR EVALUATING THE **
          **          SEISMIC RESPONSE OF SOIL STRUCTURES   **
          **                  U.C.Davis, 1993               **
          **               by Martin Byrd Hudson,           **
          **                  I.M.Idriss,                   **
          **                  and Mohsen Beikae             **
          **     MODIFIED FROM QUAD4, 1973                  **
          **               by I.M.Idriss,                   **
          **                  J. Lysmer,                    **
          **                  R. Hwang and                  **
          **                  H. Bolton Seed                **
          ***************************************************
          ***************************************************

    PD1A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
  HORIZONTAL ACCELERATION INPUT FILE:
     PD1A.O11
  WITH FIRST LINE:
                          XMAX=  1.4693 Section A-A, HBPP, 08/2002


1

                    NO. OF ELEMENTS =  1659
                NO. OF NODAL POINTS =  1768
                 DEGREES OF FREEDOM =  3536
                      HALF-BANDWIDTH =    44
                CONTROLLING ELEMENT =   337
          NO. OF FIXED BNDRY CONDS. =   128
                   NO. OF ITERATIONS =    10
       TOTAL EQ. POINTS READ (KGMAX) = 12000
 LAST EQ. PTS. USED (N1EQ TO KGEQ)   =     1 12000
   INT. EQ. PTS USED (N2EQ TO N3EQ)  =     1 12000
            TIME INTERVAL OF RECORDS =  0.0050  SECONDS
           STRAIN CONVERSION FACTOR  =  0.6500
     DAMPING RATIO REDUCTION FACTOR  =  1.000
    PREDOMINANT INPUT MOTION PERIOD  =  0.3000  SECONDS
      EQ. MULT. FACTOR (HORZ. COMP.) =  1.0000
 MAXIMUM ACCEL. USED (HORZ. COMP.)   =  1.4693

     0 STRESS HISTORIES REQUESTED,
     6 ACCEL HISTORIES REQUESTED,
     2 SEIS COEFF HISTORIES REQUESTED
          OUTPUT FILES ARE AS FOLLOWS:

   NODE   23,   X DIR IN FILE:  PD1A00.Q4A
   NODE   34,   X DIR IN FILE:  PD1A01.Q4A
   NODE   45,   X DIR IN FILE:  PD1A02.Q4A
   NODE  375,   X DIR IN FILE:  PD1A03.Q4A
   NODE  715,   X DIR IN FILE:  PD1A04.Q4A
   NODE 1395,   X DIR IN FILE:  PD1A05.Q4A
SURFACE   1,   X DIR IN FILE:  PD1A00.QSC
SURFACE   2,   X DIR IN FILE:  PD1A01.QSC

 SOIL DATA TAKEN FROM FILE: hbsoilnw.dat

 ********************
 MATERIAL TYPE NO. 1
 ********************
MODULUS:      %1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
DAMPING:      damping for Clay PI 15 (Vucetic & Dobry 1991)
  ================    ================
    STRAIN    G/Gmax      STRAIN    DAMPING
   --------   -------    --------   --------
    0.0001     1.000       0.0001      1.70
    0.0003     1.000       0.0003      1.70
    0.0010     1.000       0.0010      1.70
    0.0032     0.940       0.0032      2.60
    0.0100     0.820       0.0100      4.50
    0.0316     0.640       0.0316      7.80
    0.1000     0.400       0.1000     11.70
    0.3160     0.210       0.3160     16.30
    1.0000     0.090       1.0000     20.20
    3.1600     0.040       3.1600     23.00
   10.0000     0.020      10.0000     23.00


  [lines skipped]


    ITERATION NO.  10


DAMPING SET AT THE FOLLOWING TWO FREQUENCIES:
THE FIRST NATURAL FREQUENCY: CIRC FREQ=      17.520; PERIOD=     0.359 SEC
  3 TIMES THE NATURAL FREQ.: CIRC FREQ=      52.559; PERIOD=     0.120 SEC


TIME REQUIRED FOR FORMATION AND TRIANGULIZATION OF MATRICES =          0.  SEC

    MODULI (ENG: KSF or SI: KN/M^2) AND DAMPING
 ELM       G-USED        G-NEW      DIF-G   DAMP-USED     DAMP-NEW   DIF-DAMP


   1        810.5        810.7        0.0   0.06658      0.06655        0.0
   2       1008.9       1009.3        0.0   0.10510      0.10506        0.0
   3      10692.3      10697.0        0.0   0.05147      0.05141        0.1
   4       9407.0       9412.8       -0.1   0.06876      0.06869        0.1
   5       2512.4       2516.9       -0.2   0.11102      0 11080        0.2
```

6	2631.6	2636.1	-0.2	0.11836	0.11817	0.2
7	2705.0	2709.2	-0.2	0.12518	0.12501	0.1
8	2742.5	2746.0	-0.1	0.13160	0.13147	0.1
9	2754.4	2756.5	-0.1	0.13758	0.13750	0.1
10	2753.0	2753.2	0.0	0.14294	0.14294	0.0
11	797.1	797.5	0.0	0.06817	0.06813	0.1
12	1004.7	1005.2	0.0	0.10551	0.10547	0.0
13	10332.9	10339.6	-0.1	0.05631	0.05622	0.2
14	9315.5	9322.2	-0.1	0.06999	0.06990	0.1
15	2524.6	2529.1	-0.2	0.11043	0.11022	0.2
16	2639.9	2644.4	-0.2	0.11800	0.11781	0.2
17	2709.1	2713.4	-0.2	0.12502	0.12485	0.1
18	2742.4	2746.0	-0.1	0.13160	0.13147	0.1
19	2749.7	2752.0	-0.1	0.13773	0.13766	0.1
20	2743.8	2743.9	0.0	0.14324	0.14324	0.0

[lines skipped]

PEAK NODAL ACCELERATION VALUES (g's)

NODE	XORD	YORD	X-ACC	AT TIME	Y-ACC	AT TIME
1	-275.0	2.0	1.3490	24.3050	0.0000	0.0000
2	-275.0	-2.0	1.3185	24.3050	0.0000	0.0000
3	-275.0	-6.0	1.3068	23.6000	0.0000	0.0000
4	-275.0	-11.0	1.3093	23.6000	0.0000	0.0000
5	-275.0	-16.0	1.3089	23.5950	0.0000	0.0000
6	-275.0	-21.0	1.3199	23.5900	0.0000	0.0000
7	-275.0	-26.0	1.3305	23.5850	0.0000	0.0000
8	-275.0	-31.0	1.3268	23.5800	0.0000	0.0000
9	-275.0	-36.0	1.3151	23.5750	0.0000	0.0000
10	-275.0	-41.0	1.3095	23.5700	0.0000	0.0000
11	-275.0	-46.0	1.3140	23.5650	0.0000	0.0000
12	-260.0	2.0	1.3457	24.3050	0.0316	23.7050
13	-260.0	-2.0	1.3154	24.3050	0.0289	23.7050
14	-260.0	-6.0	1.3062	23.6000	0.0264	23.7100
15	-260.0	-11.0	1.3084	23.6000	0.0236	23.7100
16	-260.0	-16.0	1.3078	23.5950	0.0205	23.7100
17	-260.0	-21.0	1.3197	23.5900	0.0169	20.2100
18	-260.0	-26.0	1.3313	23.5850	0.0135	20.2100
19	-260.0	-31.0	1.3282	23.5800	0.0098	20.2100
20	-260.0	-36.0	1.3169	23.5750	0.0062	20.2150

[lines skipped]

PEAK ELEMENTS STRESSES (ENG: PSF or SI: N/M^2) AND STRAINS

ELM	SIG-X	SIG-Y	SIG-XY	EPS-MAX	AT TIME
1	102.7	4.9	339.5	0.042	24.305
2	122.7	13.0	994.4	0.099	23.620
3	1356.8	13.5	2011.9	0.019	23.615
4	1196.6	29.8	3285.5	0.835	23.615
5	309.1	43.7	4317.4	0.172	23.610
6	341.9	51.1	5164.6	0.196	23.610
7	356.6	61.2	6005.9	0.222	23.605
8	361.3	67.2	6840.7	0.249	23.600
9	356.1	70.3	7659.8	0.278	23.595
10	344.7	72.0	8444.6	0.307	23.590
11	303.7	14.1	336.9	0.044	24.305
12	372.7	31.7	991.3	0.100	23.620
13	3960.0	35.0	1979.5	0.023	23.615
14	3587.8	53.2	3241.7	0.037	23.610
15	950.6	108.1	4283.3	0.170	23.610
16	1030.9	151.6	5136.4	0.195	23.610
17	1084.8	176.1	5986.1	0.221	23.605
18	1100.2	192.5	6830.3	0.249	23.600
19	1081.4	202.9	7659.6	0.279	23.595
20	1044.3	208.7	8454.8	0.308	23.590

[lines skipped]

1 MAX & MIN SEISMIC COEFFICIENTS

SURFACE	WEIGHT(LB or N)	X-DIRECTION NEGATIVE	X-DIRECTION POSITIVE
1	909868.6250	-0.9329	1.2056
2	1551090.8750	-0.9403	1.1982

ITERATION CYCLE NO. 10 AVE OVERALL DAMP = 0.122

TIME REQUIRED FOR 12000 STEPS = 221. SEC

****
** END OF JOB **
****

excerpt from PD1A00.QSC

```
PD1A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
   Seismic Coefficient Surface History
 Time Step =       0.005 Sec
  Surface   1

 0.000000  0.000000  0.000000  0.000000  0.000001  0.000003  0.000007  0.000015
 0.000026  0.000039  0.000051  0.000060  0.000064  0.000064  0.000062  0.000059
 0.000061  0.000066  0.000076  0.000089  0.000101  0.000109  0.000113  0.000111
 0.000107  0.000103  0.000101  0.000104  0.000111  0.000121  0.000131  0.000137
 0.000139  0.000136  0.000130  0.000124  0.000120  0.000121  0.000126  0.000133
 0.000139  0.000142  0.000140  0.000134  0.000124  0.000114  0.000106  0.000103
 0.000105  0.000109  0.000112  0.000112  0.000108  0.000099  0.000086  0.000074
 0.000064  0.000058  0.000057  0.000058  0.000059  0.000057  0.000049  0.000036
 0.000020  0.000003 -0.000011 -0.000022 -0.000029 -0.000033 -0.000038 -0.000047
-0.000062 -0.000082 -0.000106 -0.000131 -0.000155 -0.000174 -0.000190 -0.000204
-0.000219 -0.000239 -0.000264 -0.000295 -0.000330 -0.000367 -0.000403 -0.000435
-0.000463 -0.000490 -0.000519 -0.000552 -0.000590 -0.000636 -0.000686 -0.000738
-0.000788 -0.000836 -0.000880 -0.000923 -0.000968 -0.001017 -0.001073 -0.001136
-0.001204 -0.001273 -0.001343 -0.001409 -0.001472 -0.001535 -0.001589 -0.001669
-0.001745 -0.001828 -0.001917 -0.002009 -0.002099 -0.002187 -0.002272 -0.002356
-0.002441 -0.002531 -0.002627 -0.002730 -0.002837 -0.002946 -0.003053 -0.003156
-0.003255 -0.003351 -0.003447 -0.003548 -0.003650 -0.003759 -0.003870 -0.003981
-0.004088 -0.004189 -0.004283 -0.004372 -0.004458 -0.004544 -0.004632 -0.004721
-0.004811 -0.004897 -0.004976 -0.005046 -0.005106 -0.005158 -0.005203 -0.005245
-0.005287 -0.005327 -0.005365 -0.005397 -0.005420 -0.005433 -0.005434 -0.005426
-0.005412 -0.005395 -0.005378 -0.005361 -0.005343 -0.005320 -0.005291 -0.005252
-0.005204 -0.005149 -0.005090 -0.005030 -0.004972 -0.004916 -0.004862 -0.004806
-0.004744 -0.004676 -0.004600 -0.004518 -0.004435 -0.004352 -0.004273 -0.004199
-0.004127 -0.004055 -0.003980 -0.003900 -0.003814 -0.003723 -0.003632 -0.003543
-0.003458 -0.003379 -0.003303 -0.003229 -0.003151 -0.003068 -0.002979 -0.002887
-0.002794 -0.002703 -0.002618 -0.002539 -0.002463 -0.002389 -0.002312 -0.002231
-0.002143 -0.002052 -0.001961 -0.001872 -0.001788 -0.001710 -0.001636 -0.001564
-0.001489 -0.001409 -0.001324 -0.001236 -0.001147 -0.001061 -0.000981 -0.000908
-0.000840 -0.000773 -0.000704 -0.000631 -0.000554 -0.000473 -0.000392 -0.000314
-0.000243 -0.000179 -0.000120 -0.000062 -0.000003  0.000061  0.000130  0.000202
 0.000275  0.000343  0.000406  0.000461  0.000511  0.000559  0.000607  0.000659
 0.000716  0.000775  0.000834  0.000889  0.000937  0.000977  0.001011  0.001043
 0.001077  0.001114  0.001157  0.001205  0.001253  0.001289  0.001339  0.001372
 0.001401  0.001428  0.001458  0.001494  0.001536  0.001582  0.001631  0.001678
 0.001719  0.001755  0.001787  0.001818  0.001853  0.001894  0.001941  0.001994
 0.002048  0.002099  0.002143  0.002182  0.002216  0.002249  0.002286  0.002329
 0.002380  0.002438  0.002498  0.002556  0.002608  0.002655  0.002698  0.002742
 0.002791  0.002850  0.002918  0.002994  0.003075  0.003154  0.003228  0.003295
 0.003357  0.003417  0.003480  0.003550  0.003627  0.003712  0.003799  0.003883
 0.003961  0.004030  0.004092  0.004151  0.004212  0.004279  0.004355  0.004439
 0.004527  0.004613  0.004695  0.004769  0.004836  0.004899  0.004963  0.005032
 0.005107  0.005187  0.005269  0.005346  0.005415  0.005473  0.005520  0.005561
 0.005599  0.005641  0.005686  0.005736  0.005785  0.005829  0.005863  0.005885
 0.005897  0.005903  0.005909  0.005922  0.005946  0.005982  0.006027  0.006078
 0.006128  0.006176  0.006221  0.006265  0.006313  0.006368  0.006432  0.006501
 0.006571  0.006631  0.006673  0.006690  0.006679  0.006641  0.006582  0.006508
 0.006427  0.006344  0.006261  0.006176  0.006089  0.005996  0.005897  0.005796
 0.005697  0.005605  0.005525  0.005460  0.005406  0.005360  0.005315  0.005263
 0.005197  0.005116  0.005012  0.004895  0.004766  0.004629  0.004488  0.004347
 0.004207  0.004071  0.003940  0.003816  0.003702  0.003600  0.003513  0.003442
 0.003389  0.003351  0.003327  0.003316  0.003313  0.003316  0.003319  0.003320
 0.003312  0.003293  0.003258  0.003207  0.003140  0.003060  0.002973  0.002884
 0.002802  0.002731  0.002674  0.002632  0.002605  0.002591  0.002586  0.002589
 0.002597  0.002608  0.002620  0.002632  0.002640  0.002643  0.002638  0.002627
 0.002611  0.002596  0.002584  0.002579  0.002583  0.002593  0.002605  0.002613
 0.002614  0.002603  0.002582  0.002557  0.002536  0.002527  0.002538  0.002574
 0.002635  0.002715  0.002808  0.002905  0.002998  0.003081  0.003158  0.003201
 0.003237  0.003257  0.003261  0.003255  0.003246  0.003241  0.003256  0.003301
 0.003388  0.003523  0.003701  0.003912  0.004139  0.004362  0.004563  0.004733
 0.004872  0.004991  0.005104  0.005229  0.005380  0.005561  0.005766  0.005982
 0.006191  0.006381  0.006545  0.006686  0.006815  0.006948  0.007097  0.007268
 0.007455  0.007645  0.007819  0.007960  0.008060  0.008122  0.008160  0.008197
 0.008255  0.008349  0.008480  0.008635  0.008790  0.008915  0.008984  0.008982
 0.008906  0.008768  0.008590  0.008394  0.008199  0.008016  0.007849  0.007695
 0.007552  0.007420  0.007307  0.007226  0.007190  0.007211  0.007286  0.007401
 0.007530  0.007641  0.007701  0.007687  0.007587  0.007406  0.007159  0.006866
 0.006548  0.006218  0.005885  0.005550  0.005211  0.004874  0.004548  0.004253
 0.004011  0.003841  0.003755  0.003750  0.003806  0.003892  0.003972  0.004013
 0.003992  0.003900  0.003747  0.003552  0.003339  0.003133  0.002950  0.002795
 0.002668  0.002560  0.002461  0.002362  0.002258  0.002144  0.002017  0.001872
 0.001703  0.001504  0.001272  0.001006  0.000715  0.000408  0.000098 -0.000203
-0.000489 -0.000761 -0.001025 -0.001290 -0.001562 -0.001836 -0.002100 -0.002330
-0.002501 -0.002594 -0.002600 -0.002531 -0.002417 -0.002300 -0.002230 -0.002248
-0.002379 -0.002627 -0.002980 -0.003406 -0.003875 -0.004359 -0.004844 -0.005326
-0.005813 -0.006312 -0.006827 -0.007347 -0.007849 -0.008298 -0.008659 -0.008904
-0.009020 -0.009014 -0.008910 -0.008743 -0.008556 -0.008384 -0.008254 -0.008185
-0.008186 -0.008261 -0.008417 -0.008663 -0.009011 -0.009470 -0.010044 -0.010724
-0.011487 -0.012295 -0.013106 -0.013875 -0.014561 -0.015139 -0.015592 -0.015918
-0.016119 -0.016201 -0.016168 -0.016022 -0.015763 -0.015396 -0.014930 -0.014387
-0.013798 -0.013199 -0.012633 -0.012139 -0.011748 -0.011483 -0.011354 -0.011366
-0.011515 -0.011794 -0.012195 -0.012708 -0.013321 -0.014019 -0.014782 -0.015589
-0.016421 -0.017260 -0.018091 -0.018910 -0.019716 -0.020511 -0.021300 -0.022084
-0.022860 -0.023620 -0.024353 -0.025045 -0.025682 -0.026253 -0.026748 -0.027160
-0.027481 -0.027707 -0.027832 -0.027852 -0.027765 -0.027573 -0.027279 -0.026890
-0.026414 -0.025854 -0.025211 -0.024485 -0.023671 -0.022774 -0.021803 -0.020781
-0.019742 -0.018729 -0.017791 -0.016966 -0.016285 -0.015756 -0.015372 -0.015105
-0.014920 -0.014780 -0.014656 -0.014531 -0.014400 -0.014274 -0.014169 -0.014098
-0.014070 -0.014083 -0.014124 -0.014172 -0.014203 -0.014193 -0.014126 -0.013996
-0.013806 -0.013570 -0.013311 -0.013052 -0.012821 -0.012641 -0.012527 -0.012484
-0.012507 -0.012575 -0.012658 -0.012720 -0.012721 -0.012624 -0.012403 -0.012042
-0.011535 -0.010889 -0.010116 -0.009227 -0.008236 -0.007152 -0.005985 -0.004749
-0.003463 -0.002155 -0.000862  0.000376  0.001521  0.002544  0.003430  0.004179
 0.004807  0.005335  0.005787  0.006184  0.006536  0.006852  0.007132  0.007384
 0.007621  0.007863  0.008136  0.008466  0.008866  0.009334  0.009852  0.010378
 0.010866  0.011277  0.011587  0.011794  0.011921  0.012013  0.012118  0.012281
 0.012526  0.012857  0.013253  0.013682  0.014111  0.014517  0.014899  0.015273
 0.015668  0.016114  0.016628  0.017206  0.017825  0.018436  0.018986  0.019433
 0.019754  0.019957  0.020074  0.020157  0.020261  0.020427  0.020672  0.020982
 0.021314  0.021609  0.021805  0.021850  0.021715  0.021399  0.020924  0.020330
 0.019661  0.018959  0.018253  0.017561  0.016889  0.016239  0.015617  0.015032
 0.014502  0.014052  0.013702  0.013467  0.013347  0.013324  0.013365  0.013424
 0.013456  0.013423  0.013305  0.013104  0.012842  0.012561  0.012303  0.012109
```

excerpt from PD3A.Q4I

```
PD3A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
UNITS (E for English, S for SI):                                  *** (A1)            ***
E
       DRF        PRM     ROCKVP     ROCKVS    ROCKRHO             *** (5F10.0)        ***
         1       0.65     6305.      1500.      130.
 NELM NDPT NSLP                                                   *** (3I5)           ***
 1659 1768    2
KGMAX KGEQ NLEQ N2EQ N3EQ NUMB   KV KSAV                          *** (8I5)           ***
1200012000     1    112000   10    1    0
      DTEQ     EQMUL1     EQMUL2     UGMAX1     UGMAX2 NDRX NDRY NPLX NPLY    PRINPUT *** (5F10.0,4I5,F10.0) ***
     0.005        1.0        1.0                          2    0    8    0        0.60
EARTHQUAKE INPUT FILE NAME(S) & FORMAT(S) (* for FREE FORMAT)  *** (A)            ***
PD3A.O11
(8F9.6)
 SOUT AOUT KOUT                                                  *** (3I5)           ***
    0    1    1
 ACCELERATION OUTPUT FORMAT (M or C), FILE PREFIX, AND SUFFIX:  *** (A)             ****
MULTIPLE
PD3A
Q4A
SEISMIC COEFF OUTPUT FORMAT (M OR C), FILE PREFIX, AND SUFFIX: **(A)
MULTIPLE
PD3A
QSC
NSEG ESEG  ***(2I5)
   60  314
NOSEG
  100  101  112  124  125  137  150  163  164  177  190  203  216  217  230
  243  256  269  283  298  314  331  349  368  388  408  407  427  447  467
  487  486  506  526  545  545  565  585  584  604  624  623  643  663  662
  682  702  701  721  720  740  760  759  779  778  798  797  796  816  815
ELSEG
   91  101  102  112  113  114  123  124  125  126  135  136  137  138  147
  148  149  150  151  159  160  161  162  163  171  172  173  174  175  183
  184  185  186  187  195  196  197  198  199  200  207  208  209  210  211
  212  219  220  221  222  223  224  231  232  233  234  235  236  243  244
  245  246  247  248  249  256  257  258  259  260  261  262  263  270  271
  272  273  274  275  276  277  278  285  286  287  288  289  290  291  292
  293  294  301  302  303  304  305  306  307  308  309  310  311  318  319
  320  321  322  323  324  325  326  327  328  329  336  337  338  339  340
  341  342  343  344  345  346  347  348  355  356  357  358  359  360  361
  362  363  364  365  366  367  374  375  376  377  378  379  380  381  382
  383  384  385  393  394  395  396  397  398  399  400  401  402  403  404
  412  413  414  415  416  417  418  419  420  421  422  423  431  432  433
  434  435  436  437  438  439  440  441  442  450  451  452  453  454  455
  456  457  458  459  460  469  470  471  472  473  474  475  476  477  478
  479  488  489  490  491  492  493  494  495  496  497  498  507  508  509
  510  511  512  513  514  515  516  526  527  528  529  530  531  532  533
  534  535  545  546  547  548  549  550  551  552  553  564  565  566  567
  568  569  570  571  572  583  584  585  586  587  588  589  590  602  603
  604  605  606  607  608  609  621  622  623  624  625  626  627  640  641
  642  643  644  645  646  659  660  661  662  663  664  678  679  680  681
  682  697  698  699  700  701  716  717  718  719  735  736  737  754
NSEG ESEG  ***(2I5)
   83  515
NOSEG
  575  576  596  597  617  618  638  658  659  679  699  700  720  740  741
  761  781  782  802  822  842  843  863  883  903  904  924  944  964  965
  985 1005 1025 1026 1046 1066 1086 1106 1107 1127 1147 1167 1187 1207 1227
 1247 1248 1268 1288 1308 1328 1348 1368 1388 1407 1425 1442 1458 1474 1489
 1504 1519 1534 1549 1548 1563 1578 1592 1605 1618 1631 1644 1643 1656 1669
 1668 1681 1694 1693 1706 1705 1718 1717
ELSEG
  545  564  565  583  584  585  602  603  604  621  622  623  624  640  641
  642  643  659  660  661  662  663  678  679  680  681  682  697  698  699
  700  701  702  716  717  718  719  720  721  735  736  737  738  739  740
  741  754  755  756  757  758  759  760  773  774  775  776  777  778  779
  792  793  794  795  796  797  798  799  811  812  813  814  815  816  817
  818  830  831  832  833  834  835  836  837  849  850  851  852  853  854
  855  856  857  868  869  870  871  872  873  874  875  876  887  888  889
  890  891  892  893  894  895  906  907  908  909  910  911  912  913  914
  915  925  926  927  928  929  930  931  932  933  934  944  945  946  947
  948  949  950  951  952  953  963  964  965  966  967  968  969  970  971
  972  973  982  983  984  985  986  987  988  989  990  991  992 1001 1002
 1003 1004 1005 1006 1007 1008 1009 1010 1011 1020 1021 1022 1023 1024 1025
 1026 1027 1028 1029 1030 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048
 1049 1050 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1077
 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1096 1097 1098 1099
 1100 1101 1102 1103 1104 1105 1106 1107 1115 1116 1117 1118 1119 1120 1121
 1122 1123 1124 1125 1126 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143
 1144 1145 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1172
 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1191 1192 1193
 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1210 1211 1212 1213 1214
 1215 1216 1217 1218 1219 1220 1221 1222 1229 1230 1231 1232 1233 1234 1235
 1236 1237 1238 1239 1240 1241 1248 1249 1250 1251 1252 1253 1254 1255 1256
 1257 1258 1259 1260 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277
 1278 1279 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298
 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1324 1325
 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1342 1343 1344 1345 1346
 1347 1348 1349 1350 1351 1352 1359 1360 1361 1362 1363 1364 1365 1366 1367
 1368 1375 1376 1377 1378 1379 1380 1381 1382 1383 1390 1391 1392 1393 1394
 1395 1396 1397 1398 1405 1406 1407 1408 1409 1410 1411 1412 1419 1420 1421
 1422 1423 1424 1425 1426 1433 1434 1435 1436 1437 1438 1439 1440 1447 1448
 1449 1450 1451 1452 1453 1454 1461 1462 1463 1464 1465 1466 1467 1475 1476
 1477 1478 1479 1480 1481 1489 1490 1491 1492 1493 1494 1495 1503 1504 1505
 1506 1507 1508 1516 1517 1518 1519 1520 1528 1529 1530 1531 1532 1540 1541
 1542 1543 1544 1552 1553 1554 1555 1564 1565 1566 1567 1576 1577 1578 1588
 1589 1590 1600 1601 1612
   N  NP1  NP2  NP3  NP4 TYPE      DENS        PO        GMX         G        XL LSTR  *** (6I5,5F10.0,I5) ***
   1    1    2   13   12    2    130.00       .47   1270.99   1016.79     .10000
   2    2    3   14   13    2    130.00       .47   2201.62   1761.14     .10000
   3    3    4   15   14    3    130.00       .47  13625.78  10900.62     .10000
   .
   .
   .
   (same as PD1A.Q4I)
```

excerpt from PD3A.O11

```
                    XMAX=  1.2834 Section A-A, HBPP, 08/2002
 ACCELERATION VALUES AT OUTCROPPING LAYER 11 -  ISFSI Pad, HBPP, ISFSI, 08/2002
-0.000157-0.000473-0.000618-0.000537-0.000261 0.000106 0.000422 0.000567      1
 0.000486 0.000208-0.000160-0.000478-0.000624-0.000542-0.000265 0.000103      2
 0.000420 0.000565 0.000483 0.000205-0.000164-0.000482-0.000627-0.000544      3
-0.000264 0.000106 0.000425 0.000570 0.000487 0.000207-0.000163-0.000482      4
-0.000626-0.000542-0.000260 0.000112 0.000431 0.000577 0.000493 0.000211      5
-0.000160-0.000479-0.000624-0.000538-0.000254 0.000120 0.000440 0.000586      6
 0.000500 0.000217-0.000156-0.000476-0.000620-0.000533-0.000248 0.000127      7
 0.000449 0.000594 0.000507 0.000222-0.000154-0.000475-0.000619-0.000531      8
-0.000245 0.000131 0.000453 0.000597 0.000508 0.000220-0.000158-0.000482      9
-0.000627-0.000539-0.000252 0.000125 0.000446 0.000589 0.000498 0.000206     10
-0.000174-0.000508-0.000646-0.000557-0.000268 0.000110 0.000432 0.000575     11
 0.000483 0.000191-0.000190-0.000514-0.000657-0.000564-0.000269 0.000115     12
 0.000444 0.000593 0.000507 0.000221-0.000151-0.000464-0.000594-0.000483     13
-0.000169 0.000238 0.000591 0.000766 0.000708 0.000453 0.000114-0.000162     14
-0.000250-0.000095 0.000267 0.000722 0.001124 0.001346 0.001335 0.001124     15
 0.000829 0.000594 0.000546 0.000739 0.001134 0.001618 0.002043 0.002280     16
 0.002276 0.002066 0.001762 0.001514 0.001444 0.001608 0.001968 0.002409     17
 0.002782 0.002960 0.002889 0.002605 0.002223 0.001891 0.001736 0.001813     18
 0.002083 0.002434 0.002717 0.002808 0.002654 0.002295 0.001849 0.001466     19
 0.001272 0.001324 0.001583 0.001932 0.002221 0.002322 0.002181 0.001835     20
 0.001401 0.001030 0.000847 0.000907 0.001171 0.001521 0.001806 0.001901     21
 0.001749 0.001392 0.000946 0.000564 0.000373 0.000428 0.000689 0.001038     22
 0.001323 0.001416 0.001263 0.000902 0.000453 0.000067-0.000127-0.000075     23
 0.000184 0.000532 0.000816 0.000908 0.000754 0.000393-0.000056-0.000440     24
-0.000633-0.000578-0.000316 0.000034 0.000320 0.000414 0.000261-0.000097     25
-0.000542-0.000920-0.001104-0.001040-0.000770-0.000415-0.000129-0.000041     26
-0.000206-0.000583-0.001051-0.001453-0.001660-0.001616-0.001359-0.001011     27
-0.000725-0.000631-0.000786-0.001151-0.001605-0.001996-0.002193-0.002141     28
-0.001879-0.001527-0.001238-0.001142-0.001292-0.001650-0.002096-0.002478     29
-0.002666-0.002608-0.002341-0.001988-0.001699-0.001602-0.001751-0.002105     30
-0.002542-0.002911-0.003083-0.003007-0.002723-0.002353-0.002051-0.001946     31
-0.002089-0.002439-0.002874-0.003240-0.003406-0.003320-0.003020-0.002629     32
-0.002296-0.002153-0.002251-0.002552-0.002937-0.003258-0.003386-0.003273     33
-0.002960-0.002564-0.002237-0.002102-0.002210-0.002520-0.002913-0.003241     34
-0.003382-0.003287-0.002997-0.002628-0.002322-0.002197-0.002294-0.002566     35
-0.002896-0.003143-0.003197-0.003028-0.002691-0.002317-0.002053-0.002011     36
-0.002218-0.002611-0.003048-0.003373-0.003463-0.003284-0.002901-0.002453     37
-0.002101-0.001971-0.002100-0.002425-0.002804-0.003076-0.003114-0.002880     38
-0.002437-0.001932-0.001530-0.001366-0.001481-0.001815-0.002223-0.002537     39
-0.002620-0.002425-0.002006-0.001502-0.001078-0.000869-0.000922-0.001188     40
-0.001533-0.001803-0.001874-0.001708-0.001365-0.000983-0.000718-0.000690     41
-0.000929-0.001363-0.001839-0.002186-0.002272-0.002059-0.001612-0.001078     42
-0.000630-0.000400-0.000427-0.000651-0.000928-0.001097-0.001037-0.000728     43
-0.000252 0.000226 0.000523 0.000504 0.000141-0.000479-0.001178-0.001750     44
-0.002031-0.001964-0.001609-0.001125-0.000707-0.000514-0.000611-0.000950     45
-0.001380-0.001721-0.001817-0.001611-0.001148-0.000574-0.000067 0.000224     46
 0.000237 0.000019-0.000295-0.000538-0.000573-0.000352 0.000070 0.000550     47
 0.000922 0.001052 0.000904 0.000546 0.000139-0.000137-0.000133 0.000194     48
 0.000780 0.001462 0.002045 0.002370 0.002370 0.002089 0.001670 0.001287     49
 0.001088 0.001127 0.001361 0.001652 0.001836 0.001781 0.001449 0.000903     50
 0.000295-0.000197-0.000435-0.000376-0.000082 0.000292 0.000569 0.000608     51
 0.000368-0.000084-0.000587-0.000957-0.001048-0.000815-0.000326 0.000256     52
 0.000740 0.000969 0.000889 0.000557 0.000127-0.000217-0.000324-0.000145     53
 0.000260 0.000729 0.001069 0.001120 0.000816 0.000207-0.000560-0.001296     54
-0.001840-0.002118-0.002156-0.002073-0.002019-0.002119-0.002410-0.002837     55
-0.003261-0.003523-0.003502-0.003169-0.002593-0.001928-0.001344-0.000969     56
-0.000837-0.000880-0.000949-0.000881-0.000560 0.000032 0.000807 0.001594     57
 0.002214 0.002536 0.002538 0.002305 0.002009 0.001832 0.001903 0.002243     58
 0.002755 0.003260 0.003565 0.003536 0.003158 0.002539 0.001884 0.001419     59
 0.001315 0.001629 0.002288 0.003120 0.003918 0.004519 0.004863 0.005004     60
 0.005091 0.005294 0.005740 0.006453 0.007344 0.008239 0.008950 0.009345     61
 0.009399 0.009206 0.008942 0.008798 0.008898 0.009251 0.009738 0.010151     62
 0.010270 0.009940 0.009133 0.007965 0.006649 0.005435 0.004514 0.003967     63
 0.003739 0.003678 0.003590 0.003328 0.002837 0.002174 0.001472 0.000876     64
 0.000468 0.000231 0.000039-0.000289-0.000916-0.001905-0.003176-0.004510     65
-0.005614-0.006209-0.006141-0.005432-0.004295-0.003069-0.002123-0.001739     66
-0.002031-0.002919-0.004167-0.005466-0.006547-0.007253-0.007582-0.007651     67
-0.007631-0.007652-0.007745-0.007812-0.007673-0.007135-0.006089-0.004570     68
-0.002771-0.000998 0.000421 0.001238 0.001357 0.000859-0.000042-0.001076     69
-0.002024-0.002779-0.003376-0.003946-0.004637-0.005521-0.006534-0.007469     70
-0.008036-0.007962-0.007102-0.005510-0.003444-0.001304 0.000488 0.001621     71
 0.001988 0.001706 0.001078 0.000461 0.000139 0.000209 0.000546 0.000845     72
 0.000736-0.000075-0.001688-0.003947-0.006480-0.008795-0.010428-0.011075     73
-0.010663-0.009350-0.007444-0.005280-0.003105-0.001010 0.001075 0.003303     74
 0.005813 0.008622 0.011583 0.014396 0.016698 0.018180 0.018695 0.018317     75
 0.017323 0.016104 0.015037 0.014368 0.014132 0.014170 0.014196 0.013926     76
 0.013195 0.012032 0.010653 0.009391 0.008564 0.008359 0.008748 0.009492     77
 0.010206 0.010496 0.010084 0.008903 0.007106 0.005015 0.002980 0.001265     78
-0.000072-0.001187-0.002417-0.004142-0.006669-0.010092-0.014268-0.018820     79
-0.023254-0.027068-0.029885-0.031511-0.031955-0.031364-0.029958-0.027938     80
-0.025452-0.022597-0.019459-0.016176-0.012968-0.010142-0.008037-0.006933     81
-0.006960-0.008036-0.009853-0.011936-0.013751-0.014829-0.014871-0.013806     82
-0.011781-0.009097-0.006102-0.003110-0.000323 0.002165 0.004353 0.006264     83
 0.007906 0.009240 0.010201 0.010738 0.010874 0.010734 0.010545 0.010581     84
 0.011084 0.012171 0.013784 0.015680 0.017498 0.018864 0.019519 0.019423     85
 0.018798 0.018090 0.017865 0.018658 0.020825 0.024434 0.029229 0.034682     86
 0.040101 0.044782 0.048138 0.049796 0.049614 0.047653 0.044083 0.039108     87
 0.032878 0.025492 0.016998 0.007496-0.002812-0.013521-0.024040-0.034591     88
-0.043344-0.046519-0.048561-0.047234-0.042697-0.035491-0.026449-0.016568     89
-0.006830 0.001927 0.009136 0.014522 0.018083 0.019992 0.020495 0.019807     90
 0.018055 0.015288 0.011524 0.006855 0.001523-0.004028-0.009188-0.013269     91
-0.015670-0.016029-0.014352-0.011040-0.006826-0.002605 0.000772 0.002714     92
 0.003006 0.001839-0.000303-0.002830-0.005272-0.007445-0.009529-0.011992     93
-0.015429-0.020306-0.026759-0.034453-0.042612-0.050155-0.055961-0.059137     94
-0.059235-0.056351-0.051066-0.044285-0.036986-0.030007-0.023878-0.018799     95
-0.014689-0.011334-0.008506-0.006073-0.003988-0.002254-0.000808 0.000532     96
 0.002102 0.004301 0.007484 0.011782 0.017022 0.022679 0.027997 0.032146     97
 0.034465 0.034627 0.032741 0.029304 0.025054 0.020750 0.016968 0.013978     98
 0.011735 0.009985 0.008444 0.006969 0.005661 0.004853 0.005003 0.006497     99
 0.009497 0.013822 0.018991 0.024345 0.029264 0.033356 0.036583 0.039232    100
 0.041791 0.044711 0.048199 0.052078 0.055801 0.058601 0.059741 0.058778    101
 0.055728 0.051101 0.045747 0.040604 0.036390 0.033397 0.031401 0.029789    102
 0.027781 0.024757 0.020480 0.015222 0.009649 0.004611 0.000787-0.001557    103
-0.002738-0.003562-0.005103-0.008318-0.013724-0.021149-0.029748-0.038170    104
-0.044938-0.048826-0.049194-0.046115-0.040315-0.032922-0.025122-0.017850    105
```

excerpt from PD3A.Q4O

```
          ************************************************
          ************************************************
          ** QUAD4MU  A COMPUTER PROGRAM FOR EVALUATING THE **
          **          SEISMIC RESPONSE OF SOIL STRUCTURES   **
          **                U.C.Davis, 1993                 **
          **             by Martin Byrd Hudson,             **
          **                I.M.Idriss,                     **
          **                and Mohsen Beikae               **
          **    MODIFIED FROM QUAD4, 1973                   **
          **             by I.M.Idriss,                     **
          **                J. Lysmer,                      **
          **                R. Hwang and                    **
          **                H. Bolton Seed                  **
          ************************************************
          ************************************************

    PD3A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
 HORIZONTAL ACCELERATION INPUT FILE:
    PD3A.O11
 WITH FIRST LINE:
                        XMAX=  1.2834 Section A-A, HBPP, 08/2002


1
                    NO. OF ELEMENTS =  1659
                  NO. OF NODAL POINTS =  1768
                   DEGREES OF FREEDOM =  3536
                        HALF-BANDWIDTH =    44
                  CONTROLLING ELEMENT =   337
           NO. OF FIXED BNDRY CONDS. =   128
                     NO. OF ITERATIONS =    10
       TOTAL EQ. POINTS READ (XGMAX) = 12000
 LAST EQ. PTS. USED (N1EQ TO NGEQ)  =     1 12000
   INT. EQ. PTS USED (N2EQ TO N3EQ) =     1 12000
            TIME INTERVAL OF RECORDS =  0.0050  SECONDS
           STRAIN CONVERSION FACTOR =  0.6500
     DAMPING RATIO REDUCTION FACTOR =   1.000
    PREDOMINANT INPUT MOTION PERIOD =  0.6000  SECONDS
     EQ. MULT. FACTOR (HORZ. COMP.) =  1.0000
 MAXIMUM ACCEL. USED (HORZ. COMP.) =  1.2834

     0 STRESS HISTORIES REQUESTED,
     6 ACCEL HISTORIES REQUESTED,
     2 SEIS COEFF HISTORIES REQUESTED
          OUTPUT FILES ARE AS FOLLOWS:

   NODE   23,   X DIR IN FILE:  PD3A00.Q4A
   NODE   34,   X DIR IN FILE:  PD3A01.Q4A
   NODE   45,   X DIR IN FILE:  PD3A02.Q4A
   NODE  375,   X DIR IN FILE:  PD3A03.Q4A
   NODE  715,   X DIR IN FILE:  PD3A04.Q4A
   NODE 1395,   X DIR IN FILE:  PD3A05.Q4A
SURFACE   1,   X DIR IN FILE:  PD3A00.QSC
SURFACE   2,   X DIR IN FILE:  PD3A01.QSC

 SOIL DATA TAKEN FROM FILE: hbsoilnw.dat

**********************
 MATERIAL TYPE NO. 1
**********************
MODULUS:       #1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
DAMPING:       damping for Clay PI 15 (Vucetic & Dobry 1991)
 ==================    ==================
   STRAIN    G/Gmax      STRAIN    DAMPING
  --------   -------    --------  --------
   0.0001     1.000       0.0001      1.70
   0.0003     1.000       0.0003      1.70
   0.0010     1.000       0.0010      1.70
   0.0032     0.960       0.0032      2.60
   0.0100     0.820       0.0100      4.50
   0.0316     0.640       0.0316      7.80
   0.1000     0.400       0.1000     11.70
   0.3160     0.210       0.3160     16.30
   1.0000     0.090       1.0000     20.20
   3.1600     0.040       3.1600     23.00
  10.0000     0.020      10.0000     23.00

  [lines skipped]


    ITERATION NO.  10


DAMPING SET AT THE FOLLOWING TWO FREQUENCIES:
THE FIRST NATURAL FREQUENCY: CIRC FREQ=      17.882; PERIOD=     0.351 SEC
  1 TIMES THE NATURAL FREQ.: CIRC FREQ=      17.882; PERIOD=     0.351 SEC


TIME REQUIRED FOR FORMATION AND TRIANGULIZATION OF MATRICES =          0.  SEC

    MODULI (ENG: KSF or SI: KN/M^2) AND DAMPING
 ELM      G-USED       G-NEW     DIF-G   DAMP-USED    DAMP-NEW  DIF-DAMP


   1       832.7       832.9       0.0   0.06393     0.06390       0.0
   2      1058.8      1059.1       0.0   0.10008     0.10004       0.0
   3     10906.0     10908.6       0.0   0.04859     0.04856       0.1
```

4	9648.2	9652.0	0.0	0.06552	0.06547	0.1
5	2711.9	2715.3	-0.1	0.10247	0.10236	0.1
6	2850.4	2853.4	-0.1	0.10894	0.10881	0.1
7	2964.9	2967.8	-0.1	0.11494	0.11483	0.1
8	3056.7	3059.4	-0.1	0.12013	0.12003	0.1
9	3135.4	3138.0	-0.1	0.12455	0.12446	0.1
10	3208.5	3210.8	-0.1	0.12825	0.12818	0.1
11	822.9	823.1	0.0	0.06510	0.06507	0.0
12	1055.3	1055.7	0.0	0.10042	0.10039	0.0
13	10581.0	10584.5	0.0	0.05297	0.05292	0.1
14	9559.0	9563.1	0.0	0.06672	0.06666	0.1
15	2722.1	2725.5	-0.1	0.10214	0.10203	0.1
16	2854.7	2857.6	-0.1	0.10875	0.10863	0.1
17	2964.4	2967.4	-0.1	0.11496	0.11485	0.1
18	3051.4	3054.1	-0.1	0.12032	0.12022	0.1
19	3124.8	3127.4	-0.1	0.12491	0.12483	0.1
20	3192.5	3194.8	-0.1	0.12877	0.12869	0.1

[lines skipped]

PEAK NODAL ACCELERATION VALUES (g's)

NODE	XORD	YORD	X-ACC	AT TIME	Y-ACC	AT TIME
1	-275.0	2.0	1.2096	21.7750	0.0000	0.0000
2	-275.0	-2.0	1.1975	21.7700	0.0000	0.0000
3	-275.0	-6.0	1.1749	21.7650	0.0000	0.0000
4	-275.0	-11.0	1.1702	21.7650	0.0000	0.0000
5	-275.0	-16.0	1.1621	21.7650	0.0000	0.0000
6	-275.0	-21.0	1.1313	21.7600	0.0000	0.0000
7	-275.0	-26.0	1.1056	21.7500	0.0000	0.0000
8	-275.0	-31.0	1.0866	21.7450	0.0000	0.0000
9	-275.0	-36.0	1.0731	21.7400	0.0000	0.0000
10	-275.0	-41.0	1.0691	21.7300	0.0000	0.0000
11	-275.0	-46.0	1.0749	21.7250	0.0000	0.0000
12	-260.0	2.0	1.2098	21.7750	0.0186	21.9350
13	-260.0	-2.0	1.1972	21.7700	0.0173	21.9350
14	-260.0	-6.0	1.1752	21.7650	0.0159	21.9350
15	-260.0	-11.0	1.1702	21.7650	0.0143	21.9400
16	-260.0	-16.0	1.1620	21.7650	0.0121	21.9400
17	-260.0	-21.0	1.1308	21.7600	0.0098	21.9400
18	-260.0	-26.0	1.1051	21.7500	0.0078	21.9450
19	-260.0	-31.0	1.0854	21.7450	0.0058	21.9450
20	-260.0	-36.0	1.0721	21.7400	0.0039	21.9450

[lines skipped]

PEAK ELEMENTS STRESSES (ENG: PSF or SI: N/M^2) AND STRAINS

ELM	SIG-X	SIG-Y	SIG-XY	EPS-MAX	AT TIME
1	90.4	2.9	318.0	0.038	21.780
2	109.7	7.7	938.4	0.089	21.780
3	1133.1	11.2	1864.5	0.017	21.780
4	981.1	17.7	3012.9	0.031	21.785
5	271.1	26.4	3949.0	0.166	21.785
6	300.1	31.4	4725.6	0.166	21.785
7	316.6	39.5	5478.8	0.185	21.785
8	327.0	44.9	6203.5	0.203	21.785
9	331.3	50.5	6893.4	0.220	21.785
10	333.3	56.4	7543.1	0.235	21.785
11	268.1	8.0	316.3	0.040	21.780
12	333.4	19.0	936.4	0.089	21.780
13	3323.4	29.9	1839.6	0.020	21.780
14	2946.5	39.0	2978.5	0.033	21.785
15	832.8	64.6	3923.4	0.145	21.785
16	904.7	94.5	4706.9	0.165	21.785
17	963.7	113.5	5469.8	0.185	21.785
18	995.9	129.6	6205.6	0.204	21.785
19	1007.2	144.4	6908.3	0.221	21.785
20	1010.2	162.6	7570.8	0.237	21.785

[lines skipped]

1 MAX & MIN SEISMIC COEFFICIENTS

SURFACE	WEIGHT(LB or N)	X-DIRECTION NEGATIVE	POSITIVE
1	909868.6250	-1.1774	0.9278
2	1551090.8750	-1.1749	0.9337

ITERATION CYCLE NO. 10 AVE OVERALL DAMP = 0.119

TIME REQUIRED FOR 12000 STEPS = 157. SEC

****
** END OF JOB **
****

excerpt from PD3A00.QSC

```
PD3A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
  Seismic Coefficient Surface History
 Time Step =       0.005 Sec
  Surface   1

  0.000000  0.000000  0.000000 -0.000001 -0.000004 -0.000009 -0.000018 -0.000030
 -0.000042 -0.000053 -0.000060 -0.000061 -0.000059 -0.000053 -0.000048 -0.000046
 -0.000049 -0.000055 -0.000063 -0.000070 -0.000074 -0.000072 -0.000067 -0.000058
 -0.000050 -0.000046 -0.000045 -0.000050 -0.000056 -0.000062 -0.000064 -0.000062
 -0.000055 -0.000046 -0.000037 -0.000032 -0.000031 -0.000034 -0.000039 -0.000044
 -0.000046 -0.000042 -0.000035 -0.000025 -0.000016 -0.000010 -0.000009 -0.000013
 -0.000019 -0.000025 -0.000027 -0.000025 -0.000019 -0.000010 -0.000002  0.000002
  0.000002 -0.000003 -0.000010 -0.000017 -0.000020 -0.000019 -0.000013 -0.000005
  0.000002  0.000006  0.000005  0.000000 -0.000008 -0.000015 -0.000018 -0.000017
 -0.000012 -0.000004  0.000003  0.000006  0.000005 -0.000001 -0.000009 -0.000016
 -0.000021 -0.000020 -0.000018 -0.000009 -0.000002  0.000000 -0.000002 -0.000009
 -0.000018 -0.000026 -0.000031 -0.000031 -0.000027 -0.000021 -0.000016 -0.000013
 -0.000016 -0.000023 -0.000032 -0.000040 -0.000045 -0.000045 -0.000040 -0.000033
 -0.000026 -0.000021 -0.000022 -0.000026 -0.000031 -0.000035 -0.000035 -0.000029
 -0.000017 -0.000001  0.000015  0.000030  0.000042  0.000052  0.000062  0.000075
  0.000095  0.000122  0.000157  0.000198  0.000242  0.000286  0.000328  0.000370
  0.000414  0.000463  0.000518  0.000583  0.000655  0.000733  0.000814  0.000895
  0.000973  0.001049  0.001124  0.001202  0.001284  0.001371  0.001463  0.001556
  0.001648  0.001733  0.001811  0.001882  0.001946  0.002007  0.002066  0.002124
  0.002181  0.002234  0.002280  0.002315  0.002338  0.002349  0.002351  0.002348
  0.002341  0.002332  0.002322  0.002308  0.002288  0.002259  0.002220  0.002172
  0.002117  0.002058  0.002000  0.001943  0.001888  0.001832  0.001772  0.001707
  0.001635  0.001558  0.001476  0.001395  0.001316  0.001243  0.001174  0.001108
  0.001041  0.000971  0.000898  0.000820  0.000742  0.000666  0.000594  0.000530
  0.000472  0.000417  0.000364  0.000308  0.000249  0.000188  0.000125  0.000065
  0.000011 -0.000038 -0.000080 -0.000118 -0.000156 -0.000196 -0.000240 -0.000287
 -0.000335 -0.000381 -0.000422 -0.000458 -0.000488 -0.000515 -0.000543 -0.000575
 -0.000612 -0.000653 -0.000698 -0.000741 -0.000782 -0.000818 -0.000850 -0.000880
 -0.000912 -0.000947 -0.000989 -0.001035 -0.001085 -0.001134 -0.001181 -0.001223
 -0.001261 -0.001297 -0.001334 -0.001376 -0.001423 -0.001475 -0.001529 -0.001583
 -0.001634 -0.001680 -0.001721 -0.001760 -0.001800 -0.001844 -0.001892 -0.001944
 -0.001997 -0.002050 -0.002097 -0.002139 -0.002175 -0.002208 -0.002241 -0.002276
 -0.002316 -0.002359 -0.002403 -0.002444 -0.002480 -0.002509 -0.002532 -0.002549
 -0.002566 -0.002583 -0.002602 -0.002624 -0.002645 -0.002663 -0.002676 -0.002680
 -0.002679 -0.002673 -0.002666 -0.002661 -0.002660 -0.002661 -0.002664 -0.002666
 -0.002663 -0.002655 -0.002642 -0.002626 -0.002610 -0.002596 -0.002586 -0.002577
 -0.002569 -0.002558 -0.002542 -0.002522 -0.002499 -0.002475 -0.002454 -0.002439
 -0.002430 -0.002428 -0.002428 -0.002427 -0.002422 -0.002412 -0.002397 -0.002381
 -0.002366 -0.002354 -0.002346 -0.002342 -0.002337 -0.002329 -0.002314 -0.002290
 -0.002260 -0.002225 -0.002190 -0.002157 -0.002129 -0.002104 -0.002079 -0.002051
 -0.002017 -0.001975 -0.001927 -0.001873 -0.001818 -0.001765 -0.001715 -0.001667
 -0.001621 -0.001574 -0.001523 -0.001469 -0.001413 -0.001358 -0.001309 -0.001269
 -0.001237 -0.001214 -0.001195 -0.001176 -0.001154 -0.001125 -0.001091 -0.001054
 -0.001015 -0.000977 -0.000941 -0.000906 -0.000868 -0.000825 -0.000775 -0.000719
 -0.000660 -0.000603 -0.000555 -0.000518 -0.000496 -0.000488 -0.000491 -0.000500
 -0.000510 -0.000519 -0.000527 -0.000535 -0.000547 -0.000564 -0.000588 -0.000617
 -0.000648 -0.000675 -0.000695 -0.000705 -0.000705 -0.000697 -0.000683 -0.000667
 -0.000651 -0.000633 -0.000613 -0.000587 -0.000552 -0.000509 -0.000459 -0.000404
 -0.000349 -0.000296 -0.000246 -0.000197 -0.000145 -0.000086 -0.000016  0.000068
  0.000164  0.000269  0.000379  0.000488  0.000594  0.000695  0.000792  0.000887
  0.000979  0.001070  0.001156  0.001234  0.001298  0.001347  0.001377  0.001389
  0.001388  0.001375  0.001356  0.001332  0.001302  0.001264  0.001217  0.001157
  0.001086  0.001004  0.000918  0.000833  0.000753  0.000680  0.000616  0.000557
  0.000500  0.000442  0.000383  0.000322  0.000262  0.000208  0.000162  0.000125
  0.000094  0.000066  0.000034 -0.000006 -0.000060 -0.000127 -0.000208 -0.000300
 -0.000400 -0.000506 -0.000618 -0.000737 -0.000863 -0.000997 -0.001137 -0.001280
 -0.001421 -0.001552 -0.001670 -0.001770 -0.001851 -0.001914 -0.001962 -0.001994
 -0.002009 -0.002007 -0.001983 -0.001933 -0.001856 -0.001750 -0.001619 -0.001468
 -0.001300 -0.001122 -0.000935 -0.000740 -0.000536 -0.000320 -0.000093  0.000144
  0.000386  0.000627  0.000861  0.001082  0.001290  0.001484  0.001671  0.001855
  0.002042  0.002236  0.002440  0.002652  0.002870  0.003092  0.003320  0.003554
  0.003797  0.004053  0.004324  0.004609  0.004907  0.005211  0.005517  0.005820
  0.006117  0.006407  0.006692  0.006971  0.007246  0.007511  0.007760  0.007983
  0.008172  0.008318  0.008414  0.008461  0.008459  0.008414  0.008328  0.008206
  0.008050  0.007859  0.007632  0.007368  0.007069  0.006736  0.006372  0.005978
  0.005556  0.005103  0.004616  0.004092  0.003530  0.002932  0.002306  0.001664
  0.001021  0.000391 -0.000213 -0.000784 -0.001323 -0.001833 -0.002324 -0.002804
 -0.003280 -0.003755 -0.004228 -0.004695 -0.005151 -0.005591 -0.006010 -0.006404
 -0.006771 -0.007104 -0.007395 -0.007634 -0.007810 -0.007913 -0.007937 -0.007881
 -0.007751 -0.007558 -0.007316 -0.007040 -0.006745 -0.006443 -0.006143 -0.005851
 -0.005574 -0.005319 -0.005092 -0.004897 -0.004737 -0.004608 -0.004501 -0.004404
 -0.004298 -0.004169 -0.004003 -0.003794 -0.003543 -0.003258 -0.002949 -0.002626
 -0.002299 -0.001974 -0.001653 -0.001339 -0.001034 -0.000748 -0.000494 -0.000289
 -0.000151 -0.000095 -0.000128 -0.000248 -0.000444 -0.000696 -0.000980 -0.001268
 -0.001538 -0.001768 -0.001941 -0.002041 -0.002056 -0.001971 -0.001776 -0.001462
 -0.001027 -0.000475  0.000183  0.000927  0.001735  0.002581  0.003444  0.004306
  0.005156  0.005987  0.006794  0.007572  0.008314  0.009012  0.009656  0.010238
  0.010754  0.011206  0.011598  0.011941  0.012244  0.012512  0.012745  0.012936
  0.013075  0.013145  0.013134  0.013030  0.012828  0.012523  0.012113  0.011594
  0.010958  0.010192  0.009280  0.008204  0.006950  0.005513  0.003898  0.002120
  0.000208 -0.001803 -0.003872 -0.005956 -0.008011 -0.009998 -0.011880 -0.013625
 -0.015207 -0.016607 -0.017816 -0.018834 -0.019673 -0.020351 -0.020893 -0.021324
 -0.021666 -0.021935 -0.022134 -0.022259 -0.022297 -0.022232 -0.022045 -0.021720
 -0.021244 -0.020612 -0.019820 -0.018873 -0.017776 -0.016539 -0.015176 -0.013700
 -0.012130 -0.010485 -0.008785 -0.007045 -0.005280 -0.003499 -0.001708  0.000092
  0.001896  0.003698  0.005487  0.007249  0.008966  0.010622  0.012208  0.013722
  0.015176  0.016593  0.018002  0.019439  0.020931  0.022501  0.024153  0.025876
  0.027644  0.029416  0.031139  0.032754  0.034200  0.035413  0.036331  0.036893
  0.037042  0.036730  0.035918  0.034585  0.032729  0.030376  0.027579  0.024415
  0.020987  0.017408  0.013800  0.010278  0.006943  0.003876  0.001132 -0.001258
 -0.003286 -0.004964 -0.006318 -0.007384 -0.008203 -0.008824 -0.009297 -0.009673
 -0.010002 -0.010330 -0.010694 -0.011114 -0.011596 -0.012123 -0.012666 -0.013178
 -0.013611 -0.013918 -0.014067 -0.014039 -0.013836 -0.013473 -0.012979 -0.012388
 -0.011735 -0.011052 -0.010370 -0.009722 -0.009143 -0.008679 -0.008380 -0.008303
 -0.008501 -0.009014 -0.009863 -0.011042 -0.012514 -0.014218 -0.016072 -0.017986
 -0.019871 -0.021649 -0.023258 -0.024654 -0.025810 -0.026711 -0.027354 -0.027742
 -0.027880 -0.027777 -0.027447 -0.026902 -0.026152 -0.025206 -0.024065 -0.022726
 -0.021180 -0.019417 -0.017431 -0.015226 -0.012821 -0.010250 -0.007562 -0.004813
 -0.002063  0.000633  0.003230  0.005694  0.008004  0.010145  0.012108  0.013888
  0.015480  0.016886  0.018111  0.019172  0.020093  0.020911  0.021664  0.022392
  0.023129  0.023900  0.024722  0.025601  0.026541  0.027547  0.028625  0.029782
  0.031023  0.032347  0.033742  0.035179  0.036618  0.038007  0.039295  0.040436
```

excerpt from PD1B.Q4I

```
PD1B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
UNITS (E for English, S for SI):                                    *** (A1)            ***
E
       DRF        PRN     ROCKVP     ROCKVS    ROCKRHO              *** (5F10.0)        ***
         1       0.65       6305.      1500.      130.
 NELM NDPT NSLP                                                     *** (3I5)           ***
 1659 1768    2
XGMAX XGEQ N1EQ N2EQ N3EQ NUMB   KV KSAV                           *** (8I5)           ***
1200012000    1    112000   10    1    0
      DTEQ     EQMUL1     EQMUL2     UGMAX1     UGMAX2 NDRX NDRY NPLX NPLY    PRINPUT *** (5F10.0,4I5,F10.0) ***
     0.005        1.0        1.0                     2    0    8    0      0.50
EARTHQUAKE INPUT FILE NAME(S) & FORMAT(S) (* for FREE FORMAT)      *** (A)             ***
PD1B.O11
(8F9.6)
 SOUT AOUT KOUT                                                     *** (3I5)           ***
    0    1    1
 ACCELERATION OUTPUT FORMAT (H or C), FILE PREFIX, AND SUFFIX:  *** (A)                 ****
MULTIPLE
PD1B
Q4A
SEISMIC COEFF OUTPUT FORMAT (H OR C), FILE PREFIX, AND SUFFIX: **(A)
MULTIPLE
PD1B
QSC
NSEQ ESEQ  ***(2I5)                                  \
   60  314
NOSEQ
  100  101  112  124  125  137  150  163  164  177  190  203  216  217  230
  243  256  269  283  298  314  331  349  368  388  408  407  427  447  467
  487  486  506  526  546  545  565  585  584  604  624  623  643  663  662
  682  702  701  721  720  740  760  759  779  778  798  797  796  816  815
ELSEQ
   91  101  102  113  113  114  123  124  125  126  135  136  137  138  147
  148  149  150  151  159  160  161  162  163  171  172  173  174  175  183
  184  185  186  187  195  196  197  198  199  200  207  208  209  210  211
  212  219  220  221  222  223  224  231  232  233  234  235  236  243  244
  245  246  247  248  249  256  257  258  259  260  261  262  263  270  271
  272  273  274  275  276  277  278  285  286  287  288  289  290  291  292
  293  294  301  302  303  304  305  306  307  308  309  310  311  318  319
  320  321  322  323  324  325  326  327  328  329  336  337  338  339  340
  341  342  343  344  345  346  347  348  355  356  357  358  359  360  361
  362  363  364  365  366  367  374  375  376  377  378  379  380  381  382
  383  384  385  393  394  395  396  397  398  399  400  401  402  403  404
  412  413  414  415  416  417  418  419  420  421  422  423  431  432  433
  434  435  436  437  438  439  440  441  442  450  451  452  453  454  455
  456  457  458  459  460  468  470  471  472  473  474  475  476  477  478
  479  488  489  490  491  492  493  494  495  496  497  498  507  508  509
  510  511  512  513  514  515  516  526  527  528  529  530  531  532  533
  534  535  545  546  547  548  549  550  551  552  553  564  565  566  567
  568  569  570  571  572  583  584  585  586  587  588  589  590  602  603
  604  605  606  607  608  609  621  622  623  624  625  626  627  640  641
  642  643  644  645  646  659  660  661  662  663  664  678  679  680  681
  682  697  698  699  700  701  716  717  718  719  735  736  737  754
NSEQ ESEQ  ***(2I5)
   83  515
NOSEQ
  575  576  596  597  617  618  638  658  659  679  699  700  720  740  741
  761  781  782  802  822  842  843  863  883  903  904  924  944  964  965
  985 1005 1025 1026 1046 1066 1086 1106 1107 1127 1147 1167 1187 1207 1227
 1247 1248 1268 1288 1308 1328 1348 1368 1388 1407 1425 1442 1458 1474 1489
 1504 1519 1534 1549 1548 1563 1578 1592 1605 1618 1631 1644 1643 1656 1669
 1668 1681 1694 1693 1706 1705 1718 1717
ELSEQ
  545  564  565  583  584  585  602  603  604  621  622  623  624  640  641
  642  643  659  660  661  662  663  678  679  680  681  682  697  698  699
  700  701  702  716  717  718  719  720  721  735  736  737  738  739  740
  741  754  755  756  757  758  759  760  773  774  775  776  777  778  779
  792  793  794  795  796  797  798  799  811  812  813  814  815  816  817
  818  830  831  832  833  834  835  836  837  849  850  851  852  853  854
  855  856  857  868  869  870  871  872  873  874  875  876  887  888  889
  890  891  892  893  894  895  906  907  908  909  910  911  912  913  914
  915  925  926  927  928  929  930  931  932  933  934  944  945  946  947
  948  949  950  951  952  953  963  964  965  966  967  968  969  970  971
  972  973  982  983  984  985  986  987  988  989  990  991  992 1001 1002
 1003 1004 1005 1006 1007 1008 1009 1010 1011 1020 1021 1022 1023 1024 1025
 1026 1027 1028 1029 1030 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048
 1049 1050 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1077
 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1096 1097 1098 1099
 1100 1101 1102 1103 1104 1105 1106 1107 1115 1116 1117 1118 1119 1120 1121
 1122 1123 1124 1125 1126 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143
 1144 1145 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1172
 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1191 1192 1193
 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1210 1211 1212 1213 1214
 1215 1216 1217 1218 1219 1220 1221 1222 1229 1230 1231 1232 1233 1234 1235
 1236 1237 1238 1239 1240 1241 1248 1249 1250 1251 1252 1253 1254 1255 1256
 1257 1258 1259 1260 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277
 1278 1279 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298
 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1326 1325
 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1342 1343 1344 1345 1346
 1347 1348 1349 1350 1351 1352 1359 1360 1361 1362 1363 1364 1365 1366 1367
 1368 1375 1376 1377 1378 1379 1380 1381 1382 1383 1390 1391 1392 1393 1394
 1395 1396 1397 1398 1405 1406 1407 1408 1409 1410 1411 1412 1419 1420 1421
 1422 1423 1424 1425 1426 1433 1434 1435 1436 1437 1438 1439 1440 1447 1448
 1449 1450 1451 1452 1453 1454 1461 1462 1463 1464 1465 1466 1467 1475 1476
 1477 1478 1479 1480 1481 1489 1490 1491 1492 1493 1494 1495 1503 1504 1505
 1506 1507 1508 1516 1517 1518 1519 1520 1528 1529 1530 1531 1532 1540 1541
 1542 1543 1544 1552 1553 1554 1555 1564 1565 1566 1567 1576 1577 1578 1588
 1589 1590 1600 1601 1612
   N  NP1  NP2  NP3  NP4 TYPE      DENS        PO       GMX         G       XL LSTR  *** (6I5,5F10.0,I5) ***
   1    1    2   13   12    2    130.00       .47   1270.99   1016.79    .10000
   2    2    3   14   13    2    130.00       .47   2201.42   1761.14    .10000
   3    3    4   15   14    3    130.00       .47  13625.78  10900.62    .10000
   .
   .
   .
   [same as PD1A.Q4I]
```

excerpt from PD1B.O11

XMAX= 1.8218 Section B-B, HBPP, 08/2002
ACCELERATION VALUES AT OUTCROPPING LAYER 11 - ISFSI Pad, HBPP, ISFSI, 08/2002

-0.000799	-0.000596	-0.000176	0.000302	0.000656	0.000749	0.000546	0.000123		1
-0.000359	-0.000717	-0.000814	-0.000612	-0.000188	0.000296	0.000654	0.000749		2
0.000544	0.000114	-0.000376	-0.000740	-0.000840	-0.000636	-0.000206	0.000286		3
0.000651	0.000750	0.000542	0.000107	-0.000392	-0.000763	-0.000866	-0.000661		4
-0.000225	0.000273	0.000643	0.000743	0.000531	0.000087	-0.000422	-0.000803		5
-0.000911	-0.000707	-0.000268	0.000235	0.000609	0.000707	0.000489	0.000034		6
-0.000488	-0.000881	-0.000997	-0.000796	-0.000358	0.000148	0.000521	0.000615		7
0.000386	-0.000084	-0.000625	-0.001035	-0.001165	-0.000973	-0.000539	-0.000037		8
0.000331	0.000414	0.000169	-0.000325	-0.000890	-0.001324	-0.001475	-0.001298		9
-0.000875	-0.000383	-0.000027	0.000038	-0.000231	-0.000754	-0.001352	-0.001819		10
-0.001999	-0.001847	-0.001445	-0.000974	-0.000641	-0.000605	-0.000912	-0.001480		11
-0.002126	-0.002642	-0.002868	-0.002758	-0.002395	-0.001962	-0.001672	-0.001685		12
-0.002049	-0.002680	-0.003395	-0.003980	-0.004272	-0.004224	-0.003920	-0.003545		13
-0.003316	-0.003397	-0.003835	-0.004546	-0.005341	-0.006001	-0.006361	-0.006370		14
-0.006112	-0.005777	-0.005585	-0.005703	-0.006181	-0.006933	-0.007767	-0.008461		15
-0.008843	-0.008861	-0.008601	-0.008254	-0.008044	-0.008142	-0.008599	-0.009328		16
-0.010135	-0.010791	-0.011121	-0.011072	-0.010730	-0.010290	-0.009981	-0.009978		17
-0.010335	-0.010965	-0.011668	-0.012212	-0.012418	-0.012229	-0.011732	-0.011128		18
-0.010652	-0.010487	-0.010694	-0.011189	-0.011774	-0.012215	-0.012331	-0.012064		19
-0.011501	-0.010842	-0.010324	-0.010130	-0.010320	-0.010805	-0.011381	-0.011809		20
-0.011903	-0.011601	-0.010992	-0.010280	-0.009708	-0.009462	-0.009605	-0.010048		21
-0.010583	-0.010967	-0.011011	-0.010651	-0.009978	-0.009202	-0.008571	-0.008277		22
-0.008385	-0.008804	-0.009323	-0.009690	-0.009711	-0.009319	-0.008606	-0.007783		23
-0.007105	-0.006771	-0.006851	-0.007254	-0.007767	-0.008133	-0.008151	-0.007752		24
-0.007023	-0.006180	-0.005480	-0.005130	-0.005200	-0.005603	-0.006124	-0.006505		25
-0.006540	-0.006157	-0.005445	-0.004617	-0.003935	-0.003602	-0.003691	-0.004110		26
-0.004641	-0.005022	-0.005044	-0.004638	-0.003895	-0.003039	-0.002336	-0.001996		27
-0.002092	-0.002528	-0.003079	-0.003476	-0.003505	-0.003094	-0.002341	-0.001474		28
-0.000772	-0.000451	-0.000587	-0.001084	-0.001707	-0.002175	-0.002264	-0.001895		29
-0.001162	-0.000299	0.000409	0.000737	0.000603	0.000104	-0.000524	-0.000990		30
-0.001064	-0.000661	0.000124	0.001051	0.001823	0.002201	0.002095	0.001591		31
0.000928	0.000399	0.000242	0.000553	0.001243	0.002078	0.002767	0.003075		32
0.002911	0.002370	0.001694	0.001178	0.001063	0.001437	0.002203	0.003112		33
0.003859	0.004200	0.004045	0.003495	0.002808	0.002299	0.002226	0.002686		34
0.003577	0.004633	0.005523	0.005970	0.005856	0.005266	0.004458	0.003765		35
0.003471	0.003710	0.004414	0.005341	0.006170	0.006620	0.006560	0.006055		36
0.005339	0.004733	0.004516	0.004823	0.005597	0.006606	0.007539	0.008113		37
0.008189	0.007814	0.007201	0.006645	0.006405	0.006605	0.007188	0.007936		38
0.008559	0.008811	0.008588	0.007971	0.007201	0.006588	0.006393	0.006727		39
0.007509	0.008486	0.009336	0.009777	0.009683	0.009121	0.008336	0.007656		40
0.007370	0.007629	0.008387	0.009429	0.010452	0.011182	0.011476	0.011369		41
0.011056	0.010806	0.010856	0.011310	0.012098	0.012999	0.013727	0.014038		42
0.013827	0.013162	0.012267	0.011423	0.010876	0.010729	0.010923	0.011253		43
0.011462	0.011342	0.010825	0.010006	0.009117	0.008430	0.008163	0.008387		44
0.009019	0.009842	0.010617	0.011163	0.011447	0.011579	0.011772	0.012233		45
0.013067	0.014202	0.015402	0.016326	0.016662	0.016228	0.015061	0.013408		46
0.011656	0.010189	0.009284	0.009008	0.009227	0.009669	0.010061	0.010235		47
0.010212	0.010178	0.010409	0.011119	0.012359	0.013937	0.015468	0.016480		48
0.016591	0.015641	0.013778	0.011411	0.009084	0.007281	0.006263	0.005973		49
0.006073	0.006080	0.005572	0.004363	0.002612	0.000778	-0.000524	-0.000755		50
0.000353	0.002670	0.005708	0.008769	0.011193	0.012567	0.012872	0.012441		51
0.011820	0.011508	0.011749	0.012395	0.012969	0.012840	0.011532	0.008869		52
0.005304	0.001644	-0.001092	-0.002049	-0.000853	0.002195	0.006184	0.009846		53
0.011990	0.011899	0.009616	0.005946	0.002216	-0.000181	-0.000261	0.002179		54
0.006470	0.011254	0.014948	0.016255	0.014638	0.010501	0.005099	0.000122		55
-0.002832	-0.002786	0.000337	0.005688	0.011830	0.017192	0.020611	0.021646		56
0.020680	0.018681	0.016811	0.015964	0.016456	0.017934	0.019574	0.020435		57
0.019882	0.017851	0.014916	0.012070	0.010359	0.010460	0.012414	0.015573		58
0.018846	0.021083	0.021531	0.020115	0.017495	0.014814	0.013280	0.013673		59
0.016037	0.019597	0.023031	0.024917	0.024286	0.020994	0.015845	0.010349		60
0.006233	0.004844	0.006676	0.011165	0.016875	0.021948	0.024758	0.024437		61
0.021197	0.016244	0.011388	0.008424	0.008558	0.012010	0.017992	0.024982		62
0.031273	0.035506	0.037090	0.036289	0.034036	0.031486	0.029566	0.028615		63
0.028317	0.027881	0.026454	0.023531	0.019262	0.014467	0.010404	0.008318		64
0.008986	0.012382	0.017643	0.023301	0.027766	0.029822	0.029028	0.025826		65
0.021362	0.017057	0.014117	0.013122	0.013869	0.015493	0.016830	0.016858		66
0.015072	0.011637	0.007290	0.003018	-0.000331	-0.002361	-0.003240	-0.003566		67
-0.004044	-0.005117	-0.006687	-0.008086	-0.008273	-0.006238	-0.001432	0.005915		68
0.014771	0.023514	0.030429	0.034199	0.034323	0.031230	0.026101	0.020429		69
0.015496	0.011962	0.009694	0.007924	0.005642	0.002095	-0.002838	-0.008516		70
-0.013748	-0.017240	-0.018148	-0.016484	-0.013232	-0.010083	-0.008874	-0.010906		71
-0.016385	-0.024207	-0.032182	-0.037646	-0.038285	-0.032896	-0.021831	-0.006983		72
0.008725	0.022125	0.030707	0.033242	0.030048	0.022742	0.013644	0.005016		73
-0.001602	-0.005728	-0.007892	-0.009235	-0.010938	-0.013703	-0.017477	-0.021508		74
-0.026682	-0.026017	-0.025073	-0.022157	-0.018189	-0.014338	-0.011512	-0.009960		75
-0.009100	-0.007708	-0.004356	0.001996	0.011521	0.023286	0.035420	0.045564		76
0.051561	0.052066	0.046948	0.037307	0.025131	0.012708	0.001964	-0.006012		77
-0.011164	-0.014300	-0.016680	-0.019473	-0.023319	-0.028098	-0.033003	-0.036839		78
-0.038453	-0.037123	-0.032782	-0.026031	-0.017925	-0.009672	-0.002301	0.001535		79
0.007645	0.010198	0.011590	0.012251	0.012553	0.012749	0.013010	0.013438		80
0.014084	0.014895	0.015664	0.015985	0.015299	0.013027	0.008780	0.002590		81
-0.004966	-0.012780	-0.019438	-0.023575	-0.024289	-0.021444	-0.015769	-0.008677		82
-0.001860	0.003219	0.005774	0.005897	0.004463	0.002744	0.001867	0.002330		83
0.003749	0.004961	0.004454	0.000993	-0.005800	-0.015127	-0.025114	-0.033312		84
-0.037482	-0.036360	-0.030159	-0.020605	-0.010438	-0.002572	0.000876	-0.000714		85
-0.006219	-0.013138	-0.018432	-0.019573	-0.015441	-0.006762	0.004092	0.013866		86
0.019528	0.019307	0.013346	0.003699	-0.006308	-0.013162	-0.014327	-0.009091		87
0.001184	0.013490	0.024152	0.029994	0.029337	0.022475	0.011497	-0.000466		88
-0.010308	-0.015932	-0.016855	-0.014209	-0.010202	-0.007224	-0.006964	-0.009816		89
-0.014817	-0.020077	-0.023555	-0.023851	-0.020743	-0.015253	-0.009237	-0.004657		90
-0.002817	-0.003858	-0.006689	-0.009404	-0.010009	-0.007206	-0.000928	0.007564		91
0.016073	0.022196	0.026153	0.021392	0.014785	0.006338	-0.001479	-0.006513		92
-0.007577	-0.004714	0.000978	0.007869	0.014469	0.019962	0.024429	0.028655		93
0.033648	0.040031	0.047612	0.055262	0.061226	0.063707	0.061547	0.054726		94
0.044478	0.032988	0.022632	0.015396	0.012056	0.012070	0.013784	0.015076		95
0.014131	0.010116	0.003472	-0.004244	-0.010935	-0.014716	-0.014589	-0.010776		96
-0.004609	0.001992	0.007244	0.010149	0.010844	0.010492	0.010784	0.013220		97
0.018445	0.025894	0.033884	0.040121	0.042450	0.039580	0.031518	0.019597		98
0.006034	-0.006726	-0.016735	-0.022993	-0.025560	-0.025255	-0.023149	-0.020027		99
-0.016084	-0.010951	-0.004043	0.004921	0.015483	0.026287	0.035322	0.040500		100
0.040384	0.034789	0.024994	0.013476	0.003177	-0.003416	-0.005116	-0.002440		101
0.002527	0.006838	0.007694	0.003443	-0.005819	-0.018205	-0.030656	-0.039925		102
-0.043684	-0.041276	-0.033941	-0.024365	-0.015763	-0.010785	-0.010662	-0.014843		103
-0.021282	-0.027221	-0.030212	-0.028965	-0.023769	-0.016302	-0.008944	-0.003861		104
-0.002193	-0.003670	-0.006792	-0.009480	-0.009977	-0.007604	-0.003107	0.001588		105

excerpt from PD1B.Q4O

```
          **************************************************
          **************************************************
          ** QUAD4MU  A COMPUTER PROGRAM FOR EVALUATING THE **
          **           SEISMIC RESPONSE OF SOIL STRUCTURES  **
          **                 U.C.Davis, 1993                **
          **              by Martin Byrd Hudson,            **
          **                 I.M.Idriss,                    **
          **                 and Mohsen Beikae              **
          **     MODIFIED FROM QUAD4, 1973                  **
          **              by I.M.Idriss,                    **
          **                 J. Lysmer,                     **
          **                 R. Hwang and                   **
          **                 H. Bolton Seed                 **
          **************************************************
          **************************************************

     PD1B: HUMBOLDT BAY, 1SFSI, SITE 4, PG&E, 06/2003
  HORIZONTAL ACCELERATION INPUT FILE:
     PD1B.O11
  WITH FIRST LINE:
                          XMAX=  1.8218 Section B-B, HBPP, 08/2002


1

                    NO. OF ELEMENTS =  1659
                  NO. OF NODAL POINTS =  1768
                   DEGREES OF FREEDOM =  3536
                       HALF-BANDWIDTH =    44
                  CONTROLLING ELEMENT =   337
           NO. OF FIXED BNDRY CONDS. =   128
                    NO. OF ITERATIONS =    10
       TOTAL EQ. POINTS READ (KGMAX) = 12000
  LAST EQ. PTS. USED (M1EQ TO KGEQ)  =     1 12000
    INT. EQ. PTS USED (N2EQ TO N3EQ) =     1 12000
            TIME INTERVAL OF RECORDS =   0.0050  SECONDS
           STRAIN CONVERSION FACTOR  =   0.6500
      DAMPING RATIO REDUCTION FACTOR =    1.000
    PREDOMINANT INPUT MOTION PERIOD  =   0.5000  SECONDS
      EQ. MULT. FACTOR (HOR2. COMP.) =   1.0000
   MAXIMUM ACCEL. USED (HOR2. COMP.) =   1.8218

      0 STRESS HISTORIES REQUESTED,
      6 ACCEL HISTORIES REQUESTED,
      2 SEIS COEFF HISTORIES REQUESTED
          OUTPUT FILES ARE AS FOLLOWS:

    NODE   23,   X DIR IN FILE:  PD1B00.Q4A
    NODE   34,   X DIR IN FILE:  PD1B01.Q4A
    NODE   45,   X DIR IN FILE:  PD1B02.Q4A
    NODE  375,   X DIR IN FILE:  PD1B03.Q4A
    NODE  715,   X DIR IN FILE:  PD1B04.Q4A
    NODE 1395,   X DIR IN FILE:  PD1B05.Q4A
  SURFACE   1,   X DIR IN FILE:  PD1B00.QSC
  SURFACE   2,   X DIR IN FILE:  PD1B01.QSC

   SOIL DATA TAKEN FROM FILE: hbsoilnw.dat

 **********************
  MATERIAL TYPE NO. 1
 **********************
 MODULUS:      G1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
 DAMPING:      damping for Clay PI 15 (Vucetic & Dobry 1991)
  ******************    ******************
    STRAIN     G/Gmax .    STRAIN    DAMPING
   --------    -------    --------  --------
    0.0001      1.000       0.0001     1.70
    0.0003      1.000       0.0003     1.70
    0.0010      1.000       0.0010     1.70
    0.0032      0.940       0.0032     2.60
    0.0100      0.820       0.0100     4.50
    0.0316      0.640       0.0316     7.80
    0.1000      0.400       0.1000    11.70
    0.3160      0.210       0.3160    16.30
    1.0000      0.090       1.0000    20.20
    3.1600      0.040       3.1600    23.00
   10.0000      0.020      10.0000    23.00


   [lines skipped]


     ITERATION NO.  10


 DAMPING SET AT THE FOLLOWING TWO FREQUENCIES:
 THE FIRST NATURAL FREQUENCY: CIRC FREQ=      10.360; PERIOD=     0.606 SEC
   3 TIMES THE NATURAL FREQ.: CIRC FREQ=      31.080; PERIOD=     0.202 SEC


 TIME REQUIRED FOR FORMATION AND TRIANGULIZATION OF MATRICES =          1.  SEC

     MODULI (ENG: KSF or SI: KN/M^2) AND DAMPING
  ELN       G-USED       G-NEW     DIF-G   DAMP-USED    DAMP-NEW  DIF-DAMP


    1        692.6       690.0       0.4   0.08589     0.08635      -0.5
    2        745.2       739.2       0.8   0.13479     0.13573      -0.7
    3       9848.8      9900.5      -0.5   0.06282     0.06212       1.1
```

4	8371.7	8459.6	-1.0	0.08216	0.08111	1.3
5	1722.2	1766.4	-2.5	0.14898	0.14686	1.4
6	1720.6	1766.7	-2.6	0.15761	0.15562	1.3
7	1668.7	1696.5	-1.6	0.16626	0.16490	0.8
8	1724.8	1746.6	-1.2	0.17064	0.16952	0.8
9	1769.3	1791.6	-1.2	0.17499	0.17372	0.7
10	1805.5	1826.3	-1.1	0.17873	0.17762	0.6
11	677.8	681.0	-0.5	0.08847	0.08791	0.6
12	746.5	740.6	0.8	0.13458	0.13550	-0.7
13	9182.1	9151.3	0.3	0.07179	0.07220	-0.6
14	8111.1	8151.5	-0.5	0.08527	0.08479	0.6
15	1742.5	1786.6	-2.5	0.14801	0.14589	1.5
16	1730.5	1776.2	-2.6	0.15718	0.15521	1.3
17	1668.5	1695.7	-1.6	0.16627	0.16493	0.8
18	1721.3	1742.6	-1.2	0.17106	0.16976	0.8
19	1762.1	1783.9	-1.2	0.17539	0.17416	0.7
20	1794.7	1814.7	-1.1	0.17931	0.17823	0.6

[lines skipped]

PEAK NODAL ACCELERATION VALUES (g's)

NODE	XORD	YORD	X-ACC	AT TIME	Y-ACC	AT TIME
1	-275.0	2.0	1.8849	23.2150	0.0000	0.0000
2	-275.0	-2.0	1.8797	23.2150	0.0000	0.0000
3	-275.0	-6.0	1.8595	23.2200	0.0000	0.0000
4	-275.0	-11.0	1.8590	23.2200	0.0000	0.0000
5	-275.0	-16.0	1.8569	23.2200	0.0000	0.0000
6	-275.0	-21.0	1.8327	23.2250	0.0000	0.0000
7	-275.0	-26.0	1.8037	23.2300	0.0000	0.0000
8	-275.0	-31.0	1.7630	23.2300	0.0000	0.0000
9	-275.0	-36.0	1.7091	23.2300	0.0000	0.0000
10	-275.0	-41.0	1.6438	23.2250	0.0000	0.0000
11	-275.0	-46.0	1.6656	23.3450	0.0000	0.0000
12	-260.0	2.0	1.8825	23.2150	0.0184	23.7300
13	-260.0	-2.0	1.8775	23.2150	0.0173	9.4300
14	-260.0	-6.0	1.8578	23.2200	0.0162	9.4300
15	-260.0	-11.0	1.8574	23.2200	0.0150	9.4300
16	-260.0	-16.0	1.8551	23.2200	0.0133	9.4300
17	-260.0	-21.0	1.8312	23.2250	0.0110	9.4300
18	-260.0	-26.0	1.8023	23.2300	0.0085	9.4350
19	-260.0	-31.0	1.7615	23.2300	0.0061	23.7350
20	-260.0	-36.0	1.7077	23.2300	0.0039	23.7350

[lines skipped]

PEAK ELEMENTS STRESSES (ENG: PSF or SI: N/M**2) AND STRAINS

ELM	SIG-X	SIG-Y	SIG-XY	EPS-MAX	AT TIME
1	146.8	3.2	459.1	0.066	23.230
2	147.6	10.4	1358.0	0.182	23.230
3	1938.9	31.1	2630.7	0.028	23.410
4	1543.3	71.2	4416.7	0.053	23.415
5	312.8	63.9	5668.1	0.329	23.420
6	376.1	71.2	6631.4	0.386	23.425
7	385.1	80.7	7603.5	0.456	23.440
8	401.6	87.1	8572.5	0.497	23.445
9	400.8	89.6	9521.6	0.538	23.455
10	381.9	92.5	10461.8	0.580	23.465
11	436.1	10.0	461.7	0.069	23.230
12	455.4	22.6	1354.1	0.182	23.230
13	5625.5	35.0	2552.9	0.040	23.410
14	4665.3	131.2	4340.9	0.059	23.415
15	994.7	156.9	5619.6	0.324	23.420
16	1149.1	198.8	6601.9	0.383	23.425
17	1178.9	221.8	7587.8	0.456	23.440
18	1229.4	241.8	8575.8	0.499	23.445
19	1227.5	250.1	9546.9	0.543	23.455
20	1167.3	269.0	10510.0	0.586	23.465

[lines skipped]

1 MAX & MIN SEISMIC COEFFICIENTS

SURFACE	WEIGHT(LB or N)	X-DIRECTION NEGATIVE	X-DIRECTION POSITIVE
1	909868.6250	-0.9196	1.9307
2	1551090.8750	-0.8582	1.8824

ITERATION CYCLE NO. 10 AVE OVERALL DAMP = 0.175

TIME REQUIRED FOR 12000 STEPS = 171. SEC

****
** END OF JOB **
****

excerpt from PD1B01.QSC

```
PD1B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
   Seismic Coefficient Surface History
 Time Step =       0.005 Sec
  Surface   2

  0.000000  0.000000  0.000000 -0.000001 -0.000003 -0.000007 -0.000011 -0.000016
 -0.000019 -0.000019 -0.000017 -0.000013 -0.000009 -0.000006 -0.000006 -0.000009
 -0.000014 -0.000020 -0.000024 -0.000025 -0.000024 -0.000020 -0.000016 -0.000013
 -0.000014 -0.000017 -0.000022 -0.000028 -0.000033 -0.000035 -0.000033 -0.000030
 -0.000026 -0.000024 -0.000025 -0.000028 -0.000034 -0.000040 -0.000045 -0.000047
 -0.000046 -0.000043 -0.000040 -0.000038 -0.000038 -0.000042 -0.000049 -0.000056
 -0.000061 -0.000064 -0.000064 -0.000062 -0.000059 -0.000058 -0.000060 -0.000066
 -0.000073 -0.000082 -0.000090 -0.000096 -0.000097 -0.000097 -0.000096 -0.000098
 -0.000103 -0.000112 -0.000123 -0.000136 -0.000147 -0.000156 -0.000163 -0.000168
 -0.000173 -0.000181 -0.000192 -0.000207 -0.000225 -0.000245 -0.000265 -0.000282
 -0.000298 -0.000312 -0.000327 -0.000345 -0.000367 -0.000393 -0.000424 -0.000457
 -0.000490 -0.000522 -0.000552 -0.000581 -0.000613 -0.000647 -0.000687 -0.000733
 -0.000783 -0.000837 -0.000892 -0.000946 -0.001001 -0.001055 -0.001113 -0.001175
 -0.001244 -0.001319 -0.001402 -0.001488 -0.001578 -0.001668 -0.001760 -0.001853
 -0.001951 -0.002055 -0.002167 -0.002288 -0.002417 -0.002551 -0.002689 -0.002829
 -0.002971 -0.003116 -0.003265 -0.003421 -0.003585 -0.003758 -0.003939 -0.004125
 -0.004314 -0.004505 -0.004696 -0.004889 -0.005085 -0.005285 -0.005492 -0.005706
 -0.005925 -0.006146 -0.006367 -0.006587 -0.006803 -0.007016 -0.007229 -0.007442
 -0.007658 -0.007875 -0.008092 -0.008307 -0.008517 -0.008719 -0.008912 -0.009097
 -0.009276 -0.009449 -0.009620 -0.009787 -0.009950 -0.010106 -0.010253 -0.010389
 -0.010514 -0.010628 -0.010734 -0.010833 -0.010927 -0.011017 -0.011102 -0.011179
 -0.011247 -0.011302 -0.011346 -0.011378 -0.011401 -0.011416 -0.011427 -0.011432
 -0.011432 -0.011424 -0.011406 -0.011375 -0.011332 -0.011277 -0.011213 -0.011142
 -0.011067 -0.010987 -0.010902 -0.010810 -0.010709 -0.010596 -0.010472 -0.010337
 -0.010195 -0.010047 -0.009897 -0.009744 -0.009588 -0.009428 -0.009260 -0.009084
 -0.008898 -0.008705 -0.008507 -0.008306 -0.008105 -0.007905 -0.007706 -0.007505
 -0.007301 -0.007091 -0.006875 -0.006655 -0.006433 -0.006213 -0.005995 -0.005781
 -0.005570 -0.005361 -0.005150 -0.004936 -0.004719 -0.004500 -0.004280 -0.004064
 -0.003853 -0.003648 -0.003447 -0.003250 -0.003053 -0.002854 -0.002653 -0.002452
 -0.002253 -0.002058 -0.001871 -0.001692 -0.001519 -0.001352 -0.001187 -0.001022
 -0.000855 -0.000690 -0.000526 -0.000369 -0.000218 -0.000076  0.000059  0.000190
  0.000320  0.000451  0.000584  0.000718  0.000850  0.000979  0.001100  0.001214
  0.001320  0.001422  0.001521  0.001621  0.001722  0.001822  0.001920  0.002014
  0.002100  0.002178  0.002250  0.002319  0.002387  0.002457  0.002531  0.002606
  0.002681  0.002752  0.002819  0.002880  0.002937  0.002994  0.003053  0.003119
  0.003190  0.003268  0.003348  0.003427  0.003502  0.003570  0.003634  0.003695
  0.003756  0.003821  0.003891  0.003965  0.004041  0.004116  0.004188  0.004255
  0.004319  0.004381  0.004447  0.004518  0.004597  0.004683  0.004775  0.004869
  0.004962  0.005054  0.005143  0.005232  0.005322  0.005416  0.005513  0.005613
  0.005712  0.005807  0.005898  0.005982  0.006061  0.006138  0.006216  0.006300
  0.006388  0.006482  0.006578  0.006672  0.006763  0.006848  0.006928  0.007007
  0.007089  0.007177  0.007273  0.007379  0.007493  0.007614  0.007739  0.007867
  0.008000  0.008138  0.008284  0.008437  0.008599  0.008766  0.008935  0.009101
  0.009260  0.009408  0.009546  0.009673  0.009791  0.009900  0.010000  0.010090
  0.010168  0.010232  0.010280  0.010312  0.010331  0.010340  0.010344  0.010348
  0.010354  0.010364  0.010380  0.010404  0.010435  0.010478  0.010534  0.010606
  0.010695  0.010799  0.010913  0.011030  0.011142  0.011241  0.011319  0.011375
  0.011408  0.011421  0.011417  0.011399  0.011373  0.011339  0.011301  0.011261
  0.011224  0.011193  0.011174  0.011172  0.011187  0.011216  0.011255  0.011292
  0.011318  0.011322  0.011299  0.011245  0.011160  0.011048  0.010910  0.010748
  0.010561  0.010346  0.010102  0.009828  0.009528  0.009213  0.008896  0.008590
  0.008310  0.008067  0.007864  0.007702  0.007576  0.007481  0.007410  0.007361
  0.007330  0.007315  0.007310  0.007306  0.007293  0.007257  0.007185  0.007072
  0.006920  0.006737  0.006541  0.006350  0.006178  0.006034  0.005916  0.005815
  0.005714  0.005600  0.005465  0.005312  0.005152  0.005003  0.004884  0.004808
  0.004777  0.004782  0.004803  0.004817  0.004804  0.004754  0.004671  0.004570
  0.004478  0.004420  0.004420  0.004490  0.004630  0.004832  0.005082  0.005363
  0.005665  0.005983  0.006314  0.006660  0.007021  0.007391  0.007763  0.008126
  0.008469  0.008787  0.009083  0.009364  0.009642  0.009928  0.010231  0.010551
  0.010880  0.011209  0.011527  0.011828  0.012114  0.012393  0.012677  0.012977
  0.013296  0.013630  0.013962  0.014272  0.014540  0.014753  0.014908  0.015019
  0.015107  0.015196  0.015309  0.015454  0.015629  0.015819  0.016003  0.016160
  0.016280  0.016366  0.016434  0.016509  0.016622  0.016796  0.017045  0.017370
  0.017761  0.018199  0.018663  0.019134  0.019597  0.020042  0.020461  0.020845
  0.021182  0.021460  0.021665  0.021791  0.021837  0.021817  0.021751  0.021667
  0.021591  0.021541  0.021525  0.021536  0.021560  0.021576  0.021564  0.021513
  0.021418  0.021284  0.021120  0.020936  0.020733  0.020510  0.020256  0.019958
  0.019603  0.019181  0.018688  0.018127  0.017500  0.016817  0.016083  0.015305
  0.014491  0.013655  0.012815  0.012000  0.011244  0.010584  0.010048  0.009654
  0.009404  0.009283  0.009262  0.009304  0.009372  0.009434  0.009467  0.009454
  0.009387  0.009258  0.009058  0.008777  0.008462  0.007926  0.007349  0.006680
  0.005936  0.005139  0.004308  0.003454  0.002574  0.001655  0.000677 -0.000375
 -0.001507 -0.002699 -0.003909 -0.005079 -0.006137 -0.007018 -0.007676 -0.008090
 -0.008272 -0.008260 -0.008111 -0.007887 -0.007645 -0.007429 -0.007265 -0.007165
 -0.007132 -0.007164 -0.007261 -0.007427 -0.007663 -0.007971 -0.008344 -0.008770
 -0.009231 -0.009703 -0.010166 -0.010601 -0.010996 -0.011340 -0.011620 -0.011820
 -0.011913 -0.011864 -0.011637 -0.011200 -0.010535 -0.009648 -0.008567 -0.007345
 -0.006050 -0.004756 -0.003531 -0.002429 -0.001485 -0.000717 -0.000124  0.000299
  0.000559  0.000663  0.000614  0.000416  0.000075 -0.000393 -0.000962 -0.001595
 -0.002247 -0.002873 -0.003428 -0.003879 -0.004203 -0.004390 -0.004438 -0.004358
 -0.004163 -0.003868 -0.003489 -0.003039 -0.002528 -0.001966 -0.001360 -0.000718
 -0.000052  0.000623  0.001285  0.001908  0.002459  0.002908  0.003226  0.003397
  0.003420  0.003308  0.003092  0.002810  0.002505  0.002214  0.001963  0.001766
  0.001621  0.001520  0.001450  0.001402  0.001369  0.001348  0.001336  0.001321
  0.001287  0.001204  0.001039  0.000763  0.000356 -0.000181 -0.000827 -0.001541
 -0.002272 -0.002970 -0.003602 -0.004152 -0.004629 -0.005057 -0.005465 -0.005873
 -0.006286 -0.006686 -0.007040 -0.007308 -0.007459 -0.007480 -0.007381 -0.007199
 -0.006980 -0.006771 -0.006603 -0.006481 -0.006385 -0.006272 -0.006097 -0.005823
 -0.005437 -0.004951 -0.004406 -0.003858 -0.003364 -0.002970 -0.002698 -0.002549
 -0.002505 -0.002539 -0.002625 -0.002749 -0.002908 -0.003109 -0.003363 -0.003675
 -0.004037 -0.004432 -0.004834 -0.005215 -0.005556 -0.005843 -0.006079 -0.006271
 -0.006428 -0.006552 -0.006632 -0.006649 -0.006575 -0.006388 -0.006076 -0.005647
 -0.005126 -0.004554 -0.003975 -0.003429 -0.002941 -0.002515 -0.002138 -0.001782
 -0.001414 -0.000999 -0.000512  0.000067  0.000751  0.001553  0.002483  0.003552
  0.004765  0.006119  0.007595  0.009160  0.010763  0.012347  0.013856  0.015243
  0.016481  0.017559  0.018488  0.019283  0.019960  0.020526  0.020979  0.021306
  0.021493  0.021528  0.021414  0.021167  0.020819  0.020410  0.019981  0.019566
  0.019186  0.018855  0.018574  0.018347  0.018183  0.018095  0.018102  0.018221
  0.018458  0.018801  0.019219  0.019659  0.020059  0.020355  0.020492  0.020434
  0.020164  0.019690  0.019034  0.018233  0.017329  0.016364  0.015380  0.014424
  0.013538  0.012764  0.012133  0.011666  0.011359  0.011188  0.011111  0.011071
  0.011014  0.010892  0.010682  0.010380  0.010002  0.009574  0.009117  0.008638
```

excerpt from PD3B.Q4I

```
PD3B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
UNITS (E for English, S for SI):                                  *** (A1)            ***
E
       DRF       PRM     ROCKVP     ROCKVS    ROCKRHO              *** (5F10.0)        ***
         1      0.65      6305.      1500.      130.
 NELM NDPT NSLP                                                   *** (3I5)           ***
 1659 1768    2
KGMAX KGEQ N1EQ N2EQ N3EQ NUMB    KV KSAV                         *** (8I5)           ***
12000120000    1    112000   10    1    0
      DTEQ     EQMUL1     EQMUL2     UGMAX1     UGMAX2 NDRX NDRY NPLX NPLY    PRINPUT *** (5F10.0,4I5,F10.0) ***
     0.005        1.0        1.0                       2    0    8    0       0.80
EARTHQUAKE INPUT FILE NAME(S) & FORMAT(S) (* for FREE FORMAT)    *** (A)             ***
PD3B.011
(8F9.6)
 SOUT AOUT KOUT                                                   *** (3I5)           ***
    0    1    1
 ACCELERATION OUTPUT FORMAT (M or C), FILE PREFIX, AND SUFFIX:    *** (A)             ****
MULTIPLE
PD3B
Q4A
SEISMIC COEFF OUT[UT FORMAT (M OR C), FILE PREFIX, AND SUFFIX: **(A)
MULTIPLE
PD3B
QSC
NSEG ESEG  ***(2I5)
   60  314
NOSEG
  100  101  112  124  125  137  150  163  164  177  190  203  216  217  230
  243  256  269  283  298  314  331  349  368  388  408  407  427  447  467
  487  486  506  526  546  545  565  585  584  604  624  623  643  663  662
  682  702  701  721  720  740  760  759  779  778  798  797  796  816  815
ELSEG
   91  101  102  112  113  114  123  124  125  126  135  136  137  138  147
  148  149  150  151  159  160  161  162  163  171  172  173  174  175  183
  184  185  186  187  195  196  197  198  199  200  207  208  209  210  211
  212  219  220  221  222  223  224  231  232  233  234  235  236  243  244
  245  246  247  248  249  256  257  258  259  260  261  262  263  270  271
  272  273  274  275  276  277  278  285  286  287  288  289  290  291  292
  293  294  301  302  303  304  305  306  307  308  309  310  311  318  319
  320  321  322  323  324  325  326  327  328  329  336  337  338  339  340
  341  342  343  344  345  346  347  348  355  356  357  358  359  360  361
  362  363  364  365  366  367  374  375  376  377  378  379  380  381  382
  383  384  385  393  394  395  396  397  398  399  400  401  402  403  404
  412  413  414  415  416  417  418  419  420  421  422  423  431  432  433
  434  435  436  437  438  439  440  441  442  450  451  452  453  454  455
  456  457  458  459  460  469  470  471  472  473  474  475  476  477  478
  479  488  489  490  491  492  493  494  495  496  497  498  507  508  509
  510  511  512  513  514  515  516  526  527  528  529  530  531  532  533
  534  535  545  546  547  548  549  550  551  552  553  564  565  566  567
  568  569  570  571  572  583  584  585  586  587  588  589  590  602  603
  604  605  606  607  608  609  621  622  623  624  625  626  627  640  641
  642  643  644  645  646  659  660  661  662  663  664  678  679  680  681
  682  697  698  699  700  701  716  717  718  719  735  736  737  754
NSEG ESEG  ***(2I5)
   83  515
NOSEG
  575  576  596  597  617  618  638  658  659  679  699  700  720  740  741
  761  781  782  802  822  842  843  863  883  903  904  924  944  964  965
  985 1005 1025 1026 1046 1066 1086 1106 1107 1127 1147 1167 1187 1207 1227
 1247 1248 1268 1288 1308 1328 1348 1368 1388 1407 1425 1442 1458 1474 1489
 1504 1519 1534 1549 1548 1563 1578 1592 1605 1618 1631 1644 1643 1656 1669
 1668 1681 1694 1693 1706 1705 1718 1717
ELSEG
  545  564  565  583  584  585  602  603  604  621  622  623  624  640  641
  642  643  659  660  661  662  663  678  679  680  681  682  697  698  699
  700  701  702  716  717  718  719  720  721  735  736  737  738  739  740
  741  754  755  756  757  758  759  760  773  774  775  776  777  778  779
  792  793  794  795  796  797  798  799  811  812  813  814  815  816  817
  818  830  831  832  833  834  835  836  837  849  850  851  852  853  854
  855  856  857  868  869  870  871  872  873  874  875  876  887  888  889
  890  891  892  893  894  895  906  907  908  909  910  911  912  913  914
  915  925  926  927  928  929  930  931  932  933  934  944  945  946  947
  948  949  950  951  952  953  963  964  965  966  967  968  969  970  971
  972  973  982  983  984  985  986  987  988  989  990  991  992 1001 1002
 1003 1004 1005 1006 1007 1008 1009 1010 1011 1020 1021 1022 1023 1024 1025
 1026 1027 1028 1029 1030 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048
 1049 1050 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1077
 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1096 1097 1098 1099
 1100 1101 1102 1103 1104 1105 1106 1107 1115 1116 1117 1118 1119 1120 1121
 1122 1123 1124 1125 1126 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143
 1144 1145 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1172
 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1191 1192 1193
 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1210 1211 1212 1213 1214
 1215 1816 1217 1218 1219 1220 1221 1222 1229 1230 1231 1232 1233 1234 1235
 1236 1237 1238 1239 1240 1241 1248 1249 1250 1251 1252 1253 1254 1255 1256
 1257 1258 1259 1260 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277
 1278 1279 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298
 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1324 1325
 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1342 1343 1344 1345 1346
 1347 1348 1349 1350 1351 1352 1359 1360 1361 1362 1363 1364 1365 1366 1367
 1368 1375 1376 1377 1378 1379 1380 1381 1382 1383 1390 1391 1392 1393 1394
 1395 1396 1397 1398 1405 1406 1407 1408 1409 1410 1411 1412 1419 1420 1421
 1422 1423 1424 1425 1426 1433 1434 1435 1436 1437 1438 1439 1440 1447 1448
 1449 1450 1451 1452 1453 1454 1461 1462 1463 1464 1465 1466 1467 1475 1476
 1477 1478 1479 1480 1481 1489 1490 1491 1492 1493 1494 1495 1503 1504 1505
 1506 1507 1508 1516 1517 1518 1519 1520 1528 1529 1530 1531 1532 1540 1541
 1542 1543 1544 1552 1553 1554 1555 1564 1565 1566 1567 1576 1577 1578 1588
 1589 1590 1600 1601 1612
   N  NP1  NP2  NP3  NP4 TYPE      DENS        PO        GNX         G        XL LSTR  *** (6I5,5F10.0,I5) ***
   1    1    2   13   12    2    130.00       .47   1270.99   1016.79    .10000
   2    2    3   14   13    2    130.00       .47   2201.42   1761.14    .10000
   3    3    4   15   14    3    130.00       .47  13625.78  10900.62    .10000
   .
   .
   .
   [same as PD1A.Q4I]
```

excerpt from PD3B.O11

XMAX= 1.7228 Section B-B, HBPP, 08/2002
ACCELERATION VALUES AT OUTCROPPING LAYER 11 - ISFSI Pad, HBPP, ISFSI, 08/2002

-0.000517	-0.000447	-0.000146	0.000269	0.000639	0.000822	0.000748	0.000444		1
0.000029	-0.000339	-0.000517	-0.000434	-0.000121	0.000304	0.000680	0.000866		2
0.000790	0.000484	0.000064	-0.000306	-0.000485	-0.000402	-0.000089	0.000336		3
0.000711	0.000893	0.000812	0.000500	0.000076	-0.000295	-0.000474	-0.000388		4
-0.000072	0.000357	0.000733	0.000915	0.000832	0.000518	0.000092	-0.000281		5
-0.000458	-0.000369	-0.000049	0.000382	0.000760	0.000942	0.000858	0.000542		6
0.000115	-0.000258	-0.000434	-0.000342	-0.000018	0.000417	0.000797	0.000979		7
0.000894	0.000577	0.000148	-0.000223	-0.000397	-0.000301	0.000027	0.000466		8
0.000848	0.001032	0.000947	0.000629	0.000201	-0.000170	-0.000340	-0.000240		9
0.000093	0.000537	0.000922	0.001107	0.001021	0.000703	0.000274	-0.000095		10
-0.000263	-0.000159	0.000179	0.000626	0.001015	0.001201	0.001116	0.000798		11
0.000371	0.000005	-0.000156	-0.000043	0.000305	0.000765	0.001168	0.001369		12
0.001301	0.001003	0.000600	0.000262	0.000133	0.000282	0.000669	0.001169		13
0.001611	0.001851	0.001822	0.001562	0.001198	0.000899	0.000810	0.000997		14
0.001421	0.001955	0.002426	0.002691	0.002681	0.002435	0.002081	0.001787		15
0.001698	0.001879	0.002290	0.002799	0.003235	0.003453	0.003385	0.003071		16
0.002640	0.002264	0.002088	0.002179	0.002497	0.002912	0.003255	0.003382		17
0.003227	0.002834	0.002335	0.001902	0.001683	0.001744	0.002044	0.002452		18
0.002797	0.002933	0.002793	0.002420	0.001944	0.001536	0.001342	0.001426		19
0.001744	0.002164	0.002513	0.002646	0.002497	0.002110	0.001617	0.001192		20
0.000981	0.001048	0.001349	0.001750	0.002079	0.002188	0.002016	0.001605		21
0.001091	0.000648	0.000423	0.000481	0.000776	0.001175	0.001503	0.001613		22
0.001442	0.001033	0.000523	0.000086	-0.000131	-0.000064	0.000242	0.000652		23
0.000993	0.001116	0.000960	0.000569	0.000078	-0.000338	-0.000534	-0.000448		24
-0.000125	0.000296	0.000643	0.000768	0.000612	0.000221	-0.000265	-0.000671		25
-0.000849	-0.000739	-0.000388	0.000063	0.000437	0.000585	0.000442	0.000057		26
-0.000433	-0.000850	-0.001044	-0.000953	-0.000621	-0.000186	0.000177	0.000321		27
0.000182	-0.000192	-0.000664	-0.001058	-0.001229	-0.001114	-0.000760	-0.000305		28
0.000076	0.000237	0.000117	-0.000239	-0.000691	-0.001067	-0.001223	-0.001101		29
-0.000748	-0.000304	0.000059	0.000197	0.000054	-0.000319	-0.000782	-0.001160		30
-0.001309	-0.001175	-0.000809	-0.000355	0.000012	0.000145	-0.000010	-0.000403		31
-0.000890	-0.001294	-0.001467	-0.001353	-0.001000	-0.000548	-0.000170	-0.000013		32
-0.000131	-0.000477	-0.000913	-0.001268	-0.001404	-0.001267	-0.000911	-0.000474		33
-0.000128	-0.000009	-0.000170	-0.000557	-0.001031	-0.001426	-0.001608	-0.001530		34
-0.001245	-0.000889	-0.000624	-0.000573	-0.000770	-0.001150	-0.001568	-0.001863		35
-0.001916	-0.001704	-0.001308	-0.000889	-0.000621	-0.000631	-0.000944	-0.001472		36
-0.002046	-0.002479	-0.002636	-0.002483	-0.002107	-0.001676	-0.001382	-0.001362		37
-0.001649	-0.002156	-0.002707	-0.003107	-0.003210	-0.002980	-0.002502	-0.001954		38
-0.001539	-0.001409	-0.001609	-0.002061	-0.002591	-0.002999	-0.003133	-0.002943		39
-0.002505	-0.001986	-0.001583	-0.001447	-0.001624	-0.002040	-0.002531	-0.002907		40
-0.003023	-0.002841	-0.002439	-0.001987	-0.001673	-0.001640	-0.001918	-0.002422		41
-0.002973	-0.003374	-0.003478	-0.003250	-0.002773	-0.002223	-0.001791	-0.001615		42
-0.001722	-0.002018	-0.002320	-0.002436	-0.002242	-0.001727	-0.001016	-0.000326		43
0.000114	0.000145	-0.000258	-0.000974	-0.001776	-0.002407	-0.002673	-0.002507		44
-0.001993	-0.001329	-0.000753	-0.000455	-0.000508	-0.000843	-0.001281	-0.001602		45
-0.001631	-0.001304	-0.000689	0.000037	0.000665	0.001030	0.001076	0.000877		46
0.000604	0.000459	0.000589	0.001028	0.001676	0.002340	0.002801	0.002904		47
0.002618	0.002057	0.001438	0.001011	0.000963	0.001356	0.002099	0.002986		48
0.003768	0.004265	0.004334	0.004096	0.003702	0.003369	0.003267	0.003456		49
0.003862	0.004307	0.004581	0.004526	0.004097	0.003391	0.002603	0.001962		50
0.001638	0.001682	0.002004	0.002411	0.002677	0.002637	0.002248	0.001614		51
0.000942	0.000470	0.000374	0.000700	0.001341	0.002078	0.002654	0.002873		52
0.002666	0.002125	0.001458	0.000920	0.000711	0.000904	0.001416	0.002041		53
0.002522	0.002647	0.002325	0.001616	0.000705	-0.000167	-0.000795	-0.001084		54
-0.001077	-0.000930	-0.000852	-0.001008	-0.001463	-0.002146	-0.002880	-0.003450		55
-0.003682	-0.003511	-0.003007	-0.002341	-0.001722	-0.001317	-0.001189	-0.001274		56
-0.001417	-0.001437	-0.001207	-0.000708	-0.000045	0.000593	0.001008	0.001072		57
0.000784	0.000277	-0.000229	-0.000502	-0.000397	0.000093	0.000825	0.001558		58
0.002037	0.002088	0.001688	0.000975	0.000199	-0.000366	-0.000518	-0.000199		59
0.000490	0.001334	0.002091	0.002585	0.002776	0.002771	0.002779	0.003020		60
0.003632	0.004602	0.005761	0.006836	0.007553	0.007734	0.007374	0.006646		61
0.005849	0.005297	0.005211	0.005635	0.006417	0.007265	0.007849	0.007921		62
0.007400	0.006408	0.005203	0.004111	0.003384	0.003126	0.003255	0.003549		63
0.003736	0.003602	0.003076	0.002251	0.001341	0.000591	0.000166	0.000077		64
0.000165	0.000160	-0.000219	-0.001135	-0.002564	-0.004269	-0.005870	-0.006962		65
-0.007255	-0.006673	-0.005389	-0.003773	-0.002275	-0.001260	-0.000992	-0.001382		66
-0.002220	-0.003172	-0.003929	-0.004318	-0.004350	-0.004197	-0.004099	-0.004256		67
-0.004716	-0.005363	-0.005929	-0.006107	-0.005664	-0.004543	-0.002899	-0.001058		68
0.000585	0.001695	0.002102	0.001843	0.001130	0.000257	-0.000522	-0.001090		69
-0.001498	-0.001931	-0.002602	-0.003640	-0.004996	-0.006429	-0.007566	-0.008027		70
-0.007566	-0.006179	-0.004130	-0.001882	0.000047	0.001246	0.001551	0.001088		71
0.000223	-0.000578	-0.000928	-0.000671	0.000057	0.000863	0.001237	0.000741		72
-0.000827	-0.003336	-0.006349	-0.009243	-0.011405	-0.012413	-0.012157	-0.010854		73
-0.008947	-0.006944	-0.005236	-0.003975	-0.003045	-0.002140	-0.000904	0.000899		74
0.003282	0.005998	0.008624	0.010700	0.011893	0.012111	0.011536	0.010558		75
0.009628	0.009102	0.009111	0.009531	0.010030	0.010211	0.009765	0.008602		76
0.006889	0.005008	0.003415	0.002489	0.002388	0.003004	0.003985	0.004870		77
0.005232	0.004829	0.003665	0.001981	0.000143	-0.001494	-0.002730	-0.003581		78
-0.004290	-0.005215	-0.006718	-0.009005	-0.012068	-0.015656	-0.019359	-0.022712		79
-0.025334	-0.026997	-0.027667	-0.027452	-0.026534	-0.025074	-0.023169	-0.020840		80
-0.018086	-0.014954	-0.011598	-0.008301	-0.005438	-0.003383	-0.002400	-0.002544		81
-0.003624	-0.005228	-0.006826	-0.007904	-0.008097	-0.007276	-0.005567	-0.003287		82
-0.000842	0.001398	0.003196	0.004489	0.005362	0.005988	0.006538	0.007115		83
0.007727	0.008317	0.008812	0.009195	0.009538	0.010009	0.010813	0.012113		84
0.013944	0.016170	0.018482	0.020475	0.021759	0.022088	0.021450	0.020110		85
0.018558	0.017396	0.017183	0.018280	0.020742	0.024295	0.028379	0.032287		86
0.035310	0.036907	0.036785	0.034949	0.031633	0.027212	0.022050	0.016415		87
0.010390	0.003922	-0.003132	-0.010842	-0.019120	-0.027596	-0.035641	-0.042418		88
-0.047060	-0.048845	-0.047393	-0.042778	-0.035552	-0.026649	-0.017202	-0.008312		89
-0.000827	0.004790	0.008500	0.010595	0.011532	0.011737	0.011440	0.010617		90
0.009032	0.006391	0.002521	-0.002449	-0.008034	-0.013430	-0.017716	-0.020085		91
-0.020107	-0.017874	-0.014011	-0.009519	-0.005503	-0.002855	-0.002012	-0.002845		92
-0.004745	-0.006858	-0.008408	-0.008990	-0.008748	-0.008348	-0.008770	-0.010971		93
-0.015530	-0.022390	-0.030797	-0.039439	-0.046786	-0.051478	-0.052693	-0.050348		94
-0.045082	-0.038058	-0.030602	-0.023870	-0.018554	-0.014812	-0.012321	-0.010521		95
-0.008841	-0.006936	-0.004738	-0.002429	-0.000254	0.001641	0.003361	0.005247		96
0.007782	0.011357	0.016087	0.021651	0.027325	0.032124	0.035094	0.035577		97
0.033436	0.029099	0.023443	0.017531	0.012306	0.008336	0.005699	0.004043		98
0.002790	0.001410	-0.000341	-0.002300	-0.003949	-0.004603	-0.003672	-0.000903		99
0.003512	0.008965	0.014644	0.019779	0.023914	0.027018	0.029469	0.031847		100
0.034680	0.038166	0.042047	0.045632	0.048008	0.048342	0.046179	0.041634		101
0.035382	0.028478	0.022023	0.016843	0.013224	0.010882	0.009086	0.006980		102
0.003914	-0.000277	-0.005197	-0.009997	-0.013698	-0.015541	-0.015319	-0.013502		103
-0.011156	-0.009626	-0.010127	-0.013334	-0.019134	-0.026607	-0.034258	-0.040417		104
-0.043698	-0.043358	-0.039471	-0.032853	-0.024785	-0.016635	-0.009473	-0.003851		105

excerpt from PD3B.Q4O

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          ************************************************
          ************************************************
          ** QUAD4MU  A COMPUTER PROGRAM FOR EVALUATING THE **
          **          SEISMIC RESPONSE OF SOIL STRUCTURES   **
          **                U.C.Davis, 1993                 **
          **             by Martin Byrd Hudson,             **
          **                I.M.Idriss,                     **
          **                and Mohsen Beikae               **
          **    MODIFIED FROM QUAD4, 1973                   **
          **             by I.M.Idriss,                     **
          **                J. Lysmer,                      **
          **                R. Kwang and                    **
          **                H. Bolton Seed                  **
          ************************************************
          ************************************************

    PD3B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
  HORIZONTAL ACCELERATION INPUT FILE:
    PD3B.011
  WITH FIRST LINE:
                        XMAX=  1.7228 Section B-B, HBPP, 08/2002


1

                    NO. OF ELEMENTS =  1659
                NO. OF NODAL POINTS =  1768
                 DEGREES OF FREEDOM =  3536
                     HALF-BANDWIDTH =    44
                CONTROLLING ELEMENT =   337
          NO. OF FIXED ENDRY CONDS. =   128
                   NO. OF ITERATIONS =    10
       TOTAL EQ. POINTS READ (KGMAX) = 12000
 LAST EQ. PTS. USED (N1EQ TO KGEQ)   =     1 12000
   INT. EQ. PTS USED (N2EQ TO N3EQ)  =     1 12000
           TIME INTERVAL OF RECORDS  =  0.0050  SECONDS
          STRAIN CONVERSION FACTOR   =  0.6500
     DAMPING RATIO REDUCTION FACTOR  =   1.000
    PREDOMINANT INPUT MOTION PERIOD  =  0.8000  SECONDS
      EQ. MULT. FACTOR (HORI. COMP.) =  1.0000
 MAXIMUM ACCEL. USED (HORI. COMP.)   =  1.7228

     0 STRESS HISTORIES REQUESTED,
     6 ACCEL HISTORIES REQUESTED,
     2 SEIS COEFF HISTORIES REQUESTED
         OUTPUT FILES ARE AS FOLLOWS:

   NODE   23,   X DIR IN FILE:  PD3B00.Q4A
   NODE   34,   X DIR IN FILE:  PD3B01.Q4A
   NODE   45,   X DIR IN FILE:  PD3B02.Q4A
   NODE  375,   X DIR IN FILE:  PD3B03.Q4A
   NODE  715,   X DIR IN FILE:  PD3B04.Q4A
   NODE 1395,   X DIR IN FILE:  PD3B05.Q4A
 SURFACE   1,   X DIR IN FILE:  PD3B00.QSC
 SURFACE   2,   X DIR IN FILE:  PD3B01.QSC

 SOIL DATA TAKEN FROM FILE: hbsoilnw.dat

 ---------------------
 MATERIAL TYPE NO. 1
 ---------------------
MODULUS:      #1 modulus for Clay PI 15 (Vucetic and Dobry 1991)
DAMPING:      damping for Clay PI 15 (Vucetic & Dobry 1991)
 ==================     ==================
   STRAIN    G/Gmax       STRAIN    DAMPING
 ---------  -------     ---------  --------
   0.0001     1.000        0.0001      1.70
   0.0003     1.000        0.0003      1.70
   0.0010     1.000        0.0010      1.70
   0.0032     0.940        0.0032      2.60
   0.0100     0.820        0.0100      4.50
   0.0316     0.640        0.0316      7.80
   0.1000     0.400        0.1000     11.70
   0.3160     0.210        0.3160     16.30
   1.0000     0.090        1.0000     20.20
   3.1600     0.040        3.1600     23.00
  10.0000     0.020       10.0000     23.00

  [lines skipped]


    ITERATION NO.  10


DAMPING SET AT THE FOLLOWING TWO FREQUENCIES:
THE FIRST NATURAL FREQUENCY: CIRC FREQ=      15.273; PERIOD=     0.411 SEC
  1 TIMES THE NATURAL FREQ.: CIRC FREQ=      15.273; PERIOD=     0.411 SEC


TIME REQUIRED FOR FORMATION AND TRIANGULIZATION OF MATRICES =          0.  SEC

    MODULI (ENG: KSF or SI: KN/M^2) AND DAMPING
 ELM      G-USED       G-NEW      DIF-G   DAMP-USED    DAMP-NEW  DIF-DAMP


   1       697.9        698.3       -0.1   0.08497     0.08489       0.1
   2       758.8        759.3       -0.1   0.13265     0.13258       0.0
   3     10075.3      10078.3        0.0   0.05977     0.05973       0.1
```

4	8832.2	8836.0	0.0	0.07650	0.07645	0.1
5	2047.9	2051.2	-0.2	0.13334	0.13318	0.1
6	2053.5	2054.8	-0.1	0.14327	0.14321	0.0
7	1997.6	1992.7	0.2	0.15304	0.15323	-0.1
8	1883.3	1864.2	1.0	0.16297	0.16367	-0.4
9	1851.6	1848.0	0.2	0.17031	0.17051	-0.1
10	1884.0	1881.5	0.1	0.17452	0.17466	-0.1
11	693.3	693.7	-0.1	0.08577	0.08569	0.1
12	759.7	760.1	-0.1	0.13251	0.13245	0.0
13	9610.4	9612.2	0.0	0.06603	0.06600	0.0
14	8663.6	8667.3	0.0	0.07868	0.07863	0.1
15	2068.8	2072.2	-0.2	0.13233	0.13217	0.1
16	2069.7	2071.0	-0.1	0.14257	0.14251	0.0
17	2009.0	2004.3	0.2	0.15259	0.15278	-0.1
18	1889.4	1870.7	1.0	0.16274	0.16343	-0.4
19	1850.9	1847.4	0.2	0.17035	0.17055	-0.1
20	1880.9	1878.4	0.1	0.17469	0.17482	-0.1

[lines skipped]

PEAK NODAL ACCELERATION VALUES (g's)

NODE	XORD	YORD	X-ACC	AT TIME	Y-ACC	AT TIME
1	-275.0	2.0	1.7477	23.2900	0.0000	0.0000
2	-275.0	-2.0	1.7226	23.2900	0.0000	0.0000
3	-275.0	-6.0	1.6620	23.2850	0.0000	0.0000
4	-275.0	-11.0	1.6542	23.2850	0.0000	0.0000
5	-275.0	-16.0	1.6421	23.2850	0.0000	0.0000
6	-275.0	-21.0	1.5760	23.2850	0.0000	0.0000
7	-275.0	-26.0	1.5049	23.2950	0.0000	0.0000
8	-275.0	-31.0	1.4439	23.3050	0.0000	0.0000
9	-275.0	-36.0	1.4291	23.2450	0.0000	0.0000
10	-275.0	-41.0	1.4457	23.2350	0.0000	0.0000
11	-275.0	-46.0	1.4727	23.2250	0.0000	0.0000
12	-260.0	2.0	1.7460	23.2900	0.0190	22.4250
13	-260.0	-2.0	1.7209	23.2850	0.0173	21.9500
14	-260.0	-6.0	1.6604	23.2850	0.0158	21.9500
15	-260.0	-11.0	1.6524	23.2850	0.0139	21.9500
16	-260.0	-16.0	1.6401	23.2850	0.0119	21.9550
17	-260.0	-21.0	1.5744	23.2850	0.0096	21.9550
18	-260.0	-26.0	1.5033	23.2950	0.0074	21.9550
19	-260.0	-31.0	1.4424	23.3050	0.0054	21.9600
20	-260.0	-36.0	1.4293	23.2450	0.0035	21.9600

[lines skipped]

PEAK ELEMENTS STRESSES (ENG: PSF or SI: N/M^2) AND STRAINS

ELM	SIG-X	SIG-Y	SIG-XY	EPS-MAX	AT TIME
1	111.1	2.7	447.9	0.064	23.295
2	114.0	8.7	1309.0	0.173	23.300
3	1491.9	12.1	2558.6	0.026	23.295
4	1238.8	33.2	4053.8	0.046	23.295
5	290.6	38.5	5267.8	0.257	23.300
6	348.9	47.8	6329.4	0.308	23.300
7	382.8	58.1	7376.4	0.369	23.305
8	389.5	64.8	8393.1	0.446	23.305
9	395.0	68.8	9378.2	0.507	23.310
10	399.1	73.7	10321.6	0.548	23.310
11	326.7	7.3	445.2	0.065	23.295
12	349.2	19.1	1304.2	0.172	23.300
13	4348.3	33.9	2502.6	0.032	23.295
14	3722.0	57.6	4003.5	0.050	23.295
15	902.7	98.3	5219.3	0.253	23.300
16	1063.6	140.4	6289.7	0.304	23.300
17	1169.6	165.0	7346.1	0.366	23.305
18	1190.2	184.5	8372.8	0.444	23.305
19	1206.3	196.9	9370.9	0.507	23.310
20	1218.2	217.1	10327.8	0.550	23.310

[lines skipped]

1 MAX & MIN SEISMIC COEFFICIENTS

SURFACE	WEIGHT(LB or N)	X-DIRECTION NEGATIVE	X-DIRECTION POSITIVE
1	909868.6250	-1.4252	1.0939
2	1551090.8750	-1.4235	1.1214

ITERATION CYCLE NO. 10 AVE OVERALL DAMP = 0.142

TIME REQUIRED FOR 12000 STEPS = 172. SEC

****
** END OF JOB **
****

excerpt from PD3B01.QSC

PD3B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
Seismic Coefficient Surface History
Time Step = 0.005 Sec
Surface 2

0.000000	0.000000	-0.000001	-0.000002	-0.000005	-0.000009	-0.000013	-0.000016
-0.000015	-0.000010	-0.000001	0.000009	0.000019	0.000028	0.000033	0.000036
0.000037	0.000039	0.000044	0.000052	0.000064	0.000077	0.000089	0.000100
0.000107	0.000111	0.000113	0.000116	0.000121	0.000129	0.000140	0.000153
0.000165	0.000174	0.000180	0.000183	0.000183	0.000184	0.000188	0.000194
0.000204	0.000214	0.000224	0.000231	0.000234	0.000234	0.000232	0.000230
0.000231	0.000235	0.000241	0.000249	0.000256	0.000261	0.000261	0.000259
0.000256	0.000251	0.000249	0.000251	0.000256	0.000262	0.000268	0.000271
0.000271	0.000268	0.000263	0.000259	0.000258	0.000260	0.000266	0.000273
0.000280	0.000284	0.000285	0.000284	0.000281	0.000278	0.000279	0.000284
0.000292	0.000301	0.000310	0.000317	0.000321	0.000322	0.000322	0.000323
0.000327	0.000334	0.000345	0.000358	0.000370	0.000380	0.000387	0.000391
0.000394	0.000399	0.000406	0.000418	0.000433	0.000450	0.000468	0.000484
0.000497	0.000509	0.000520	0.000534	0.000552	0.000575	0.000604	0.000635
0.000669	0.000702	0.000734	0.000766	0.000799	0.000835	0.000877	0.000925
0.000979	0.001038	0.001099	0.001160	0.001221	0.001280	0.001341	0.001405
0.001473	0.001547	0.001624	0.001705	0.001784	0.001861	0.001934	0.002003
0.002068	0.002133	0.002197	0.002262	0.002326	0.002389	0.002446	0.002496
0.002537	0.002571	0.002598	0.002621	0.002641	0.002660	0.002677	0.002690
0.002698	0.002699	0.002692	0.002677	0.002656	0.002633	0.002608	0.002583
0.002557	0.002530	0.002498	0.002460	0.002415	0.002365	0.002310	0.002253
0.002196	0.002141	0.002086	0.002031	0.001973	0.001910	0.001843	0.001770
0.001695	0.001620	0.001546	0.001476	0.001408	0.001342	0.001275	0.001205
0.001131	0.001055	0.000979	0.000903	0.000832	0.000765	0.000703	0.000643
0.000586	0.000524	0.000462	0.000399	0.000336	0.000276	0.000220	0.000170
0.000125	0.000083	0.000042	0.000001	-0.000042	-0.000087	-0.000130	-0.000170
-0.000206	-0.000235	-0.000259	-0.000280	-0.000299	-0.000320	-0.000342	-0.000367
-0.000391	-0.000413	-0.000431	-0.000445	-0.000454	-0.000460	-0.000467	-0.000475
-0.000486	-0.000499	-0.000513	-0.000524	-0.000533	-0.000536	-0.000536	-0.000533
-0.000531	-0.000530	-0.000532	-0.000537	-0.000542	-0.000546	-0.000547	-0.000544
-0.000538	-0.000531	-0.000524	-0.000521	-0.000521	-0.000524	-0.000529	-0.000533
-0.000534	-0.000532	-0.000527	-0.000521	-0.000517	-0.000516	-0.000520	-0.000527
-0.000537	-0.000547	-0.000554	-0.000559	-0.000560	-0.000560	-0.000561	-0.000565
-0.000572	-0.000582	-0.000594	-0.000604	-0.000611	-0.000614	-0.000615	-0.000615
-0.000617	-0.000622	-0.000631	-0.000645	-0.000662	-0.000679	-0.000695	-0.000710
-0.000725	-0.000740	-0.000758	-0.000780	-0.000805	-0.000833	-0.000862	-0.000890
-0.000914	-0.000935	-0.000955	-0.000976	-0.001000	-0.001030	-0.001066	-0.001107
-0.001151	-0.001196	-0.001239	-0.001280	-0.001320	-0.001361	-0.001406	-0.001455
-0.001510	-0.001568	-0.001628	-0.001685	-0.001737	-0.001784	-0.001825	-0.001864
-0.001903	-0.001943	-0.001986	-0.002030	-0.002073	-0.002113	-0.002147	-0.002174
-0.002196	-0.002215	-0.002232	-0.002250	-0.002270	-0.002290	-0.002310	-0.002326
-0.002337	-0.002344	-0.002347	-0.002349	-0.002353	-0.002360	-0.002371	-0.002384
-0.002398	-0.002409	-0.002415	-0.002415	-0.002410	-0.002399	-0.002385	-0.002371
-0.002353	-0.002330	-0.002300	-0.002259	-0.002207	-0.002145	-0.002076	-0.002003
-0.001933	-0.001868	-0.001811	-0.001761	-0.001716	-0.001672	-0.001626	-0.001576
-0.001523	-0.001468	-0.001413	-0.001360	-0.001310	-0.001260	-0.001210	-0.001154
-0.001091	-0.001019	-0.000938	-0.000850	-0.000757	-0.000661	-0.000561	-0.000458
-0.000349	-0.000232	-0.000106	0.000027	0.000166	0.000307	0.000445	0.000577
0.000703	0.000824	0.000944	0.001066	0.001194	0.001330	0.001474	0.001623
0.001775	0.001928	0.002078	0.002226	0.002372	0.002518	0.002663	0.002807
0.002946	0.003078	0.003197	0.003300	0.003386	0.003455	0.003509	0.003550
0.003581	0.003602	0.003612	0.003609	0.003592	0.003558	0.003508	0.003446
0.003374	0.003299	0.003224	0.003150	0.003077	0.003003	0.002926	0.002842
0.002751	0.002654	0.002554	0.002454	0.002358	0.002266	0.002177	0.002088
0.001995	0.001893	0.001779	0.001654	0.001517	0.001371	0.001218	0.001058
0.000892	0.000717	0.000533	0.000339	0.000136	-0.000075	-0.000288	-0.000497
-0.000700	-0.000891	-0.001070	-0.001235	-0.001387	-0.001526	-0.001651	-0.001760
-0.001851	-0.001922	-0.001972	-0.002002	-0.002014	-0.002013	-0.002001	-0.001981
-0.001954	-0.001918	-0.001871	-0.001809	-0.001733	-0.001641	-0.001538	-0.001427
-0.001315	-0.001203	-0.001094	-0.000987	-0.000878	-0.000763	-0.000639	-0.000503
-0.000355	-0.000195	-0.000024	0.000158	0.000352	0.000561	0.000788	0.001036
0.001305	0.001593	0.001895	0.002204	0.002515	0.002820	0.003118	0.003408
0.003693	0.003975	0.004256	0.004534	0.004806	0.005066	0.005306	0.005521
0.005707	0.005863	0.005988	0.006087	0.006162	0.006213	0.006240	0.006242
0.006215	0.006158	0.006070	0.005953	0.005807	0.005637	0.005440	0.005215
0.004957	0.004663	0.004327	0.003949	0.003532	0.003084	0.002617	0.002143
0.001674	0.001219	0.000781	0.000361	-0.000046	-0.000442	-0.000833	-0.001220
-0.001603	-0.001980	-0.002351	-0.002713	-0.003067	-0.003414	-0.003753	-0.004084
-0.004401	-0.004697	-0.004962	-0.005188	-0.005365	-0.005490	-0.005562	-0.005584
-0.005565	-0.005511	-0.005432	-0.005333	-0.005221	-0.005101	-0.004979	-0.004860
-0.004751	-0.004659	-0.004587	-0.004536	-0.004500	-0.004471	-0.004436	-0.004383
-0.004302	-0.004188	-0.004041	-0.003864	-0.003667	-0.003455	-0.003236	-0.003010
-0.002779	-0.002542	-0.002302	-0.002062	-0.001835	-0.001635	-0.001476	-0.001374
-0.001336	-0.001365	-0.001455	-0.001594	-0.001765	-0.001952	-0.002140	-0.002319
-0.002478	-0.002612	-0.002713	-0.002773	-0.002783	-0.002732	-0.002613	-0.002420
-0.002155	-0.001824	-0.001437	-0.001008	-0.000548	-0.000069	0.000424	0.000925
0.001432	0.001942	0.002449	0.002945	0.003419	0.003862	0.004266	0.004626
0.004945	0.005227	0.005478	0.005707	0.005916	0.006105	0.006271	0.006405
0.006500	0.006547	0.006541	0.006480	0.006361	0.006181	0.005936	0.005619
0.005218	0.004722	0.004119	0.003400	0.002563	0.001610	0.000553	-0.000592
-0.001807	-0.003066	-0.004347	-0.005625	-0.006873	-0.008069	-0.009190	-0.010218
-0.011139	-0.011946	-0.012640	-0.013227	-0.013719	-0.014133	-0.014480	-0.014772
-0.015013	-0.015203	-0.015333	-0.015395	-0.015377	-0.015270	-0.015069	-0.014770
-0.014376	-0.013891	-0.013318	-0.012665	-0.011935	-0.011136	-0.010271	-0.009348
-0.008370	-0.007343	-0.006269	-0.005148	-0.003981	-0.002763	-0.001494	-0.000174
0.001192	0.002594	0.004018	0.005446	0.006859	0.008246	0.009597	0.010913
0.012203	0.013480	0.014760	0.016057	0.017378	0.018721	0.020076	0.021419
0.022721	0.023947	0.025061	0.026026	0.026807	0.027372	0.027688	0.027727
0.027462	0.026870	0.025936	0.024657	0.023046	0.021132	0.018964	0.016604
0.014129	0.011617	0.009143	0.006773	0.004557	0.002530	0.000706	-0.000910
-0.002328	-0.003562	-0.004632	-0.005559	-0.006369	-0.007089	-0.007751	-0.008387
-0.009029	-0.009703	-0.010425	-0.011198	-0.012010	-0.012837	-0.013646	-0.014402
-0.015073	-0.015639	-0.016089	-0.016426	-0.016659	-0.016801	-0.016865	-0.016860
-0.016789	-0.016660	-0.016481	-0.016272	-0.016063	-0.015894	-0.015809	-0.015851
-0.016052	-0.016425	-0.016963	-0.017636	-0.018401	-0.019201	-0.019985	-0.020705
-0.021327	-0.021829	-0.022201	-0.022441	-0.022553	-0.022538	-0.022401	-0.022142
-0.021763	-0.021267	-0.020654	-0.019928	-0.019084	-0.018116	-0.017015	-0.015766
-0.014359	-0.012789	-0.011063	-0.009200	-0.007234	-0.005209	-0.003171	-0.001169
0.000758	0.002582	0.004282	0.005851	0.007285	0.008582	0.009741	0.010762
0.011647	0.012402	0.013043	0.013592	0.014078	0.014534	0.014993	0.015481
0.016017	0.016613	0.017275	0.018003	0.018800	0.019667	0.020608	0.021622
0.022701	0.023828	0.024974	0.026101	0.027163	0.028116	0.028921	0.029551

Attachment F

SPECTRAD

Input and Output Excerpts

(see Table 7-7 for listing of files)

SPECTRA1.INP

```
PD1A00.Q4A
0
PD1A00.Q4A
PD1A00.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD1A01.Q4A
0
PD1A01.Q4A
PD1A01.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD1A02.Q4A
0
PD1A02.Q4A
PD1A02.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD3A00.Q4A
0
PD3A00.Q4A
PD3A00.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD3A01.Q4A
0
PD3A01.Q4A
PD3A01.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD3A02.Q4A
0
PD3A02.Q4A
PD3A02.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD1B00.Q4A
0
PD1B00.Q4A
PD1B00.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD1B01.Q4A
0
PD1B01.Q4A
PD1B01.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD1B02.Q4A
0
PD1B02.Q4A
PD1B02.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD3B00.Q4A
0
PD3B00.Q4A
PD3B00.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD3B01.Q4A
0
PD3B01.Q4A
PD3B01.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
PD3B02.Q4A
0
PD3B02.Q4A
PD3B02.050
(8F10.6)
4 12000 1.0 0.005 1 0.05
```

SPECTRA2.INP

```
S1AA.AC8
0
S1AA.AC8
S1AA.050
(8E15.7)
2 15999 1.0 0.005 1 0.05
S3AA.AC8
0
S3AA.AC8
S3AA.050
(8E15.7)
2 15999 1.0 0.005 1 0.05
S1BB.AC8
0
S1BB.AC8
S1BB.050
(8E15.7)
2 15999 1.0 0.005 1 0.05
S3BB.AC8
0
S3BB.AC8
S3BB.050
(8E15.7)
2 15999 1.0 0.005 1 0.05
```

PD1A00.050

PD1A00.050
PD1A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
12000 points 0.005 dt parameters are t,sd,sv,psv,sa,sr
97

1	0.01000	0.00333	0.09547	2.09104	1.33929	1.00158
2	0.01500	0.00750	0.21696	3.14198	1.34152	1.00325
3	0.02000	0.01337	0.39121	4.20146	1.34556	1.00627
4	0.02500	0.02098	0.61892	5.27332	1.35114	1.01044
5	0.03000	0.03037	0.90543	6.36122	1.35838	1.01585
6	0.03500	0.04163	1.28837	7.47341	1.36728	1.02250
7	0.04000	0.05516	1.80447	8.66519	1.38791	1.03793
8	0.04200	0.06152	2.07841	9.20380	1.40461	1.05042
9	0.04400	0.06865	2.42715	9.80255	1.42815	1.06803
10	0.04600	0.07712	2.92164	10.53395	1.46649	1.09670
11	0.04800	0.08729	3.74167	11.42654	1.52457	1.14014
12	0.05000	0.09776	4.91743	12.28480	1.57441	1.17741
13	0.05500	0.11774	6.40751	13.45050	1.56833	1.17286
14	0.06000	0.13376	5.89117	14.00743	1.50302	1.12402
15	0.06500	0.16227	6.17306	15.68575	1.54931	1.15864
16	0.07000	0.19570	8.59547	17.56638	1.60497	1.20027
17	0.07500	0.22226	11.12470	18.62012	1.59474	1.19261
18	0.08000	0.26582	12.24446	20.87776	1.67530	1.25286
19	0.08500	0.30802	15.28740	22.76896	1.71474	1.28235
20	0.09000	0.36980	15.48530	25.81685	1.84425	1.37921
21	0.09500	0.40704	18.03481	26.92126	1.82223	1.36274
22	0.10000	0.46155	21.13822	29.00035	1.85560	1.38769
23	0.11000	0.64079	27.49842	36.60181	2.14776	1.60618
24	0.12000	0.81660	30.92526	42.75688	2.29468	1.71605
25	0.13000	0.99003	39.73797	47.85022	2.35537	1.76144
26	0.14000	1.11965	43.68586	50.24984	2.30034	1.72029
27	0.15000	1.27740	47.12838	51.50755	2.28580	1.70942
28	0.16000	1.84940	56.34097	72.62592	2.92689	2.18885
29	0.17000	2.04122	67.71910	75.44323	2.85079	2.13193
30	0.18000	2.54107	74.70020	88.70014	3.16765	2.36890
31	0.19000	2.62909	77.86652	86.94234	2.93585	2.19555
32	0.20000	3.38704	100.48904	106.40710	3.43126	2.56603
33	0.22000	4.29304	108.24632	122.60905	3.58454	2.68066
34	0.24000	4.60376	113.91713	120.52608	3.23313	2.41786
35	0.26000	5.36631	129.36870	129.68269	3.20871	2.39960
36	0.28000	6.77330	153.26727	151.99242	3.49369	2.61272
37	0.30000	8.00556	144.70984	167.66808	3.59591	2.68917
38	0.32000	9.16329	169.00874	179.92075	3.61799	2.70568
39	0.34000	8.76702	160.56488	162.01413	3.06720	2.29378
40	0.36000	9.37074	170.45906	163.55029	2.92299	2.18593
41	0.38000	9.58341	170.51224	158.45880	2.68228	2.00592
42	0.40000	11.38530	167.42929	178.83981	2.87571	2.15057
43	0.42000	12.60725	179.76813	188.60400	2.88976	2.16108
44	0.44000	14.09820	207.01413	201.32175	2.94725	2.20407
45	0.46000	14.90988	197.68434	203.65550	2.85133	2.13234
46	0.48000	13.82482	171.93431	180.96646	2.42411	1.81285
47	0.50000	15.54463	159.44859	195.33957	2.51273	1.87912
48	0.55000	19.36351	165.77737	221.20822	2.58643	1.93424
49	0.60000	22.17700	178.92422	232.23695	2.48733	1.86013
50	0.65000	26.86259	206.03151	259.66553	2.56777	1.92028
51	0.70000	32.07250	234.39810	287.88208	2.64454	1.97769
52	0.75000	37.88619	289.73331	317.39459	2.71908	2.03344
53	0.80000	44.96416	299.96588	353.14771	2.86198	2.12535
54	0.85000	49.11325	296.30106	363.04425	2.74949	2.05618
55	0.90000	52.14279	316.16003	364.02533	2.60174	1.94569
56	0.95000	51.35487	302.55475	339.65494	2.29930	1.71951
57	1.00000	58.05069	326.66855	364.74323	2.34576	1.75425
58	1.10000	71.82284	390.47345	410.25107	2.39826	1.79352
59	1.20000	90.45879	430.83206	473.64111	2.53756	1.89769
60	1.30000	110.09064	478.30460	532.09222	2.63560	1.97101
61	1.40000	133.08324	610.74512	597.27618	2.74371	2.05186
62	1.50000	142.72266	609.60211	597.83527	2.56333	1.91696
63	1.60000	161.74217	624.11743	635.16003	2.55689	1.91215
64	1.70000	165.15411	604.03290	610.40814	2.31240	1.72930
65	1.80000	171.07986	593.06519	597.18140	2.13874	1.59944
66	1.90000	168.65291	603.76227	557.72498	1.88926	1.41287
67	2.00000	152.38789	564.11273	478.74069	1.54315	1.15403
68	2.20000	136.71660	477.50345	390.46170	1.14374	0.85534
69	2.40000	131.33350	440.06711	343.83029	0.92650	0.69287
70	2.60000	145.50461	423.58533	351.62787	0.87363	0.65334
71	2.80000	156.36705	474.78476	350.88684	0.80775	0.60407
72	3.00000	144.79890	453.13745	303.26611	0.65280	0.48819
73	3.20000	142.98486	445.00256	280.75012	0.56688	0.42393
74	3.40000	140.27238	438.67331	259.22275	0.49308	0.36875
75	3.60000	138.02191	435.39395	240.89368	0.43357	0.32424
76	3.80000	132.31293	430.97116	218.77564	0.37478	0.28028
77	4.00000	145.43022	419.94736	228.44127	0.36921	0.27611
78	4.20000	153.17749	406.76675	229.15300	0.35257	0.26366
79	4.40000	161.49472	395.65265	230.61392	0.33740	0.25232
80	4.60000	157.60902	386.64594	215.27972	0.30129	0.22532
81	4.80000	159.66342	377.34085	208.99893	0.28111	0.21022
82	5.00000	166.79733	364.71790	209.60371	0.27086	0.20256
83	5.50000	164.31485	313.95593	187.71284	0.22203	0.16604
84	6.00000	186.61119	280.41913	195.41879	0.20960	0.15675
85	6.50000	173.35095	265.07468	167.56863	0.16643	0.12446
86	7.00000	156.16299	267.50165	140.17157	0.12923	0.09664
87	7.50000	166.34372	278.74823	139.35579	0.12009	0.08981
88	8.00000	205.62021	278.93121	161.49374	0.12985	0.09710
89	8.50000	252.21222	269.34158	186.43483	0.14147	0.10580
90	9.00000	258.69931	256.59802	180.60619	0.12954	0.09687
91	9.50000	257.75146	268.11090	170.47371	0.11608	0.08681
92	10.00000	230.82245	276.85574	145.03003	0.09388	0.07021
93	11.00000	178.54047	285.87006	101.98207	0.06106	0.04566
94	12.00000	158.79553	287.59085	83.14515	0.04808	0.03595
95	13.00000	147.45514	286.12375	71.26830	0.03888	0.02908
96	14.00000	139.85101	283.81467	62.76499	0.03255	0.02434
97	15.00000	134.88640	281.65298	56.50108	0.02811	0.02102

PD1A01.050

```
PD1A01.050
PD1A: HUMBOLDT BAY, ISFSI, SITE 4. PG&E, 06/2003
  12000 points 0.005 dt  parameters are t,sd,sv,psv,sa,mr
   97
    1   0.01000   0.00330   0.09632   2.07105   1.32656   1.00190
    2   0.01500   0.00743   0.21702   3.11132   1.32843   1.00332
    3   0.02000   0.01325   0.39137   4.16116   1.33256   1.00643
    4   0.02500   0.02077   0.62447   5.22031   1.33748   1.01015
    5   0.03000   0.03006   0.91711   6.29503   1.34414   1.01518
    6   0.03500   0.04119   1.30195   7.39509   1.35318   1.02200
    7   0.04000   0.05480   1.82115   8.60747   1.37880   1.04136
    8   0.04200   0.06110   2.09959   9.14000   1.39500   1.05359
    9   0.04400   0.06822   2.45284   9.74205   1.41854   1.07137
   10   0.04600   0.07655   2.95968  10.45653   1.45629   1.09988
   11   0.04800   0.08662   3.77763  11.33845   1.51200   1.14196
   12   0.05000   0.09713   4.94749  12.20514   1.55762   1.17642
   13   0.05500   0.11655   6.42737  13.31459   1.55440   1.17398
   14   0.06000   0.13502   5.81155  14.13919   1.51321   1.14287
   15   0.06500   0.16371   6.34594  15.82536   1.56345   1.18082
   16   0.07000   0.19556   8.69782  17.55347   1.60427   1.21164
   17   0.07500   0.22136  11.35658  18.54456   1.58640   1.19815
   18   0.08000   0.26769  12.51904  21.02407   1.69289   1.27857
   19   0.08500   0.30392  15.31840  22.46564   1.69509   1.28023
   20   0.09000   0.36686  15.34534  25.61190   1.82796   1.38059
   21   0.09500   0.40355  17.68360  26.69062   1.80807   1.36557
   22   0.10000   0.45708  20.79039  28.71901   1.83617   1.38679
   23   0.11000   0.63055  27.09574  36.01694   2.11480   1.59723
   24   0.12000   0.80309  30.38772  42.04958   2.25497   1.70309
   25   0.13000   0.98910  39.70744  47.80518   2.35361   1.77760
   26   0.14000   1.11784  43.29511  50.16875   2.29434   1.73283
   27   0.15000   1.26231  46.44500  52.87538   2.25774   1.70519
   28   0.16000   1.81535  55.06841  71.28881   2.86970   2.16738
   29   0.17000   2.00460  66.11298  74.08971   2.79643   2.11204
   30   0.18000   2.48293  73.04127  86.67074   3.09716   2.33917
   31   0.19000   2.57110  75.94999  85.02467   2.87257   2.16955
   32   0.20000   3.30932  98.14060 103.96525   3.35296   2.53237
   33   0.22000   4.21735 106.08655 120.44724   3.52134   2.65954
   34   0.24000   4.53679 112.02590 118.77292   3.18596   2.40624
   35   0.26000   5.28841 127.26033 127.80017   3.16236   2.38841
   36   0.28000   6.66727 150.57764 149.61314   3.43893   2.59729
   37   0.30000   7.87438 141.56441 164.92062   3.53687   2.67127
   38   0.32000   9.01033 166.11130 176.91750   3.55756   2.68689
   39   0.34000   8.66090 158.87262 160.05305   3.03022   2.28861
   40   0.36000   9.27392 168.70842 161.86049   2.89316   2.18509
   41   0.38000   9.50506 168.72836 157.16338   2.66100   2.00975
   42   0.40000  11.34902 166.62920 178.26999   2.86728   2.16555
   43   0.42000  12.57013 179.01404 188.04875   2.88212   2.17676
   44   0.44000  14.08331 206.03262 201.10916   2.94325   2.22293
   45   0.46000  14.86877 196.68234 203.09393   2.84244   2.14679
   46   0.48000  13.81908 171.49353 180.89134   2.42354   1.83041
   47   0.50000  13.54276 158.76845 195.31613   2.51291   1.89790
   48   0.55000  19.37279 165.41371 221.31427   2.58801   1.95463
   49   0.60000  22.20786 178.90297 232.56020   2.49102   1.88137
   50   0.65000  26.91233 206.16643 260.14636   2.57258   1.94297
   51   0.70000  32.13780 234.60629 288.46823   2.64964   2.00117
   52   0.75000  37.96630 289.33740 318.06573   2.72498   2.05807
   53   0.80000  45.03479 299.78394 353.70242   2.84633   2.14973
   54   0.85000  49.18253 296.98395 363.55637   2.75324   2.07942
   55   0.90000  52.22266 316.69189 364.58292   2.60572   1.96801
   56   0.95000  51.43438 302.91669 340.18079   2.30289   1.73928
   57   1.00000  58.13501 327.02652 365.27301   2.34921   1.77427
   58   1.10000  71.91463 390.76456 410.77539   2.40133   1.81363
   59   1.20000  90.54879 431.05823 474.11234   2.54012   1.91846
   60   1.30000 110.18253 478.33975 532.53638   2.63778   1.99222
   61   1.40000 133.21342 611.06836 597.86041   2.74641   2.07426
   62   1.50000 142.81859 610.37592 598.23712   2.56506   1.93730
   63   1.60000 161.82912 624.51514 635.50146   2.55820   1.93211
   64   1.70000 165.26694 604.30896 610.82513   2.31401   1.74769
   65   1.80000 171.20082 593.45367 597.60358   2.14023   1.61644
   66   1.90000 168.78021 603.64270 558.14600   1.89072   1.42799
   67   2.00000 152.48386 563.86652 479.04218   1.54406   1.16617
   68   2.20000 136.81114 477.15076 390.73169   1.14460   0.86447
   69   2.40000 131.40508 439.78671 344.01767   0.92697   0.70011
   70   2.60000 145.58002 423.35532 351.81009   0.87406   0.66015
   71   2.80000 156.43011 474.56430 351.02835   0.80808   0.61031
   72   3.00000 144.84665 452.91187 303.36612   0.65299   0.49318
   73   3.20000 143.02779 444.76343 280.83441   0.56703   0.42826
   74   3.40000 140.31009 438.41916 259.29242   0.49322   0.37251
   75   3.60000 138.06027 435.15201 240.96063   0.43370   0.32756
   76   3.80000 132.34955 430.72775 218.83598   0.37488   0.28314
   77   4.00000 145.45442 419.68088 228.47928   0.36928   0.27890
   78   4.20000 153.19812 406.50845 229.18387   0.35262   0.26632
   79   4.40000 161.51205 395.38367 230.63867   0.33744   0.25486
   80   4.60000 157.62430 386.37607 215.30060   0.30133   0.22758
   81   4.80000 159.67366 377.08258 209.01233   0.28112   0.21232
   82   5.00000 166.83842 364.45776 209.65535   0.27095   0.20464
   83   5.50000 164.31366 313.67938 187.71147   0.22212   0.16776
   84   6.00000 186.61833 280.28806 195.42627   0.20960   0.15831
   85   6.50000 173.35916 264.96289 167.57657   0.16644   0.12571
   86   7.00000 156.16577 267.21838 140.17407   0.12923   0.09760
   87   7.50000 166.36255 278.43436 139.37157   0.12010   0.09071
   88   8.00000 205.64372 278.59277 161.51221   0.12986   0.09808
   89   8.50000 252.22404 269.03366 186.44357   0.14148   0.10686
   90   9.00000 258.69247 256.50027 180.60141   0.12954   0.09783
   91   9.50000 257.73038 267.98975 170.45976   0.11607   0.08766
   92  10.00000 230.92232 276.65036 145.09277   0.09392   0.07093
   93  11.00000 178.54341 285.75452 101.98376   0.06108   0.04613
   94  12.00000 156.81281 287.47711  83.15419   0.04811   0.03633
   95  13.00000 147.60281 285.93115  71.33968   0.03895   0.02941
   96  14.00000 139.89439 283.67007  62.78446   0.03259   0.02461
   97  15.00000 134.98193 281.38037  56.54110   0.02813   0.02125
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PD1A02.050

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PD1A02.050
PD1A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
  12000 points 0.005 dt  parameters are t,sd,sv,psv,sa,sr
   97
   1   0.01000   0.00327   0.09624   2.05505   1.31625   1.00112
   2   0.01500   0.00738   0.21989   3.09007   1.31947   1.00358
   3   0.02000   0.01315   0.39451   4.13235   1.32331   1.00649
   4   0.02500   0.02062   0.62754   5.18249   1.32776   1.00987
   5   0.03000   0.02987   0.92027   6.25492   1.33528   1.01560
   6   0.03500   0.04108   1.30775   7.37408   1.34942   1.02635
   7   0.04000   0.05462   1.82266   8.57952   1.37442   1.04537
   8   0.04200   0.06090   2.10080   9.11048   1.39064   1.05770
   9   0.04400   0.06801   2.45757   9.71193   1.41349   1.07508
  10   0.04600   0.07626   2.96732  10.41684   1.45113   1.10371
  11   0.04800   0.08628   3.78178  11.29468   1.50673   1.14600
  12   0.05000   0.09681   4.95007  12.16494   1.55332   1.18143
  13   0.05500   0.11581   6.43590  13.22968   1.54557   1.17554
  14   0.06000   0.13577   5.76324  14.21758   1.51585   1.15294
  15   0.06500   0.16405   6.39969  15.85813   1.56704   1.19187
  16   0.07000   0.19470   8.75306  17.47646   1.59759   1.21510
  17   0.07500   0.22290  11.47592  18.67339   1.59495   1.21310
  18   0.08000   0.27014  12.66755  21.21693   1.70698   1.29831
  19   0.08500   0.30104  15.45121  22.25253   1.68185   1.27919
  20   0.09000   0.36478  15.33166  25.46660   1.81647   1.38158
  21   0.09500   0.40152  17.49999  26.55612   1.79882   1.36816
  22   0.10000   0.45466  20.63099  28.56714   1.82950   1.39149
  23   0.11000   0.62351  26.75337  35.61505   2.08476   1.58564
  24   0.12000   0.79036  29.89553  41.38318   2.21737   1.68651
  25   0.13000   0.98445  39.48247  47.58063   2.34542   1.78390
  26   0.14000   1.11393  42.85254  49.99288   2.28739   1.73976
  27   0.15000   1.24958  45.79058  52.34233   2.23675   1.70124
  28   0.16000   1.78501  53.93441  70.09733   2.81925   2.14428
  29   0.17000   1.97208  64.73241  72.88782   2.74880   2.09070
  30   0.18000   2.43425  71.68027  84.97139   3.03793   2.31061
  31   0.19000   2.52193  74.68237  83.39859   2.81877   2.14392
  32   0.20000   3.24334  96.41661 101.89240   3.28628   2.49950
  33   0.22000   4.15246 104.21072 118.59403   3.46711   2.63704
  34   0.24000   4.47928 110.39410 117.26719   3.14540   2.39235
  35   0.26000   5.22101 125.42444 126.17155   3.12242   2.37487
  36   0.28000   6.57533 148.26065 147.55009   3.39143   2.57948
  37   0.30000   7.76056 139.36276 162.53685   3.48564   2.65113
  38   0.32000   8.87828 163.55898 174.32463   3.50540   2.66616
  39   0.34000   8.57083 157.40892 158.38861   2.99888   2.28091
  40   0.36000   9.19215 167.17436 160.43332   2.86799   2.18136
  41   0.38000   9.43849 167.27528 156.06265   2.64292   2.01017
  42   0.40000  11.32065 165.99266 177.82442   2.86042   2.17560
  43   0.42000  12.54022 178.37894 187.60127   2.87604   2.18748
  44   0.44000  14.07228 205.23738 200.95168   2.94013   2.23623
  45   0.46000  14.83574 195.93690 202.64282   2.83630   2.15725
  46   0.48000  13.81549 171.13538 180.84428   2.42330   1.84313
  47   0.50000  15.54546 158.21194 195.34999   2.51331   1.91159
  48   0.55000  19.38669 165.11092 221.47298   2.58964   1.96965
  49   0.60000  22.24001 178.87563 232.89680   2.49458   1.89734
  50   0.65000  26.95789 206.29962 260.56679   2.57699   1.96002
  51   0.70000  32.19682 234.82214 288.99802   2.65449   2.01897
  52   0.75000  38.03996 288.98633 318.48286   2.73029   2.07662
  53   0.80000  45.09859 299.78568 354.20349   2.85025   2.16746
  54   0.85000  49.24595 297.57660 364.02521   2.75670   2.09671
  55   0.90000  52.29425 317.18240 365.08273   2.60929   1.98459
  56   0.95000  51.50542 303.23514 340.65067   2.30610   1.75399
  57   1.00000  58.21014 327.34137 365.74512   2.35228   1.78912
  58   1.10000  71.99680 391.00262 411.24478   2.40409   1.82852
  59   1.20000  90.62867 431.27142 474.53061   2.54240   1.93371
  60   1.30000 110.26495 478.36481 532.93475   2.63975   2.00776
  61   1.40000 133.32909 611.36829 598.37952   2.74881   2.09071
  62   1.50000 142.90314 611.05194 598.59125   2.56659   1.95212
  63   1.60000 161.90698 624.88074 635.80725   2.55938   1.94663
  64   1.70000 165.36787 604.55579 611.19824   2.31546   1.76111
  65   1.80000 171.30885 593.81323 597.98071   2.14157   1.62885
  66   1.90000 168.89214 603.54333 558.51611   1.89201   1.43903
  67   2.00000 152.56905 563.66724 479.30981   1.54487   1.17501
  68   2.20000 136.89464 476.86093 390.97015   1.14535   0.87114
  69   2.40000 131.46899 439.57782 344.18503   0.92739   0.70536
  70   2.60000 145.64720 423.15509 351.97244   0.87445   0.66510
  71   2.80000 156.48714 474.36124 351.15631   0.80838   0.61484
  72   3.00000 144.88840 452.71167 303.45355   0.65316   0.49679
  73   3.20000 143.06790 444.55292 280.91318   0.56717   0.43138
  74   3.40000 140.34895 438.23032 259.36426   0.49335   0.37524
  75   3.60000 138.09474 434.95941 241.02080   0.43381   0.32995
  76   3.80000 132.37961 430.51721 218.88568   0.37496   0.28519
  77   4.00000 145.48288 419.48108 228.52399   0.36936   0.28093
  78   4.20000 153.21756 406.29135 229.21295   0.35266   0.26823
  79   4.40000 161.52798 395.16345 230.66142   0.33748   0.25669
  80   4.60000 157.63501 386.16797 215.31523   0.30135   0.22920
  81   4.80000 159.69463 376.89529 209.03978   0.28115   0.21384
  82   5.00000 166.85495 364.25854 209.67612   0.27099   0.20611
  83   5.50000 164.33195 313.47980 187.73238   0.22222   0.16902
  84   6.00000 186.62462 280.22006 195.43285   0.20960   0.15942
  85   6.50000 173.39032 264.84747 167.60669   0.16647   0.12662
  86   7.00000 156.17474 266.97961 140.18213   0.12923   0.09829
  87   7.50000 166.38173 278.16931 139.38763   0.12011   0.09136
  88   8.00000 205.64598 278.37524 161.51398   0.12986   0.09877
  89   8.50000 252.27441 268.80380 186.46080   0.14151   0.10763
  90   9.00000 258.70685 256.38895 180.61145   0.12954   0.09853
  91   9.50000 257.72868 267.89505 170.46526   0.11607   0.08828
  92  10.00000 230.86842 276.59647 145.05891   0.09390   0.07142
  93  11.00000 178.43666 285.65320 101.92278   0.06112   0.04648
  94  12.00000 158.67819 287.33600  83.08371   0.04810   0.03658
  95  13.00000 147.74771 285.84946  71.40971   0.03901   0.02967
  96  14.00000 139.88483 283.54510  62.78016   0.03262   0.02481
  97  15.00000 135.13664 281.45425  56.60591   0.02817   0.02142
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PD3A00.050

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PD3A00.050
PD3A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
  12000 points 0.005 dt  parameters are t,sd,sv,psv,sa,mr
   97
   1   0.01000   0.00301   0.07051   1.89361   1.21287   1.00104
   2   0.01500   0.00679   0.15970   2.84361   1.21419   1.00213
   3   0.02000   0.01209   0.28809   3.79742   1.21612   1.00373
   4   0.02500   0.01892   0.46193   4.75579   1.21834   1.00555
   5   0.03000   0.02732   0.69086   5.72194   1.22159   1.00824
   6   0.03500   0.03731   0.98468   6.69700   1.22565   1.01159
   7   0.04000   0.04894   1.37010   7.68743   1.23129   1.01625
   8   0.04200   0.05409   1.55843   8.09222   1.23418   1.01863
   9   0.04400   0.05954   1.77384   8.50209   1.23748   1.02135
  10   0.04600   0.06526   2.03025   8.91330   1.24134   1.02454
  11   0.04800   0.07121   2.33855   9.32134   1.24365   1.02645
  12   0.05000   0.07719   2.81247   9.70006   1.24315   1.02603
  13   0.05500   0.09491   4.33258  10.84281   1.26381   1.04308
  14   0.06000   0.11915   5.83227  12.47776   1.33587   1.10256
  15   0.06500   0.14241   7.04764  13.76644   1.36189   1.12404
  16   0.07000   0.15978   8.79534  14.34222   1.32138   1.09055
  17   0.07500   0.19873  11.38979  16.64895   1.41989   1.17190
  18   0.08000   0.24928  11.18141  19.57839   1.56854   1.29460
  19   0.08500   0.28348  13.17015  20.95499   1.57818   1.30255
  20   0.09000   0.33538  14.89840  23.41369   1.66922   1.37769
  21   0.09500   0.38008  16.32734  25.13828   1.70450   1.40681
  22   0.10000   0.41252  16.69175  25.91922   1.66349   1.37296
  23   0.11000   0.49812  20.87156  28.45244   1.66770   1.37643
  24   0.12000   0.67010  26.37678  35.08643   1.88257   1.55377
  25   0.13000   0.96922  37.67113  46.84442   2.31185   1.90808
  26   0.14000   1.19938  39.38213  53.82813   2.47717   2.04453
  27   0.15000   1.38199  44.05855  57.88883   2.47754   2.04484
  28   0.16000   1.60236  47.57743  62.92458   2.53009   2.08820
  29   0.17000   1.85354  52.65802  68.50649   2.58700   2.13518
  30   0.18000   2.03434  63.90676  71.01171   2.52932   2.08757
  31   0.19000   2.50586  67.52383  82.86730   2.80376   2.31408
  32   0.20000   2.93565  79.20656  92.22609   2.96148   2.44425
  33   0.22000   3.31080  73.30528  94.55617   2.75774   2.27610
  34   0.24000   3.91144  68.64158 102.40124   2.74103   2.26230
  35   0.26000   4.68495  94.02402 113.21685   2.79852   2.30976
  36   0.28000   5.69555 107.12921 127.80782   2.93407   2.42163
  37   0.30000   7.01108 136.28836 146.83978   3.14664   2.59707
  38   0.32000   7.34208 134.40361 144.16142   2.89654   2.39065
  39   0.34000   8.35637 153.68069 154.42531   2.92156   2.41130
  40   0.36000   8.83893 153.04622 154.26851   2.75776   2.27611
  41   0.38000   9.76071 149.53479 161.39044   2.73049   2.25361
  42   0.40000  11.04043 152.33896 173.42268   2.79108   2.30362
  43   0.42000  12.90889 179.11467 193.11653   2.95876   2.44201
  44   0.44000  14.56982 203.71500 208.05650   3.04409   2.51243
  45   0.46000  15.04016 206.43904 205.43500   2.87252   2.37084
  46   0.48000  16.47253 220.08115 215.62492   2.89016   2.38539
  47   0.50000  18.87604 243.41342 237.20337   3.05028   2.51754
  48   0.55000  23.88377 255.78992 272.84756   3.19307   2.63540
  49   0.60000  29.22991 310.83228 306.09494   3.28301   2.70963
  50   0.65000  32.20709 313.22800 311.32785   3.08445   2.54575
  51   0.70000  35.77027 309.38080 321.07321   2.94682   2.43216
  52   0.75000  40.32695 307.41129 337.84225   2.89572   2.38998
  53   0.80000  44.89302 296.31461 352.58893   2.83484   2.33973
  54   0.85000  47.48962 297.70111 351.04248   2.65693   2.19289
  55   0.90000  56.57162 338.65143 394.94443   2.82595   2.33240
  56   0.95000  62.13333 403.74530 410.94226   2.78402   2.29779
  57   1.00000  72.29919 436.33636 454.26926   2.92299   2.41248
  58   1.10000  77.98578 437.27240 445.45370   2.60383   2.14907
  59   1.20000 105.63441 559.87543 553.10046   2.96609   2.44806
  60   1.30000 118.39533 575.23834 572.23065   2.83428   2.33927
  61   1.40000 116.41898 527.51154 522.48718   2.40198   1.98247
  62   1.50000 135.29831 599.79407 566.73627   2.43436   2.00920
  63   1.60000 142.48775 542.02936 559.54803   2.25078   1.85768
  64   1.70000 142.83575 528.48096 527.91968   1.99898   1.64986
  65   1.80000 139.37508 498.88602 486.51080   1.74107   1.43699
  66   1.90000 137.15530 485.90225 453.56430   1.53448   1.26648
  67   2.00000 187.15472 579.73401 587.96393   1.89279   1.56222
  68   2.20000 201.09854 567.59190 574.33606   1.68153   1.38785
  69   2.40000 176.66010 528.01959 462.49503   1.24212   1.02518
  70   2.60000 138.14125 357.03363 333.83350   0.82716   0.68269
  71   2.80000 119.06129 325.70367 267.17291   0.61673   0.50902
  72   3.00000 141.50162 375.79849 296.36029   0.63708   0.52581
  73   3.20000 152.82646 381.81580 300.07404   0.60680   0.50082
  74   3.40000 183.80147 346.80011 339.66431   0.64238   0.53019
  75   3.60000 175.77789 314.59906 306.79031   0.55004   0.45398
  76   3.80000 139.85472 323.98511 231.24556   0.39157   0.32318
  77   4.00000 158.37482 317.71933 248.77458   0.40061   0.33066
  78   4.20000 180.32834 307.99960 269.77057   0.41417   0.34184
  79   4.40000 187.95753 328.68805 268.40274   0.39541   0.32635
  80   4.60000 184.42024 331.51459 251.90144   0.35589   0.29373
  81   4.80000 178.04350 327.29141 233.05840   0.31552   0.26041
  82   5.00000 171.50667 326.11572 218.03491   0.28330   0.23382
  83   5.50000 177.62502 335.00015 202.91833   0.23767   0.19616
  84   6.00000 231.01192 307.76688 241.91512   0.26126   0.21563
  85   6.50000 244.23476 332.87024 236.08803   0.23754   0.19605
  86   7.00000 204.02812 346.64459 183.13521   0.17203   0.14198
  87   7.50000 176.26523 321.26376 147.66762   0.12809   0.10572
  88   8.00000 154.70987 296.30829 121.50885   0.09873   0.08148
  89   8.50000 149.71764 287.74765 110.67102   0.08481   0.07000
  90   9.00000 142.10611 278.28787  99.20878   0.07288   0.06015
  91   9.50000 133.83923 269.90356  88.51965   0.06232   0.05144
  92  10.00000 127.51007 263.19772  80.11694   0.05411   0.04466
  93  11.00000 120.49464 256.50558  68.82637   0.04298   0.03547
  94  12.00000 116.30585 250.00558  60.89760   0.03543   0.02925
  95  13.00000 111.56018 247.55539  53.91948   0.02948   0.02433
  96  14.00000 108.43251 246.19893  47.76680   0.02455   0.02027
  97  15.00000 108.01458 245.24397  45.24504   0.02158   0.01781
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PD3A01.050

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PD3A01.050
PD3A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
  12000 points 0.005 dt  parameters are t,sd,sv,psv,sa,sr
   97
    1   0.01000   0.00302   0.07023   1.89521   1.21383   1.00074
    2   0.01500   0.00680   0.15850   2.84644   1.21548   1.00210
    3   0.02000   0.01210   0.28688   3.80221   1.21766   1.00390
    4   0.02500   0.01895   0.46009   4.76289   1.22017   1.00597
    5   0.03000   0.02736   0.68709   5.72999   1.22339   1.00862
    6   0.03500   0.03733   0.98037   6.70101   1.22642   1.01112
    7   0.04000   0.04899   1.36273   7.69455   1.23248   1.01612
    8   0.04200   0.05414   1.54963   8.09971   1.23514   1.01831
    9   0.04400   0.05958   1.76662   8.50793   1.23840   1.02100
   10   0.04600   0.06528   2.02450   8.91663   1.24188   1.02386
   11   0.04800   0.07123   2.34997   9.32344   1.24383   1.02547
   12   0.05000   0.07718   2.82439   9.69928   1.24308   1.02485
   13   0.05500   0.09416   4.33636  10.75679   1.25354   1.03348
   14   0.06000   0.11831   5.81523  12.38930   1.32625   1.09342
   15   0.06500   0.14114   7.00048  13.64330   1.34987   1.11290
   16   0.07000   0.16022   8.75190  14.38158   1.31484   1.08402
   17   0.07500   0.19672  11.35754  16.48028   1.40848   1.16122
   18   0.08000   0.24760  11.12943  19.44683   1.55687   1.28356
   19   0.08500   0.28221  13.05048  20.86103   1.56944   1.29392
   20   0.09000   0.33336  14.75883  23.27302   1.66365   1.37159
   21   0.09500   0.37854  16.03689  25.03587   1.69563   1.39796
   22   0.10000   0.40969  16.46806  25.74156   1.65126   1.36140
   23   0.11000   0.49055  20.64545  28.02016   1.64038   1.35241
   24   0.12000   0.66356  26.10513  34.74372   1.86316   1.53608
   25   0.13000   0.95385  37.13796  46.10154   2.27835   1.87839
   26   0.14000   1.18824  38.87519  53.32828   2.45170   2.02131
   27   0.15000   1.36011  43.40483  56.97200   2.44026   2.01187
   28   0.16000   1.57681  46.88844  61.92133   2.49113   2.05381
   29   0.17000   1.82498  51.61182  67.45108   2.54824   2.10089
   30   0.18000   1.99644  62.57607  69.68886   2.48279   2.04693
   31   0.19000   2.46883  66.14806  81.64265   2.76277   2.27776
   32   0.20000   2.89367  77.62194  90.90721   2.91902   2.40659
   33   0.22000   3.25952  71.94022  93.09153   2.71576   2.23901
   34   0.24000   3.85701  67.30747 100.97639   2.70251   2.22808
   35   0.26000   4.62306  92.50526 111.72136   2.76123   2.27650
   36   0.28000   5.62416 105.44252 126.20576   2.89705   2.38847
   37   0.30000   6.92012 133.82831 144.93456   3.10689   2.56147
   38   0.32000   7.25966 131.75627 142.54318   2.86401   2.36123
   39   0.34000   8.26369 151.96185 152.71254   2.88799   2.38100
   40   0.36000   8.79615 150.84799 153.52173   2.74467   2.26284
   41   0.38000   9.73444 148.74010 160.95605   2.72369   2.24554
   42   0.40000  11.00786 151.99634 172.91100   2.78334   2.29473
   43   0.42000  12.88211 178.64514 192.71590   2.95191   2.43370
   44   0.44000  14.55416 203.16356 207.83286   3.03916   2.50563
   45   0.46000  15.03228 205.85011 205.32736   2.87211   2.36791
   46   0.48000  16.49104 219.49248 215.86723   2.89307   2.38519
   47   0.50000  18.92508 242.99965 237.81961   3.05744   2.52070
   48   0.55000  23.95357 256.73447 273.64499   3.20223   2.64007
   49   0.60000  29.31856 311.64490 307.02319   3.29290   2.71483
   50   0.65000  32.29839 314.05862 312.21042   3.09324   2.55022
   51   0.70000  35.88019 309.20139 322.05984   2.95599   2.43707
   52   0.75000  40.41441 307.27771 338.57498   2.90195   2.39251
   53   0.80000  44.96137 296.87949 353.12579   2.83906   2.34066
   54   0.85000  47.54916 298.74210 351.48254   2.66029   2.19327
   55   0.90000  56.64027 339.38458 395.42368   2.82953   2.33280
   56   0.95000  62.23207 404.30746 411.59540   2.78833   2.29884
   57   1.00000  72.41978 437.15598 455.02695   2.92790   2.41391
   58   1.10000  78.09226 437.72943 446.06195   2.60742   2.14969
   59   1.20000 105.75395 560.45319 553.72638   2.96942   2.44814
   60   1.30000 118.52878 575.90900 572.87561   2.83747   2.33935
   61   1.40000 116.51625 527.95795 522.92371   2.40395   1.98193
   62   1.50000 135.42720 600.52936 567.27612   2.43668   2.00891
   63   1.60000 142.57761 542.40686 559.90094   2.25218   1.85681
   64   1.70000 142.94095 528.58423 528.30847   2.00045   1.64927
   65   1.80000 139.46251 499.07062 486.81601   1.74216   1.43632
   66   1.90000 137.21120 486.26300 453.74915   1.53512   1.26563
   67   2.00000 187.24194 580.08807 588.23792   1.89367   1.56124
   68   2.20000 201.21312 567.69427 574.66333   1.68251   1.38714
   69   2.40000 176.73088 528.29443 462.68036   1.24262   1.02448
   70   2.60000 138.18243 357.26810 333.93301   0.82739   0.68214
   71   2.80000 119.10773 325.82205 267.27713   0.61696   0.50865
   72   3.00000 141.55458 375.89349 296.47122   0.63732   0.52544
   73   3.20000 152.86816 381.97003 300.15594   0.60695   0.50040
   74   3.40000 183.82184 346.90610 339.70197   0.64245   0.52967
   75   3.60000 175.82190 314.54086 306.86710   0.55019   0.45360
   76   3.80000 139.87126 324.11777 231.27290   0.39162   0.32287
   77   4.00000 158.38345 317.83163 248.78815   0.40063   0.33030
   78   4.20000 180.35378 308.13095 269.80862   0.41422   0.34150
   79   4.40000 187.99162 328.78098 268.45142   0.39549   0.32606
   80   4.60000 184.45680 331.55795 251.95139   0.35594   0.29346
   81   4.80000 178.09462 327.33263 233.12531   0.31561   0.26020
   82   5.00000 173.56143 326.18146 218.10373   0.28341   0.23366
   83   5.50000 177.63840 335.04755 202.93362   0.23767   0.19595
   84   6.00000 231.04730 307.80579 241.95218   0.26129   0.21542
   85   6.50000 244.29185 333.03439 236.14322   0.23758   0.19588
   86   7.00000 204.08868 346.76614 183.18958   0.17206   0.14186
   87   7.50000 176.29308 321.41095 147.69095   0.12811   0.10562
   88   8.00000 154.71094 296.36566 121.30969   0.09873   0.08140
   89   8.50000 149.67574 287.80304 110.64005   0.08478   0.06990
   90   9.00000 142.06415 278.29626  99.17948   0.07285   0.06006
   91   9.50000 133.82996 269.94046  88.51352   0.06231   0.05137
   92  10.00000 127.48034 263.25916  80.09826   0.05409   0.04460
   93  11.00000 120.54967 254.57278  68.85781   0.04299   0.03544
   94  12.00000 116.31281 250.04401  60.90125   0.03543   0.02921
   95  13.00000 111.65688 247.58652  53.96622   0.02949   0.02432
   96  14.00000 106.43667 246.15720  47.76867   0.02455   0.02024
   97  15.00000 108.35855 245.40768  45.38913   0.02164   0.01784
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PD3A02.050

PD3A02.050
PD3A: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
12000 points 0.005 dt parameters are t,sd,sv,psv,sa,sr
97

1	0.01000	0.00302	0.06951	1.89599	1.21434	1.00060
2	0.01500	0.00680	0.15737	2.84937	1.21671	1.00255
3	0.02000	0.01209	0.28467	3.79943	1.21679	1.00261
4	0.02500	0.01895	0.45797	4.76275	1.22032	1.00553
5	0.03000	0.02737	0.68219	5.73188	1.22381	1.00840
6	0.03500	0.03733	0.97237	6.70229	1.22664	1.01073
7	0.04000	0.04901	1.35075	7.69784	1.23296	1.01596
8	0.04200	0.05417	1.53614	8.10351	1.23581	1.01829
9	0.04400	0.05961	1.75249	8.51268	1.23907	1.02098
10	0.04600	0.06532	2.00730	8.92149	1.24254	1.02384
11	0.04800	0.07126	2.34074	9.32728	1.24432	1.02530
12	0.05000	0.07720	2.81230	9.70184	1.24338	1.02453
13	0.05500	0.09346	4.30469	10.67682	1.24411	1.02513
14	0.06000	0.11742	5.76116	12.29642	1.31627	1.08458
15	0.06500	0.14020	6.92603	13.55260	1.33760	1.10216
16	0.07000	0.16034	8.67039	14.39253	1.31584	1.08423
17	0.07500	0.19510	11.26847	16.34455	1.39858	1.15241
18	0.08000	0.24595	11.02021	19.31680	1.54592	1.27382
19	0.08500	0.28131	12.90030	20.79457	1.56344	1.28825
20	0.09000	0.33184	14.59691	23.16647	1.65883	1.36685
21	0.09500	0.37722	15.85617	24.94867	1.68843	1.39124
22	0.10000	0.40724	16.27884	25.58751	1.64081	1.35200
23	0.11000	0.48353	20.40208	27.61913	1.61568	1.33130
24	0.12000	0.65698	25.80151	34.39913	1.84418	1.51958
25	0.13000	0.93957	36.68947	45.41124	2.24632	1.85093
26	0.14000	1.17763	38.38363	52.85173	2.42828	2.00085
27	0.15000	1.36140	42.82066	56.18863	2.40786	1.98404
28	0.16000	1.55520	46.27319	61.07270	2.45779	2.02518
29	0.17000	1.80081	50.71071	66.55772	2.51511	2.07241
30	0.18000	1.96467	61.42622	68.57992	2.44357	2.01347
31	0.19000	2.43752	65.00243	80.60715	2.72788	2.24773
32	0.20000	2.85825	76.29272	89.79452	2.88305	2.37559
33	0.22000	3.21615	70.78278	91.85310	2.68039	2.20860
34	0.24000	3.81059	66.16330	99.76096	2.66962	2.19972
35	0.26000	4.57006	91.21561	110.44052	2.72927	2.24888
36	0.28000	5.56302	104.00483	124.83389	2.86532	2.36098
37	0.30000	6.84597	131.69446	143.38158	3.07345	2.53248
38	0.32000	7.18945	128.50243	141.16457	2.83631	2.33707
39	0.34000	8.18864	150.46761	151.32578	2.86173	2.35802
40	0.36000	8.76114	148.96541	152.91069	2.73199	2.25276
41	0.38000	9.71408	148.10373	160.61938	2.71856	2.24006
42	0.40000	10.98243	151.72588	172.51154	2.77737	2.28851
43	0.42000	12.86242	178.26971	192.42136	2.94806	2.42916
44	0.44000	14.54445	202.74321	207.69421	3.03567	2.50135
45	0.46000	15.03263	205.38100	205.33218	2.87242	2.36683
46	0.48000	16.51399	219.02811	216.16768	2.89620	2.38642
47	0.50000	18.97147	242.69890	238.40248	3.06564	2.52604
48	0.55000	24.01862	257.57785	274.38809	3.21067	2.64555
49	0.60000	29.39956	312.32217	307.87146	3.30193	2.72074
50	0.65000	32.38143	314.97177	313.01309	3.10123	2.55536
51	0.70000	35.97856	309.12830	322.94278	2.96420	2.44245
52	0.75000	40.49249	307.37610	339.22910	2.90752	2.39575
53	0.80000	45.02303	297.44064	353.61002	2.84287	2.34248
54	0.85000	47.60433	299.63843	351.89035	2.66332	2.19453
55	0.90000	56.70233	340.06198	395.85693	2.83274	2.33414
56	0.95000	62.32208	404.81723	412.19073	2.79225	2.30077
57	1.00000	72.52734	437.89249	455.70276	2.93228	2.41615
58	1.10000	78.18680	438.14478	446.60193	2.61061	2.15110
59	1.20000	105.86056	560.97272	554.28455	2.97240	2.44921
60	1.30000	118.64759	576.50720	573.44983	2.84032	2.34038
61	1.40000	116.60275	528.37488	523.31189	2.40569	1.98226
62	1.50000	135.54208	601.18567	567.75739	2.43874	2.00948
63	1.60000	142.65805	542.74249	560.21686	2.25344	1.85680
64	1.70000	143.03482	528.68011	528.65546	2.00175	1.64942
65	1.80000	139.54059	499.23901	487.08853	1.74312	1.43631
66	1.90000	137.26054	486.58490	453.91232	1.53568	1.26538
67	2.00000	187.32024	580.40186	588.48389	1.89446	1.56100
68	2.20000	201.31508	567.80054	574.95453	1.68338	1.38708
69	2.40000	176.79433	528.54340	462.84647	1.24308	1.02428
70	2.60000	138.21996	357.48044	334.02368	0.82760	0.68193
71	2.80000	119.14771	325.93665	267.36682	0.61715	0.50853
72	3.00000	141.59921	375.97681	296.56470	0.63752	0.52531
73	3.20000	152.90793	382.12030	300.23401	0.60710	0.50024
74	3.40000	183.83983	347.00458	339.73520	0.64251	0.52942
75	3.60000	175.86076	314.49533	306.93494	0.55031	0.45345
76	3.80000	139.88850	324.23270	231.30142	0.39167	0.32273
77	4.00000	158.39714	317.93958	248.80965	0.40065	0.33013
78	4.20000	180.37238	308.22681	269.83646	0.41425	0.34134
79	4.40000	188.02089	328.85318	268.49319	0.39555	0.32593
80	4.60000	184.50525	331.61502	252.01755	0.35603	0.29336
81	4.80000	178.14803	327.37918	233.19522	0.31570	0.26013
82	5.00000	173.60199	326.21744	218.15469	0.28349	0.23359
83	5.50000	177.65349	335.07141	202.95087	0.23768	0.19584
84	6.00000	231.06493	307.81387	241.97063	0.26129	0.21530
85	6.50000	244.30017	333.15283	236.15126	0.23758	0.19577
86	7.00000	204.12627	346.88623	183.22331	0.17208	0.14179
87	7.50000	176.26486	321.49002	147.66731	0.12808	0.10555
88	8.00000	154.71782	296.41833	121.51509	0.09873	0.08136
89	8.50000	149.67818	267.87079	110.64185	0.08477	0.06985
90	9.00000	142.09425	278.38605	99.20050	0.07285	0.06003
91	9.50000	133.86589	270.03842	88.53728	0.06232	0.05135
92	10.00000	127.49754	263.34262	80.10907	0.05409	0.04457
93	11.00000	120.46777	254.62498	68.81103	0.04295	0.03539
94	12.00000	116.34949	250.11575	60.92045	0.03543	0.02919
95	13.00000	111.54514	247.68810	53.91222	0.02946	0.02427
96	14.00000	106.52688	246.33559	47.80915	0.02453	0.02021
97	15.00000	108.12322	245.43810	45.29055	0.02160	0.01780

PD1B00.050

PD1B00.050
PD1B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
12000 points 0.005 dt parameters are t,sd,sv,psv,sa,mr
97

1	0.01000	0.00466	0.08657	2.92949	1.87630	1.00030
2	0.01500	0.01049	0.19420	4.39524	1.87674	1.00054
3	0.02000	0.01866	0.34557	5.86210	1.87730	1.00083
4	0.02500	0.02917	0.53111	7.33201	1.87840	1.00142
5	0.03000	0.04203	0.76478	8.80351	1.87952	1.00202
6	0.03500	0.05724	1.04852	10.27572	1.88049	1.00253
7	0.04000	0.07486	1.39293	11.75823	1.88288	1.00381
8	0.04200	0.08260	1.55995	12.35624	1.88424	1.00454
9	0.04400	0.09073	1.73669	12.95576	1.88605	1.00550
10	0.04600	0.09931	1.94941	13.56455	1.88871	1.00692
11	0.04800	0.10839	2.24892	14.18797	1.89334	1.00938
12	0.05000	0.11775	2.72236	14.79747	1.89572	1.01066
13	0.05500	0.14265	3.98097	16.29635	1.89865	1.01222
14	0.06000	0.17118	4.57458	17.92604	1.91343	1.02010
15	0.06500	0.19851	5.71993	19.18913	1.89136	1.00833
16	0.07000	0.22930	7.62737	20.58171	1.88336	1.00406
17	0.07500	0.27187	9.03220	22.77626	1.94680	1.03789
18	0.08000	0.31181	10.03157	24.48944	1.96085	1.04538
19	0.08500	0.37258	10.17765	27.54134	2.07727	1.10744
20	0.09000	0.43740	11.33162	30.53632	2.17141	1.15763
21	0.09500	0.50997	11.80290	33.72858	2.27234	1.21144
22	0.10000	0.52933	15.64161	33.25876	2.13327	1.13730
23	0.11000	0.66631	27.71920	38.05959	2.21972	1.18339
24	0.12000	0.90938	31.32676	47.61510	2.54655	1.35763
25	0.13000	1.17316	37.42690	56.70119	2.80116	1.49336
26	0.14000	1.35390	43.24044	60.76308	2.78169	1.48298
27	0.15000	1.75799	45.45480	73.63857	3.15571	1.68239
28	0.16000	1.75045	49.27013	68.74010	2.75859	1.47067
29	0.17000	1.88257	58.09317	69.57962	2.62289	1.39833
30	0.18000	2.19097	55.92279	76.47920	2.72493	1.45272
31	0.19000	2.55567	71.98599	84.51430	2.85900	1.52420
32	0.20000	3.10682	76.31234	97.60371	3.13885	1.67340
33	0.22000	3.83962	91.48123	109.65919	3.20955	1.71109
34	0.24000	5.45395	126.03106	142.78416	3.82770	2.04064
35	0.26000	7.52564	167.50685	181.86528	4.49784	2.39791
36	0.28000	7.15595	156.05011	160.57910	3.69263	1.96863
37	0.30000	7.12501	133.18613	149.22588	3.19247	1.70198
38	0.32000	9.83324	129.67036	193.07530	3.87498	2.06585
39	0.34000	9.83586	139.41226	181.76617	3.43361	1.83054
40	0.36000	10.77571	156.66193	188.07169	3.35385	1.78802
41	0.38000	13.47231	190.38351	222.76056	3.77092	2.01037
42	0.40000	13.81856	203.17328	217.06140	3.49232	1.86184
43	0.42000	15.32623	207.53629	229.27992	3.51341	1.87308
44	0.44000	20.90651	240.95853	298.54419	4.36093	2.32492
45	0.46000	25.40229	238.20221	346.97235	4.84782	2.58449
46	0.48000	26.55010	240.13504	347.54001	4.65713	2.48283
47	0.50000	28.95719	256.97083	363.88681	4.68037	2.49522
48	0.55000	30.47252	247.45045	348.11728	4.06786	2.16867
49	0.60000	37.19097	282.82153	389.46289	4.17078	2.22354
50	0.65000	45.43741	337.73474	439.21793	4.34315	2.31544
51	0.70000	44.51838	328.43869	399.59604	3.66826	1.95564
52	0.75000	50.28804	354.59326	421.29208	3.60952	1.92432
53	0.80000	54.79080	391.54651	430.32596	3.46031	1.84478
54	0.85000	61.41297	418.19208	453.96362	3.43663	1.83215
55	0.90000	71.70447	476.70438	500.59161	3.58087	1.90905
56	0.95000	81.54994	525.02325	539.36145	3.65500	1.94857
57	1.00000	89.82914	556.54248	564.41315	3.63157	1.93608
58	1.10000	92.08339	517.63312	525.97906	3.07624	1.64002
59	1.20000	109.48072	577.90179	573.23969	3.07080	1.63712
60	1.30000	138.10646	649.07764	667.49884	3.30599	1.76251
61	1.40000	137.66414	606.63806	617.83521	2.84139	1.51481
62	1.50000	136.05206	501.11475	569.89355	2.44216	1.30198
63	1.60000	161.29248	553.52722	633.39410	2.54382	1.35617
64	1.70000	168.45160	523.60187	622.59564	2.35562	1.25564
65	1.80000	187.57759	526.06610	654.76929	2.34219	1.24868
66	1.90000	220.16019	629.88190	728.05646	2.46979	1.31671
67	2.00000	241.08151	731.06470	757.37994	2.43805	1.29978
68	2.20000	276.06464	862.72235	788.43872	2.30865	1.23080
69	2.40000	285.92825	820.53796	748.55841	2.00421	1.06849
70	2.60000	338.71198	845.54816	818.53467	2.02680	1.08054
71	2.80000	355.15256	816.21100	796.96045	1.83174	0.97655
72	3.00000	357.27838	801.46851	748.28210	1.60470	0.85550
73	3.20000	385.36234	806.80756	756.65717	1.52108	0.81093
74	3.40000	410.49420	781.55383	758.59149	1.43929	0.76732
75	3.60000	421.52893	722.57251	739.19745	1.32152	0.70453
76	3.80000	435.98956	701.03027	720.89557	1.22091	0.65090
77	4.00000	445.41968	712.67810	699.66366	1.12631	0.60046
78	4.20000	441.14368	697.23285	659.94946	1.01343	0.54028
79	4.40000	425.70441	670.13654	607.90448	0.89214	0.47562
80	4.60000	438.97040	664.04523	599.59406	0.83776	0.44663
81	4.80000	460.94092	660.24847	603.37024	0.81088	0.43230
82	5.00000	470.16934	656.95789	590.83221	0.76177	0.40612
83	5.50000	439.61111	611.57861	502.21054	0.58984	0.31446
84	6.00000	431.33594	550.70874	451.69394	0.48416	0.25812
85	6.50000	455.09921	548.43628	439.91885	0.43790	0.23346
86	7.00000	490.59448	577.25629	440.35657	0.40871	0.21789
87	7.50000	477.00525	591.44006	399.61499	0.34748	0.18525
88	8.00000	449.88593	583.83312	353.33960	0.28862	0.15387
89	8.50000	435.14075	567.50226	321.65527	0.24765	0.13203
90	9.00000	432.21716	555.32483	301.74451	0.21960	0.11707
91	9.50000	430.77414	551.21606	284.90881	0.19617	0.10458
92	10.00000	422.62701	554.12384	265.54440	0.17263	0.09203
93	11.00000	402.52722	568.61664	229.92300	0.13717	0.07313
94	12.00000	411.03513	581.06018	215.21750	0.11971	0.06382
95	13.00000	407.98834	586.65430	197.18971	0.10203	0.05440
96	14.00000	398.82092	587.13995	178.99042	0.08668	0.04621
97	15.00000	390.57895	585.10114	163.60533	0.07424	0.03958

PD1B01.050

PD1B01.050
PD1B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
12000 points 0.005 dt parameters are t,sd,sv,psv,sa,sr
97

1	0.01000	0.00464	0.08657	2.91318	1.86587	1.00018
2	0.01500	0.01043	0.19115	4.37097	1.86638	1.00045
3	0.02000	0.01856	0.33490	5.83028	1.86716	1.00086
4	0.02500	0.02900	0.54084	7.28961	1.86757	1.00109
5	0.03000	0.04180	0.77806	8.75362	1.86884	1.00177
6	0.03500	0.05694	1.06745	10.22239	1.87078	1.00281
7	0.04000	0.07441	1.43651	11.68790	1.87154	1.00322
8	0.04200	0.08208	1.59936	12.27849	1.87251	1.00374
9	0.04400	0.09016	1.76794	12.87536	1.87428	1.00469
10	0.04600	0.09870	1.96827	13.48181	1.87728	1.00630
11	0.04800	0.10774	2.26356	14.10269	1.88209	1.00888
12	0.05000	0.11708	2.71492	14.71211	1.88502	1.01044
13	0.05500	0.14185	3.99054	16.20458	1.88822	1.01216
14	0.06000	0.17013	4.58640	17.81625	1.90192	1.01951
15	0.06500	0.19725	5.74085	19.06681	1.87929	1.00738
16	0.07000	0.22803	7.64930	20.46818	1.87269	1.00384
17	0.07500	0.27086	9.05344	22.69183	1.93956	1.03968
18	0.08000	0.31035	10.03647	24.37471	1.95159	1.04613
19	0.08500	0.37138	10.12049	27.45230	2.07069	1.10997
20	0.09000	0.43625	11.27542	30.45461	2.16567	1.16089
21	0.09500	0.50911	11.88521	33.67205	2.26872	1.21612
22	0.10000	0.52768	15.56822	33.15485	2.12695	1.14013
23	0.11000	0.66540	27.72013	38.00732	2.21625	1.18800
24	0.12000	0.90728	31.35165	47.50508	2.54059	1.36186
25	0.13000	1.17391	37.70087	56.73766	2.80268	1.50235
26	0.14000	1.35620	43.25920	60.86612	2.78810	1.49454
27	0.15000	1.74773	45.48423	73.20874	3.13948	1.68289
28	0.16000	1.74008	49.00061	68.33268	2.74303	1.47038
29	0.17000	1.87141	57.58319	69.16724	2.60772	1.39784
30	0.18000	2.17700	55.43288	75.99172	2.70722	1.45118
31	0.19000	2.53541	71.27214	83.84444	2.83703	1.52076
32	0.20000	3.08270	75.72710	96.84585	3.11510	1.66982
33	0.22000	3.80314	90.56521	108.61735	3.17853	1.70382
34	0.24000	5.40249	124.73483	141.43677	3.79189	2.03261
35	0.26000	7.45375	165.82774	180.12799	4.45379	2.38741
36	0.28000	7.08672	154.45778	158.98083	3.45593	1.95973
37	0.30000	7.08802	131.94585	148.45110	3.17586	1.70239
38	0.32000	9.78053	128.42854	192.04024	3.85419	2.06600
39	0.34000	9.79091	138.44075	180.93555	3.41792	1.83215
40	0.36000	10.73019	155.56252	187.27721	3.33973	1.79023
41	0.38000	13.40447	189.23059	221.63881	3.75197	2.01121
42	0.40000	13.75028	201.67538	215.98895	3.47510	1.86280
43	0.42000	15.24769	206.16814	228.10500	3.49543	1.87369
44	0.44000	20.80217	239.20641	297.05426	4.33944	2.32611
45	0.46000	25.28269	236.97325	345.33881	4.82532	2.58657
46	0.48000	26.44109	238.97020	346.11310	4.63760	2.48594
47	0.50000	28.83993	255.69899	362.41321	4.66103	2.49850
48	0.55000	30.38383	246.38538	347.10400	4.05647	2.17443
49	0.60000	37.11563	282.00623	388.67392	4.16260	2.23132
50	0.65000	45.35499	336.48788	438.42123	4.33532	2.32390
51	0.70000	44.45772	328.15250	399.05154	3.66337	1.96371
52	0.75000	50.25372	354.65216	421.00458	3.60724	1.93363
53	0.80000	54.85918	391.92215	430.86298	3.46492	1.85734
54	0.85000	61.49183	418.58762	454.54651	3.44091	1.84447
55	0.90000	71.79207	477.11368	501.20319	3.58518	1.92180
56	0.95000	81.64668	525.41168	540.00122	3.65932	1.96154
57	1.00000	89.95268	556.88629	565.18939	3.63662	1.94938
58	1.10000	92.22854	518.35675	526.80817	3.08102	1.65155
59	1.20000	109.64880	578.62354	574.11975	3.07550	1.64859
60	1.30000	138.21840	649.81287	668.03986	3.30865	1.77257
61	1.40000	137.80441	607.22919	618.46472	2.84424	1.52463
62	1.50000	136.15492	501.52319	570.32440	2.44401	1.31009
63	1.60000	161.39609	554.01074	633.80096	2.54546	1.36447
64	1.70000	168.53580	523.98224	622.90686	2.35679	1.26334
65	1.80000	187.65891	526.41644	655.05316	2.34320	1.25605
66	1.90000	220.25246	629.98499	728.36157	2.47079	1.32444
67	2.00000	241.20222	731.34790	757.75916	2.43922	1.30752
68	2.20000	276.21692	863.59509	788.87366	2.30994	1.23822
69	2.40000	286.06128	821.06427	748.90668	2.00515	1.07484
70	2.60000	338.80820	846.13672	818.76721	2.02736	1.08675
71	2.80000	355.26233	816.36481	797.20679	1.83223	0.98215
72	3.00000	357.38156	801.47345	748.49823	1.60516	0.86043
73	3.20000	385.45648	807.04871	756.84204	1.52147	0.81557
74	3.40000	410.57828	781.70178	758.74689	1.43957	0.77167
75	3.60000	423.62769	722.97473	739.36981	1.32185	0.70857
76	3.80000	436.09213	700.84027	721.06519	1.22118	0.65460
77	4.00000	445.51471	712.44043	699.81287	1.12655	0.60388
78	4.20000	441.22855	696.93518	660.07642	1.01362	0.54334
79	4.40000	425.77985	670.49500	608.01221	0.89229	0.47830
80	4.60000	439.00873	664.37262	599.64636	0.83782	0.44910
81	4.80000	460.99564	660.57721	603.44189	0.81096	0.43471
82	5.00000	470.23917	657.26190	590.91998	0.76189	0.40840
83	5.50000	439.69525	611.83704	502.30667	0.58995	0.31624
84	6.00000	431.35178	550.95715	451.71054	0.48417	0.25953
85	6.50000	455.14313	548.68939	439.96130	0.43793	0.23475
86	7.00000	490.60721	577.50256	440.36801	0.40870	0.21908
87	7.50000	477.05429	591.69696	399.65607	0.34752	0.18628
88	8.00000	449.97217	583.84583	353.40732	0.28867	0.15474
89	8.50000	435.18863	567.73511	321.69067	0.24767	0.13276
90	9.00000	432.31174	555.53674	301.81052	0.21964	0.11774
91	9.50000	430.81766	551.50378	284.93759	0.19620	0.10517
92	10.00000	422.59933	554.38190	265.52701	0.17264	0.09254
93	11.00000	402.50769	568.82843	229.91185	0.13718	0.07353
94	12.00000	411.17130	581.30927	215.28879	0.11975	0.06419
95	13.00000	408.14865	586.95886	197.26720	0.10207	0.05471
96	14.00000	398.92850	587.44208	179.03870	0.08671	0.04648
97	15.00000	390.81152	585.39063	163.70276	0.07429	0.03982

PD1B02.050

PD1B02.050
PD1B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
12000 points 0.005 dt parameters are t,sd,sv,psv,sa,Sr
97

1	0.01000	0.00462	0.08421	2.90141	1.85831	1.00018
2	0.01500	0.01039	0.19715	4.35239	1.85845	1.00025
3	0.02000	0.01848	0.33848	5.80522	1.85908	1.00059
4	0.02500	0.02889	0.54519	7.26161	1.86042	1.00131
5	0.03000	0.04163	0.77150	8.71820	1.86128	1.00178
6	0.03500	0.05669	1.07664	10.17740	1.86240	1.00238
7	0.04000	0.07411	1.42976	11.64105	1.86404	1.00326
8	0.04200	0.08174	1.59665	12.22783	1.86484	1.00369
9	0.04400	0.08978	1.78005	12.82115	1.86626	1.00445
10	0.04600	0.09828	1.98703	13.42364	1.86926	1.00607
11	0.04800	0.10729	2.28175	14.04374	1.87406	1.00865
12	0.05000	0.11657	2.73920	14.64883	1.87730	1.01029
13	0.05500	0.14127	4.01196	16.13841	1.88076	1.01226
14	0.06000	0.16940	4.60588	17.73929	1.89386	1.01931
15	0.06500	0.19638	5.78148	18.98290	1.87103	1.00702
16	0.07000	0.22703	7.64964	20.37773	1.86464	1.00359
17	0.07500	0.27016	9.05031	22.63329	1.93366	1.04073
18	0.08000	0.30936	10.02142	24.29670	1.94553	1.04712
19	0.08500	0.37038	10.05999	27.37848	2.06565	1.11177
20	0.09000	0.43537	11.22503	30.39444	2.16197	1.16362
21	0.09500	0.50832	11.93301	33.61995	2.26597	1.21959
22	0.10000	0.52611	15.55114	33.05617	2.12119	1.14167
23	0.11000	0.66493	27.75197	37.98095	2.21509	1.19220
24	0.12000	0.90671	31.41091	47.47518	2.53842	1.36623
25	0.13000	1.17610	37.79951	56.84372	2.80784	1.51123
26	0.14000	1.35808	43.29649	60.95028	2.79297	1.50323
27	0.15000	1.73911	45.50827	72.84783	3.12456	1.68170
28	0.16000	1.73069	48.72927	67.96387	2.72875	1.46866
29	0.17000	1.86150	57.12803	68.80106	2.59408	1.39618
30	0.18000	2.16466	54.98219	75.56102	2.69178	1.44897
31	0.19000	2.51754	70.68465	83.25357	2.81732	1.51633
32	0.20000	3.06170	75.23710	96.18599	3.09408	1.66529
33	0.22000	3.77385	89.81585	107.78098	3.15372	1.69739
34	0.24000	5.36049	123.67723	140.33730	3.76252	2.02506
35	0.26000	7.39482	164.46954	178.70396	4.41865	2.37820
36	0.28000	7.02752	153.15045	157.69717	3.62641	1.95180
37	0.30000	7.05751	130.91815	147.81210	3.16216	1.70193
38	0.32000	9.73760	127.41652	191.19739	3.83726	2.06529
39	0.34000	9.75394	137.67915	180.25235	3.40503	1.83265
40	0.36000	10.69275	154.70802	186.62361	3.32813	1.79126
41	0.38000	13.35037	188.26653	220.74429	3.73690	2.01127
42	0.40000	13.69584	200.44571	215.13382	3.46142	1.86300
43	0.42000	15.18440	205.03023	227.15805	3.48097	1.87353
44	0.44000	20.71449	237.75012	295.80225	4.32141	2.32586
45	0.46000	25.18312	235.94028	343.97876	4.80665	2.58703
46	0.48000	26.35161	238.00906	344.94180	4.62150	2.48738
47	0.50000	28.74360	254.64668	361.20279	4.64509	2.50007
48	0.55000	30.31631	245.50932	346.33267	4.04731	2.17834
49	0.60000	37.06152	281.35556	388.10727	4.15643	2.23707
50	0.65000	45.29068	335.46246	437.79956	4.32908	2.32999
51	0.70000	44.40984	327.99246	398.62180	3.65953	1.96963
52	0.75000	50.22903	354.78436	420.79773	3.60563	1.94062
53	0.80000	54.93049	392.33127	431.42307	3.46954	1.86737
54	0.85000	61.57004	418.99927	455.12463	3.44520	1.85427
55	0.90000	71.87881	477.55807	501.80875	3.58945	1.93191
56	0.95000	81.74841	525.85718	540.66089	3.66359	1.97181
57	1.00000	90.07257	557.29260	565.94269	3.64152	1.95994
58	1.10000	92.36415	519.02289	527.58276	3.00548	1.66066
59	1.20000	109.80472	579.31152	574.93616	3.07987	1.65765
60	1.30000	134.32590	650.51300	668.55945	3.31121	1.78216
61	1.40000	137.93584	607.81775	619.05457	2.84691	1.53226
62	1.50000	136.25061	501.95023	570.72522	2.44573	1.31634
63	1.60000	161.49109	554.45599	634.17401	2.54696	1.37082
64	1.70000	168.61464	524.35425	623.19824	2.35789	1.26906
65	1.80000	187.73677	526.78625	655.32495	2.34416	1.26167
66	1.90000	220.34113	630.10663	728.65479	2.47175	1.33034
67	2.00000	241.31580	731.62598	758.11597	2.44032	1.31343
68	2.20000	276.35660	664.36169	789.27258	2.31111	1.24388
69	2.40000	286.18152	821.53485	749.22144	2.00601	1.07967
70	2.60000	338.89844	846.68469	818.98529	2.02788	1.09145
71	2.80000	355.36252	816.50891	797.43164	1.83270	0.98639
72	3.00000	357.47629	801.51801	748.69659	1.60558	0.86415
73	3.20000	385.54330	807.26428	757.01251	1.52183	0.81908
74	3.40000	410.65845	781.85297	758.89502	1.43983	0.77495
75	3.60000	423.71219	723.33478	739.51727	1.32213	0.71160
76	3.80000	436.18484	700.68158	721.21844	1.22143	0.65740
77	4.00000	445.60471	712.26392	699.95428	1.12677	0.60645
78	4.20000	441.30176	696.70117	660.18591	1.01379	0.54564
79	4.40000	425.85095	670.86633	608.11371	0.89243	0.48032
80	4.60000	439.04349	664.72107	599.69385	0.83787	0.45096
81	4.80000	461.01513	660.90887	603.49353	0.81102	0.43650
82	5.00000	470.31442	657.60266	591.01453	0.76202	0.41013
83	5.50000	439.76196	612.13666	502.38287	0.59004	0.31757
84	6.00000	431.36023	551.25891	451.71939	0.48417	0.26059
85	6.50000	455.17679	548.97687	439.99387	0.43796	0.23572
86	7.00000	490.68665	577.76917	440.43930	0.40876	0.22000
87	7.50000	477.13385	591.95447	399.72272	0.34757	0.18707
88	8.00000	450.06268	584.15491	353.47842	0.28873	0.15540
89	8.50000	435.25916	568.04236	321.74283	0.24771	0.13332
90	9.00000	432.40436	555.81317	301.87518	0.21968	0.11824
91	9.50000	430.88950	551.73926	284.98511	0.19625	0.10562
92	10.00000	422.66754	554.63861	265.56985	0.17270	0.09295
93	11.00000	402.55658	569.09503	229.93977	0.13721	0.07385
94	12.00000	411.14395	581.51935	215.27448	0.11973	0.06444
95	13.00000	408.23221	587.19611	197.30759	0.10209	0.05495
96	14.00000	398.73389	587.64178	178.95135	0.08667	0.04665
97	15.00000	390.82486	585.64203	163.70834	0.07430	0.03999

PD3B00.050

PD3B00.050
PD3B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
12000 points 0.005 dt parameters are t,ad,sv,psv,sa,sr
97

1	0.01000	0.00433	0.06034	2.72067	1.74254	1.00110
2	0.01500	0.00975	0.13624	4.08586	1.74462	1.00229
3	0.02000	0.01737	0.24377	5.45605	1.74728	1.00382
4	0.02500	0.02719	0.38302	6.83429	1.75105	1.00598
5	0.03000	0.03926	0.55891	8.22320	1.75585	1.00874
6	0.03500	0.05362	0.77142	9.62520	1.76136	1.01191
7	0.04000	0.07031	1.04224	11.04452	1.76845	1.01598
8	0.04200	0.07768	1.18057	11.62063	1.77207	1.01806
9	0.04400	0.08542	1.32829	12.19758	1.77552	1.02004
10	0.04600	0.09356	1.48906	12.77930	1.77923	1.02218
11	0.04800	0.10217	1.67445	13.37436	1.78446	1.02516
12	0.05000	0.11106	1.88971	13.95632	1.78916	1.02788
13	0.05500	0.13494	2.52083	15.41602	1.79669	1.03220
14	0.06000	0.16509	2.98349	17.28826	1.84702	1.06112
15	0.06500	0.19700	3.80429	19.04336	1.87629	1.07793
16	0.07000	0.22732	4.90609	20.40387	1.86731	1.07278
17	0.07500	0.26344	6.31949	22.07022	1.88326	1.08194
18	0.08000	0.30797	6.79147	24.18760	1.93740	1.11304
19	0.08500	0.34803	7.84381	25.72607	1.93720	1.11293
20	0.09000	0.37097	9.29860	25.89847	1.84602	1.06054
21	0.09500	0.41410	10.26514	27.38812	1.84637	1.06074
22	0.10000	0.47530	11.34775	29.86371	1.91338	1.09924
23	0.11000	0.65668	15.45138	37.50970	2.18309	1.25419
24	0.12000	0.86858	22.44396	44.43138	2.36955	1.36131
25	0.13000	0.91010	31.29216	43.98703	2.16995	1.24664
26	0.14000	0.94528	29.25961	42.42405	1.94406	1.11687
27	0.15000	1.05939	33.30861	44.37577	1.89690	1.08977
28	0.16000	1.51887	40.34419	59.66588	2.38839	1.37214
29	0.17000	2.26232	45.45930	83.61501	3.15464	1.81235
30	0.18000	2.75004	57.77438	95.99435	3.43134	1.97131
31	0.19000	2.64042	67.72386	87.31725	2.95082	1.69526
32	0.20000	2.86677	71.00671	90.06237	2.89555	1.66350
33	0.22000	3.55219	75.76610	101.45023	2.96126	1.70125
34	0.24000	4.65922	75.57745	121.97816	3.26183	1.87393
35	0.26000	5.96843	97.35002	144.23363	3.56599	2.04867
36	0.28000	7.38706	120.83022	165.76516	3.80438	2.18563
37	0.30000	9.30592	156.24147	194.90276	4.17596	2.39910
38	0.32000	10.36466	176.44244	203.50961	4.08913	2.34922
39	0.34000	10.69793	183.77924	197.69731	3.73985	2.14855
40	0.36000	11.41440	190.08626	199.21893	3.55811	2.04414
41	0.38000	11.48504	179.54947	189.90161	3.21322	1.84601
42	0.40000	13.52355	162.36024	212.42744	3.41287	1.96070
43	0.42000	13.54959	158.26221	202.70134	3.10067	1.78134
44	0.44000	13.03292	173.70270	186.10960	2.72510	1.56558
45	0.46000	13.41249	173.85547	183.20250	2.56337	1.47266
46	0.48000	15.57524	196.21040	203.87949	2.73342	1.57036
47	0.50000	18.42652	235.13809	231.55447	2.98229	1.71333
48	0.55000	19.77419	204.83121	225.89987	2.63890	1.51605
49	0.60000	21.11524	173.38091	221.11832	2.36705	1.35998
50	0.65000	31.89189	309.20984	308.28098	3.04812	1.75116
51	0.70000	45.57150	402.45651	409.04886	3.75461	2.15703
52	0.75000	56.75961	426.04471	475.50824	4.07608	2.34172
53	0.80000	64.08721	433.92313	503.33978	4.04806	2.32562
54	0.85000	64.40440	392.11499	476.07617	3.60566	2.07147
55	0.90000	69.99803	392.84793	488.67844	3.49645	2.00872
56	0.95000	75.30701	428.27576	498.07144	3.37420	1.93849
57	1.00000	87.70265	525.70251	551.05200	3.54511	2.03668
58	1.05000	87.70224	496.74133	500.95401	2.93005	1.68332
59	1.20000	97.98038	396.12881	513.02405	2.74331	1.57604
60	1.30000	138.95152	552.47791	671.58319	3.31912	1.90684
61	1.40000	186.81834	763.96124	838.43878	3.84857	2.21102
62	1.50000	208.28300	781.87732	836.94348	3.59673	2.06633
63	1.60000	226.64279	856.97522	890.02417	3.57958	2.05648
64	1.70000	253.41019	914.38190	936.60187	3.54550	2.03690
65	1.80000	270.58411	911.64252	944.51672	3.37638	1.93974
66	1.90000	279.10504	911.85217	922.98352	3.12701	1.79648
67	2.00000	279.33017	873.95703	877.54163	2.82413	1.62247
68	2.20000	275.59192	806.89929	787.08868	2.30075	1.32179
69	2.40000	309.73056	815.44318	810.87268	2.17781	1.25116
70	2.60000	330.87305	838.07916	799.59106	1.97974	1.13737
71	2.80000	357.05344	828.92578	801.22601	1.84441	1.05962
72	3.00000	371.46390	835.26263	777.99219	1.67066	0.95980
73	3.20000	399.88489	862.99396	785.17212	1.58093	0.90825
74	3.40000	411.29617	816.54071	760.07355	1.44012	0.82735
75	3.60000	415.67831	756.52374	725.49554	1.30028	0.74701
76	3.80000	431.17148	718.48431	712.92902	1.20986	0.69507
77	4.00000	457.34033	705.49200	718.38855	1.15673	0.66454
78	4.20000	481.10587	744.27405	719.73273	1.10461	0.63460
79	4.40000	494.19180	778.03986	705.70422	1.03421	0.59416
80	4.60000	491.65988	800.94159	671.56311	0.94072	0.54045
81	4.80000	482.82083	796.64270	632.01099	0.84858	0.48751
82	5.00000	489.72266	773.63702	615.40369	0.79338	0.45580
83	5.50000	470.90134	706.61633	537.95642	0.63229	0.36325
84	6.00000	434.10379	649.48517	454.59244	0.48988	0.28144
85	6.50000	424.86075	608.69623	410.68903	0.40755	0.23414
86	7.00000	450.91617	603.09393	404.74142	0.37242	0.21395
87	7.50000	493.65729	622.36945	413.56537	0.35549	0.20423
88	8.00000	531.77155	648.37079	417.65240	0.33710	0.19367
89	8.50000	550.93579	668.06567	407.25079	0.31097	0.17865
90	9.00000	546.66840	675.81372	381.64651	0.27635	0.15877
91	9.50000	523.94287	671.65076	346.52948	0.23739	0.13638
92	10.00000	487.82849	658.18872	306.51169	0.19872	0.11416
93	11.00000	438.69336	616.73773	250.58105	0.15122	0.08688
94	12.00000	471.35858	572.41058	246.80278	0.13677	0.07858
95	13.00000	484.37338	535.07324	234.10828	0.12018	0.06905
96	14.00000	487.30814	505.35129	218.70338	0.10489	0.06026
97	15.00000	485.54324	482.59952	203.38388	0.09168	0.05267

PD3B01.050

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PD3B01.050
PD3B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
  12000 points 0.005 dt  parameters are t,ad,sv,psv,sa,mr
   97
   1   0.01000   0.00431   0.06017   2.70633   1.73339   1.00081
   2   0.01500   0.00970   0.13582   4.06370   1.73511   1.00180
   3   0.02000   0.01727   0.24253   5.42671   1.73783   1.00338
   4   0.02500   0.02705   0.38247   6.79905   1.74200   1.00578
   5   0.03000   0.03906   0.55686   8.18114   1.74676   1.00854
   6   0.03500   0.05333   0.77010   9.57450   1.75193   1.01152
   7   0.04000   0.06993   1.04012  10.98520   1.75872   1.01544
   8   0.04200   0.07727   1.17500  11.55957   1.76255   1.01765
   9   0.04400   0.08496   1.32585  12.13267   1.76583   1.01954
  10   0.04600   0.09307   1.49305  12.71243   1.76990   1.02189
  11   0.04800   0.10161   1.68345  13.30128   1.77483   1.02474
  12   0.05000   0.11051   1.89674  13.88756   1.78002   1.02774
  13   0.05500   0.13431   2.51983  15.34368   1.78791   1.03229
  14   0.06000   0.16445   2.97563  17.22116   1.83941   1.06203
  15   0.06500   0.19610   3.81810  18.95635   1.86732   1.07814
  16   0.07000   0.22596   4.94511  20.28238   1.85738   1.07240
  17   0.07500   0.26193   6.36615  21.94348   1.87282   1.08132
  18   0.08000   0.30651   6.78534  24.07310   1.92761   1.11295
  19   0.08500   0.34635   7.82583  25.60239   1.92722   1.11273
  20   0.09000   0.36996   9.26177  25.82799   1.84080   1.06283
  21   0.09500   0.41052  10.20815  27.15102   1.83020   1.05671
  22   0.10000   0.47141  11.24731  29.61952   1.89845   1.09611
  23   0.11000   0.65119  15.36136  37.19587   2.16694   1.25113
  24   0.12000   0.84201  22.20181  44.08745   2.35288   1.35849
  25   0.13000   0.90464  30.96131  43.72330   2.15848   1.24625
  26   0.14000   0.93807  28.95019  42.10041   1.92919   1.11387
  27   0.15000   1.04962  32.84740  43.96640   1.87937   1.08510
  28   0.16000   1.50030  39.52169  58.91674   2.36075   1.36301
  29   0.17000   2.23259  44.51869  82.51640   3.10995   1.79560
  30   0.18000   2.71456  56.41567  94.75600   3.38678   1.95544
  31   0.19000   2.61085  66.13937  86.33914   2.91960   1.68570
  32   0.20000   2.83355  69.28893  89.01874   2.86302   1.65303
  33   0.22000   3.49998  73.87464  99.95924   2.91802   1.68479
  34   0.24000   4.59229  73.92393 120.22597   3.21510   1.85632
  35   0.26000   5.88355  95.37092 142.18253   3.51526   2.02962
  36   0.28000   7.28385 118.53587 163.44930   3.75115   2.16582
  37   0.30000   9.17546 151.30173 192.17039   4.11732   2.37723
  38   0.32000  10.22594 173.85126 200.78584   4.03435   2.32932
  39   0.34000  10.56083 181.14922 195.16374   3.69194   2.13163
  40   0.36000  11.27335 187.19081 196.75702   3.51427   2.02905
  41   0.38000  11.34721 176.60178 187.62262   3.17490   1.83310
  42   0.40000  13.41443 159.58357 210.71339   3.38580   1.95487
  43   0.42000  13.44885 157.52113 201.19434   3.07819   1.77726
  44   0.44000  12.95082 172.77156 184.93730   2.70696   1.56293
  45   0.46000  13.33614 172.96906 182.15970   2.54930   1.47190
  46   0.48000  15.50673 195.48283 202.98257   2.72208   1.57166
  47   0.50000  18.36570 234.17474 230.79022   2.97161   1.71573
  48   0.55000  19.77670 203.38348 225.92850   2.63897   1.52367
  49   0.60000  21.14139 172.39806 221.39209   2.36996   1.36835
  50   0.65000  31.94159 308.62372 304.76147   3.05294   1.76268
  51   0.70000  45.69239 401.75064 410.13397   3.76431   2.17341
  52   0.75000  56.86158 425.96170 476.36249   4.08325   2.35756
  53   0.80000  64.16051 434.37756 503.91544   4.05254   2.33983
  54   0.85000  64.45171 392.74222 476.42587   3.60847   2.08343
  55   0.90000  70.04454 393.31400 489.00314   3.49865   2.02003
  56   0.95000  75.37478 428.49976 498.51968   3.37710   1.94985
  57   1.00000  87.82394 526.38013 551.81415   3.55008   2.04972
  58   1.10000  87.81214 497.47128 501.58176   2.93378   1.69388
  59   1.20000  98.07518 396.37589 513.52045   2.74601   1.58547
  60   1.30000 139.04872 552.87726 672.05298   3.32144   1.91771
  61   1.40000 186.93558 764.55511 838.96490   3.85104   2.22349
  62   1.50000 200.39467 782.72003 839.41125   3.59871   2.07780
  63   1.60000 226.80623 857.45331 890.66595   3.58217   2.06825
  64   1.70000 253.58319 914.73566 937.24127   3.54787   2.04845
  65   1.80000 270.74844 912.33575 945.09033   3.37844   1.95062
  66   1.90000 279.25092 912.32086 923.46588   3.12861   1.80638
  67   2.00000 279.48132 874.20355 878.01648   2.82567   1.63146
  68   2.20000 275.72220 807.33148 787.46075   2.30184   1.32902
  69   2.40000 309.85007 815.83282 811.18555   2.17859   1.25786
  70   2.60000 330.99307 838.28870 799.88110   1.98048   1.14347
  71   2.80000 357.17709 829.17438 801.50348   1.84502   1.06527
  72   3.00000 371.59811 835.24854 778.27332   1.67122   0.96492
  73   3.20000 399.96750 863.09650 785.33435   1.58126   0.91298
  74   3.40000 411.39954 816.72675 760.26453   1.44049   0.83170
  75   3.60000 415.77655 756.76788 725.66699   1.30059   0.75093
  76   3.80000 431.27643 718.59766 713.10254   1.21013   0.69870
  77   4.00000 457.44046 705.53827 718.54584   1.15701   0.66803
  78   4.20000 481.19156 744.50909 719.86096   1.10478   0.63787
  79   4.40000 494.26535 778.14709 705.80927   1.03437   0.59722
  80   4.60000 491.74579 800.94055 671.68048   0.94090   0.54325
  81   4.80000 482.90555 796.60364 632.12189   0.84873   0.49003
  82   5.00000 489.78748 773.84613 615.48511   0.79349   0.45814
  83   5.50000 470.95325 707.04364 538.01569   0.63236   0.36511
  84   6.00000 434.16046 649.94415 454.65179   0.48989   0.28285
  85   6.50000 424.90305 609.14795 410.72992   0.40757   0.23532
  86   7.00000 450.94089 603.53094 404.76361   0.37244   0.21504
  87   7.50000 493.68851 622.81287 413.59152   0.35550   0.20526
  88   8.00000 531.80573 648.83582 417.67926   0.33711   0.19464
  89   8.50000 550.97968 668.49390 407.28323   0.31099   0.17956
  90   9.00000 546.78455 676.25171 381.72760   0.27639   0.15958
  91   9.50000 523.95831 672.01489 346.53970   0.23739   0.13706
  92  10.00000 487.89047 658.56433 306.55063   0.19874   0.11475
  93  11.00000 438.78625 617.05518 250.63411   0.15124   0.08732
  94  12.00000 471.40805 572.73840 246.82869   0.13678   0.07898
  95  13.00000 484.47372 535.02496 234.15678   0.12021   0.06940
  96  14.00000 487.20120 505.28802 218.65540   0.10489   0.06056
  97  15.00000 485.69258 482.87680 203.53021   0.09176   0.05298
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PD3B02.050

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PD3B02.050
PD3B: HUMBOLDT BAY, ISFSI, SITE 4, PG&E, 06/2003
  12000 points 0.005 dt  parameters are t,sd,sv,psv,sa,sr
   97
   1   0.01000   0.00429   0.06000   2.69433   1.72572   1.00068
   2   0.01500   0.00966   0.13493   4.04587   1.72766   1.00180
   3   0.02000   0.01720   0.24177   5.40318   1.73045   1.00342
   4   0.02500   0.02693   0.38172   6.76756   1.73385   1.00539
   5   0.03000   0.03888   0.55461   8.14228   1.73843   1.00805
   6   0.03500   0.05309   0.76620   9.53104   1.74403   1.01130
   7   0.04000   0.06961   1.03216  10.93500   1.75088   1.01527
   8   0.04200   0.07691   1.16254  11.50513   1.75447   1.01735
   9   0.04400   0.08456   1.31130  12.07523   1.75779   1.01927
  10   0.04600   0.09264   1.47914  12.65418   1.76212   1.02178
  11   0.04800   0.10112   1.67001  13.23673   1.76653   1.02434
  12   0.05000   0.11002   1.88100  13.82585   1.77191   1.02746
  13   0.05500   0.13372   2.49775  15.27630   1.77980   1.03203
  14   0.06000   0.16376   3.94313  17.14931   1.83150   1.06201
  15   0.06500   0.19521   3.79355  18.87023   1.85857   1.07771
  16   0.07000   0.22478   4.92646  20.17612   1.84836   1.07179
  17   0.07500   0.26052   6.34310  21.82488   1.86348   1.08056
  18   0.08000   0.30505   6.73733  23.95836   1.91804   1.11220
  19   0.08500   0.34468   7.78562  25.47886   1.91856   1.11249
  20   0.09000   0.36855   9.19423  25.72937   1.83369   1.06328
  21   0.09500   0.40778  10.12574  26.97026   1.81776   1.05405
  22   0.10000   0.46827  11.16324  29.42234   1.88645   1.09388
  23   0.11000   0.64654  15.23911  36.93021   2.15303   1.24845
  24   0.12000   0.83621  21.95428  43.78374   2.33852   1.35601
  25   0.13000   0.89980  30.62762  43.48911   2.14808   1.24558
  26   0.14000   0.93236  28.63684  41.84404   1.91723   1.11173
  27   0.15000   1.04194  32.42075  43.64484   1.86560   1.08179
  28   0.16000   1.48546  38.84238  58.33407   2.33848   1.35599
  29   0.17000   2.20817  43.73949  81.61379   3.07792   1.78476
  30   0.18000   2.68740  55.29797  93.80805   3.34991   1.94248
  31   0.19000   2.58640  64.83524  85.53083   2.89353   1.67784
  32   0.20000   2.80895  67.88670  88.24585   2.83623   1.64462
  33   0.22000   3.45694  72.37328  98.73000   2.88229   1.67133
  34   0.24000   4.53668  72.55853 118.77013   3.17622   1.84176
  35   0.26000   5.81305  93.72559 140.47867   3.47307   2.01390
  36   0.28000   7.19771 116.63182 161.51625   3.70669   2.14934
  37   0.30000   9.06625 148.82799 189.88306   4.06822   2.35900
  38   0.32000  10.11005 171.66161 198.51041   3.98858   2.31282
  39   0.34000  10.44581 178.92215 193.03813   3.65176   2.11751
  40   0.36000  11.15510 184.76782 194.69325   3.47756   2.01650
  41   0.38000  11.23130 174.13281 185.70619   3.14271   1.82233
  42   0.40000  13.32377 157.25687 209.28923   3.36335   1.95027
  43   0.42000  13.36577 156.90858 199.95148   3.05970   1.77420
  44   0.44000  12.88541 172.00513 184.00320   2.69239   1.56121
  45   0.46000  13.27548 172.24007 181.33112   2.53820   1.47180
  46   0.48000  15.45353 194.89671 202.28619   2.71337   1.57338
  47   0.50000  18.32023 233.39812 230.21884   2.96351   1.71842
  48   0.55000  19.78338 202.20329 226.00479   2.64047   1.53130
  49   0.60000  21.16700 171.58055 221.66029   2.37281   1.37589
  50   0.65000  31.98928 308.16708 309.22247   3.05755   1.77295
  51   0.70000  45.80273 401.24985 411.12430   3.77319   2.18792
  52   0.75000  56.95612 426.00900 477.15445   4.08990   2.37157
  53   0.80000  64.23039 434.83124 504.46432   4.05682   2.35239
  54   0.85000  66.49873 393.32657 476.77347   3.61124   2.09401
  55   0.90000  70.09209 393.74924 489.33514   3.50092   2.03005
  56   0.95000  75.44084 428.73178 498.95660   3.38003   1.95994
  57   1.00000  87.93507 526.99939 552.51239   3.55462   2.06118
  58   1.10000  87.91204 498.12488 502.15240   2.93716   1.70314
  59   1.20000  98.15919 396.61926 513.96033   2.74840   1.59369
  60   1.30000 139.13589 551.23999 672.47430   3.32351   1.92717
  61   1.40000 187.04138 765.12213 839.43976   3.85325   2.23435
  62   1.50000 200.49654 783.46362 839.83795   3.60052   2.08780
  63   1.60000 226.95334 857.88599 891.24365   3.58650   2.07851
  64   1.70000 253.73904 915.07574 937.81732   3.55002   2.05851
  65   1.80000 270.89474 912.95721 945.60107   3.38027   1.96009
  66   1.90000 279.38190 912.73663 923.89905   3.13005   1.81499
  67   2.00000 279.61688 874.45508 878.44238   2.82704   1.63928
  68   2.20000 275.83725 807.71545 787.78931   2.30279   1.33530
  69   2.40000 309.95853 816.16785 811.46948   2.17931   1.26369
  70   2.60000 331.09976 838.47528 800.13892   1.98113   1.14878
  71   2.80000 357.28839 829.40369 801.75323   1.84557   1.07017
  72   3.00000 371.71561 835.25757 778.51935   1.67172   0.96936
  73   3.20000 400.04175 863.20618 785.48010   1.58156   0.91708
  74   3.40000 431.49078 816.90051 760.43317   1.44082   0.83548
  75   3.60000 415.86548 756.98523 725.82220   1.30067   0.75432
  76   3.80000 431.37106 718.70404 713.25903   1.21038   0.70185
  77   4.00000 457.52567 705.58466 718.67963   1.15725   0.67104
  78   4.20000 481.26291 744.70892 719.96765   1.10492   0.64070
  79   4.40000 494.33112 778.22803 705.90320   1.03451   0.59987
  80   4.60000 491.81952 800.94067 671.78119   0.94105   0.54568
  81   4.80000 482.98456 796.58466 632.22528   0.84888   0.49223
  82   5.00000 489.85263 774.02252 615.56702   0.79360   0.46018
  83   5.50000 470.99374 707.42737 538.06195   0.63240   0.36671
  84   6.00000 434.21671 650.35248 454.71069   0.48992   0.28409
  85   6.50000 424.94629 609.55383 410.77173   0.40759   0.23634
  86   7.00000 450.97949 603.93280 404.79825   0.37248   0.21599
  87   7.50000 493.72171 623.21051 413.61935   0.35552   0.20615
  88   8.00000 531.81604 649.20349 417.68735   0.33711   0.19548
  89   8.50000 550.99335 668.86359 407.29333   0.31099   0.18033
  90   9.00000 546.78790 676.58807 381.72995   0.27638   0.16026
  91   9.50000 524.04260 672.38629 346.59546   0.23743   0.13767
  92  10.00000 487.90323 658.89111 306.55865   0.19874   0.11524
  93  11.00000 438.81781 617.42743 250.65213   0.15125   0.08770
  94  12.00000 471.37756 573.01575 246.81273   0.13677   0.07931
  95  13.00000 484.42743 535.13000 234.13440   0.12020   0.06970
  96  14.00000 487.37939 505.52142 218.73537   0.10494   0.06085
  97  15.00000 485.81653 489.24954 203.49835   0.09175   0.05320
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S1AA.050

S1AA.050
Sec1:
15999 points 0.005 dt parameters are t,ad,sv,psv,sa,mr
97

1	0.01000	0.00337	0.29937	2.11732	1.35620	1.00146
2	0.01500	0.00765	0.82678	3.20267	1.36782	1.01004
3	0.02000	0.01379	1.42452	4.33160	1.38699	1.02420
4	0.02500	0.02189	2.22846	5.50104	1.41002	1.04120
5	0.03000	0.03252	3.08215	6.81183	1.45360	1.07338
6	0.03500	0.04336	3.56683	7.78462	1.42663	1.05347
7	0.04000	0.05860	4.55203	9.20480	1.47348	1.08806
8	0.04200	0.06304	5.62170	9.43012	1.43457	1.05934
9	0.04400	0.06655	6.12928	9.50274	1.38530	1.02295
10	0.04600	0.07414	6.18501	10.12752	1.41179	1.04251
11	0.04800	0.08422	6.24752	11.02450	1.47241	1.08728
12	0.05000	0.09346	5.95989	11.74414	1.50467	1.11109
13	0.05500	0.11580	8.40546	13.22926	1.54390	1.14007
14	0.06000	0.14348	8.05899	15.02511	1.60105	1.18227
15	0.06500	0.17188	7.72080	16.61507	1.63389	1.20652
16	0.07000	0.19621	10.23459	17.61178	1.61338	1.19137
17	0.07500	0.24355	13.46757	20.40385	1.74171	1.28614
18	0.08000	0.27948	14.84765	21.95037	1.75828	1.29837
19	0.08500	0.29426	15.25734	21.75136	1.63800	1.20956
20	0.09000	0.36047	14.86740	25.16564	1.79963	1.32891
21	0.09500	0.40811	16.42900	26.99176	1.82524	1.34781
22	0.10000	0.46026	18.52580	28.91881	1.85168	1.36734
23	0.11000	0.58764	24.41248	33.56574	1.95199	1.44141
24	0.12000	0.70473	25.94476	36.89944	1.96840	1.45353
25	0.13000	0.87102	33.42247	42.09851	2.07696	1.53370
26	0.14000	1.06647	35.70825	47.86296	2.19772	1.62287
27	0.15000	1.15535	35.67601	48.39503	2.07284	1.53065
28	0.16000	1.53218	42.65487	60.16873	2.41868	1.78603
29	0.17000	1.72112	48.63725	63.61230	2.40000	1.77224
30	0.18000	1.95613	53.47634	68.28185	2.43824	1.80047
31	0.19000	2.18376	64.16713	72.21579	2.43999	1.80177
32	0.20000	2.83460	79.69344	89.05145	2.86756	2.11750
33	0.22000	3.58766	89.36776	102.46326	2.99949	2.21492
34	0.24000	4.25033	104.69624	111.27349	2.98081	2.20113
35	0.26000	5.18482	121.09534	125.29693	3.09769	2.28743
36	0.28000	6.56682	143.27258	147.35915	3.38699	2.49958
37	0.30000	8.85248	162.69186	185.40590	3.97674	2.93655
38	0.32000	10.27674	187.93120	201.78328	4.05708	2.99588
39	0.34000	10.48522	182.05258	193.76636	3.66633	2.70734
40	0.36000	11.36130	192.60739	198.29211	3.54313	2.61636
41	0.38000	11.78542	192.46857	194.86842	3.29877	2.43592
42	0.40000	14.13769	208.36635	222.07430	3.57274	2.63822
43	0.42000	15.51593	224.32050	232.11784	3.55714	2.62671
44	0.44000	16.04658	241.33603	229.14467	3.35229	2.47544
45	0.46000	17.15244	239.48206	234.28648	3.27876	2.42114
46	0.48000	15.66450	200.76042	205.04785	2.75401	2.03365
47	0.50000	17.26810	183.44023	216.99739	2.79053	2.06062
48	0.55000	21.45873	178.29663	245.14401	2.86638	2.11663
49	0.60000	24.47419	197.46802	256.29312	2.74615	2.02785
50	0.65000	29.28452	227.38104	283.07700	2.79978	2.06745
51	0.70000	34.56161	257.65668	310.22424	2.85073	2.10507
52	0.75000	40.12541	296.59421	336.15384	2.88027	2.12688
53	0.80000	47.25626	326.33911	371.14981	2.98528	2.20443
54	0.85000	51.66455	325.75275	381.90344	2.89174	2.13535
55	0.90000	54.94252	322.90842	383.57117	2.74227	2.02498
56	0.95000	53.88317	304.71979	356.37680	2.41361	1.78229
57	1.00000	60.62541	328.43564	380.92068	2.45059	1.80959
58	1.10000	74.19652	395.26004	423.80951	2.47770	1.82962
59	1.20000	92.73297	449.57324	485.54871	2.60116	1.92078
60	1.30000	112.71723	475.22742	544.78711	2.69775	1.99211
61	1.40000	136.46594	626.97595	612.45770	2.81538	2.07896
62	1.50000	144.44794	631.73273	605.06213	2.59275	1.91457
63	1.60000	164.42387	630.14258	645.69104	2.59912	1.91928
64	1.70000	168.29955	613.92786	622.03363	2.35703	1.74051
65	1.80000	174.24690	608.95551	608.23645	2.17853	1.60870
66	1.90000	171.28769	599.50641	566.43805	1.92017	1.41791
67	2.00000	155.18359	570.15118	487.52365	1.57281	1.16161
68	2.20000	138.78294	492.38831	396.36316	1.16188	0.85797
69	2.40000	133.29353	459.27432	348.96164	0.94073	0.69466
70	2.60000	147.46138	444.25827	356.35660	0.88635	0.65451
71	2.80000	157.40851	487.48047	353.22385	0.81252	0.59999
72	3.00000	145.62701	466.89404	305.00052	0.65574	0.48422
73	3.20000	143.86342	459.18359	282.47516	0.56996	0.42087
74	3.40000	141.23857	453.43420	261.00827	0.49646	0.36661
75	3.60000	139.13486	450.45239	242.83611	0.43692	0.32264
76	3.80000	133.65257	446.58142	220.99049	0.37820	0.27928
77	4.00000	145.98375	436.02277	229.31075	0.37031	0.27345
78	4.20000	153.66913	423.16098	229.88849	0.35357	0.26109
79	4.40000	161.72894	412.29047	230.94838	0.33791	0.24952
80	4.60000	157.77242	403.51373	215.50291	0.30130	0.22249
81	4.80000	159.88422	394.44043	209.28795	0.28119	0.20764
82	5.00000	167.32162	382.11618	210.26256	0.27284	0.20147
83	5.50000	164.41762	331.65134	187.83025	0.22444	0.16573
84	6.00000	186.66534	284.02820	195.47549	0.20955	0.15474
85	6.50000	173.52686	271.69116	167.73868	0.16670	0.12309
86	7.00000	156.22795	283.07639	140.22989	0.12921	0.09541
87	7.50000	166.47681	294.30557	139.46729	0.12024	0.08879
88	8.00000	205.57771	294.64499	161.46036	0.12987	0.09590
89	8.50000	252.23701	285.20041	186.45317	0.14145	0.10445
90	9.00000	258.72525	270.93292	180.62430	0.12958	0.09568
91	9.50000	257.76126	272.50385	170.48018	0.11596	0.08563
92	10.00000	230.91655	281.33084	145.08916	0.09391	0.06934
93	11.00000	178.55843	290.58380	101.99233	0.06200	0.04578
94	12.00000	159.37245	292.50232	83.44722	0.04897	0.03616
95	13.00000	148.08055	291.14258	71.57058	0.03978	0.02938
96	14.00000	140.48201	288.96979	63.04818	0.03350	0.02473
97	15.00000	135.49121	286.89981	56.75443	0.02898	0.02140

S3AA.050

S3AA.050
Set3:
15999 points 0.005 dt parameters are t,sd,sv,psv,sa,sr
97

1	0.01000	0.00351	0.17685	2.20621	1.41260	1.01823
2	0.01500	0.00800	0.72002	3.35207	1.43298	1.03292
3	0.02000	0.01408	1.17838	4.42317	1.41568	1.02045
4	0.02500	0.02179	1.50074	5.47609	1.40340	1.01160
5	0.03000	0.03125	2.14328	6.54513	1.39667	1.00675
6	0.03500	0.04458	3.52108	8.00272	1.46487	1.05591
7	0.04000	0.06235	5.26055	9.79387	1.57768	1.13722
8	0.04200	0.06711	5.46560	10.03972	1.52637	1.10024
9	0.04400	0.07447	5.89285	10.63479	1.54998	1.11725
10	0.04600	0.07975	6.15648	10.89340	1.52940	1.10242
11	0.04800	0.08882	6.44047	11.62624	1.55384	1.12004
12	0.05000	0.09620	7.03900	12.08936	1.54779	1.11568
13	0.05500	0.12410	9.69402	14.17710	1.67188	1.20512
14	0.06000	0.14151	11.11081	14.81896	1.58139	1.13990
15	0.06500	0.19364	12.74537	18.71778	1.83388	1.32190
16	0.07000	0.20443	14.97925	18.34953	1.67928	1.21046
17	0.07500	0.23966	18.25718	20.07774	1.72170	1.24104
18	0.08000	0.29786	16.91655	23.39375	1.88136	1.35612
19	0.08500	0.34870	18.04025	25.77611	1.95760	1.41108
20	0.09000	0.40799	20.44356	28.48323	2.03718	1.46844
21	0.09500	0.45489	20.08280	30.08571	2.02762	1.46155
22	0.10000	0.45252	19.87967	28.43270	1.82278	1.31389
23	0.11000	0.56380	24.44404	32.20417	1.88626	1.35966
24	0.12000	0.74836	28.20649	39.18380	2.10243	1.51548
25	0.13000	0.89699	39.21031	43.35353	2.13869	1.54161
26	0.14000	1.17672	37.71838	52.81101	2.42658	1.74913
27	0.15000	1.33457	42.93563	55.90228	2.39126	1.72367
28	0.16000	1.54711	45.81886	60.75489	2.44019	1.75894
29	0.17000	1.79868	48.98926	66.47899	2.51629	1.81379
30	0.18000	1.94001	57.35501	67.71918	2.41398	1.74004
31	0.19000	2.44420	60.97409	80.82832	2.73109	1.96862
32	0.20000	2.90188	72.99744	91.16515	2.92656	2.10952
33	0.22000	3.30580	67.81036	94.41343	2.75920	1.98888
34	0.24000	4.07672	70.18865	106.72835	2.85560	2.05837
35	0.26000	5.02929	98.37157	121.53844	3.00324	2.16480
36	0.28000	6.21670	120.65698	139.50235	3.20241	2.30836
37	0.30000	7.82673	155.39493	163.92255	3.51383	2.53284
38	0.32000	8.35708	159.44908	164.09093	3.29743	2.37685
39	0.34000	9.79912	187.34840	181.08727	3.42666	2.47001
40	0.36000	10.95585	183.88924	191.21570	3.41416	2.46099
41	0.38000	12.28927	183.09882	203.19934	3.43946	2.47923
42	0.40000	13.29623	185.49802	208.85661	3.36119	2.42281
43	0.42000	15.31343	201.81021	229.08838	3.51079	2.53065
44	0.44000	17.44106	233.04269	249.05777	3.64065	2.62425
45	0.46000	17.99299	236.99092	245.76797	3.43783	2.47806
46	0.48000	19.63097	253.77296	256.96875	3.44284	2.48167
47	0.50000	22.35487	285.59259	280.91953	3.61505	2.60580
48	0.55000	26.66215	286.34277	304.58771	3.56257	2.56797
49	0.60000	32.35467	345.46051	338.81732	3.63403	2.61948
50	0.65000	35.27925	345.27618	341.02472	3.37808	2.43499
51	0.70000	38.17832	337.25238	342.68781	3.14657	2.26811
52	0.75000	41.88488	328.67651	350.89395	3.00736	2.16776
53	0.80000	46.53614	327.55832	365.49399	2.93742	2.11735
54	0.85000	49.17812	315.43179	363.52377	2.75071	1.98276
55	0.90000	58.94214	355.66455	411.49374	2.94366	2.12185
56	0.95000	64.57327	420.64047	427.07983	2.89363	2.08578
57	1.00000	74.98412	458.37354	471.13910	3.03200	2.18553
58	1.10000	80.04859	448.73538	457.23648	2.67290	1.92668
59	1.20000	108.23846	575.98926	566.73517	3.03952	2.19095
60	1.30000	121.12164	590.88269	585.40747	2.89930	2.08987
61	1.40000	118.39745	545.08270	531.36646	2.44251	1.76061
62	1.50000	138.00540	616.21899	578.07568	2.48299	1.78979
63	1.60000	144.32147	550.00293	566.74908	2.27960	1.64318
64	1.70000	144.95987	530.45404	535.77039	2.02961	1.46298
65	1.80000	140.99521	508.78220	492.16614	1.76040	1.26893
66	1.90000	138.13290	491.78635	456.79718	1.54555	1.11406
67	2.00000	188.76640	567.52228	593.02716	1.90896	1.37601
68	2.20000	203.07872	574.80371	579.99146	1.69853	1.22434
69	2.40000	177.92316	533.16187	465.80173	1.25073	0.90155
70	2.60000	138.92731	359.89609	335.73309	0.83197	0.59970
71	2.80000	119.97594	328.64828	269.22537	0.62134	0.44787
72	3.00000	142.23482	378.35355	297.89590	0.63994	0.46128
73	3.20000	153.72841	388.41544	301.84503	0.61043	0.44001
74	3.40000	183.99503	350.40689	340.02200	0.64278	0.46333
75	3.60000	176.44092	315.26608	307.94751	0.55216	0.39801
76	3.80000	139.97865	324.75659	231.45047	0.39167	0.28232
77	4.00000	158.40923	319.68051	248.82864	0.40039	0.28861
78	4.20000	180.67549	312.34842	270.28992	0.41514	0.29924
79	4.40000	188.68781	328.65460	269.44556	0.39689	0.28609
80	4.60000	185.32452	331.97955	253.13661	0.35792	0.25799
81	4.80000	178.96274	328.17380	234.26167	0.31771	0.22901
82	5.00000	174.28264	326.92859	219.01003	0.28508	0.20549
83	5.50000	177.60706	336.72995	202.89781	0.23801	0.17156
84	6.00000	231.17838	310.44305	242.08943	0.26165	0.18860
85	6.50000	244.98735	333.02588	236.81552	0.23801	0.17156
86	7.00000	204.76984	347.20786	183.80098	0.17314	0.12480
87	7.50000	176.32710	322.60898	147.71945	0.12797	0.09224
88	8.00000	154.77136	310.40909	121.55724	0.09916	0.07148
89	8.50000	149.38066	302.03848	110.42193	0.08448	0.06090
90	9.00000	142.02745	292.65179	99.15386	0.07273	0.05243
91	9.50000	133.98680	284.29630	88.61725	0.06229	0.04490
92	10.00000	127.80693	277.59705	80.30347	0.05415	0.03903
93	11.00000	120.97385	268.96088	69.10010	0.04307	0.03105
94	12.00000	116.92206	264.38589	61.22025	0.03555	0.02563
95	13.00000	112.23093	261.99094	54.24367	0.02959	0.02133
96	14.00000	106.96848	260.62918	48.00734	0.02465	0.01777
97	15.00000	108.88295	259.75159	45.60878	0.02180	0.01571

S1BB.050

S1BB.050
Set1:
15999 points 0.005 dt parameters are t,sd,sv,psv,sa,mr
97

1	0.01000	0.00502	0.32146	3.15653	2.02156	1.01855
2	0.01500	0.01111	0.75310	4.65237	1.98659	1.00093
3	0.02000	0.01972	1.37620	6.19554	1.98414	0.99969
4	0.02500	0.03099	2.06225	7.78986	1.99551	1.00542
5	0.03000	0.04466	2.81958	9.35357	1.99728	1.00631
6	0.03500	0.06198	3.92734	11.12612	2.03680	1.02623
7	0.04000	0.08182	4.54033	12.85179	2.05747	1.03664
8	0.04200	0.08889	5.31514	13.29777	2.02842	1.02200
9	0.04400	0.09798	5.93201	13.99159	2.03709	1.02637
10	0.04600	0.10868	6.81699	14.84431	2.06609	1.04098
11	0.04800	0.11960	7.01812	15.65610	2.09094	1.05350
12	0.05000	0.12883	6.57239	16.18966	2.07193	1.04392
13	0.05500	0.15975	8.39404	18.24988	2.12281	1.06956
14	0.06000	0.18241	8.30804	19.10180	2.04126	1.02847
15	0.06500	0.21116	9.77290	20.41155	2.01192	1.01369
16	0.07000	0.25285	13.54314	22.69599	2.07707	1.04652
17	0.07500	0.30801	15.45462	25.80341	2.20385	1.11039
18	0.08000	0.34270	16.27778	26.91565	2.15444	1.08550
19	0.08500	0.40878	14.85346	30.21675	2.28289	1.15021
20	0.09000	0.48598	15.28326	33.92778	2.41348	1.21601
21	0.09500	0.58071	17.04112	38.40752	2.59105	1.30548
22	0.10000	0.58316	20.10490	36.64106	2.34587	1.18195
23	0.11000	0.69124	31.02099	39.48367	2.30031	1.15899
24	0.12000	0.96588	34.04013	50.57341	2.69704	1.35888
25	0.13000	1.23671	36.81917	59.77291	2.95430	1.48850
26	0.14000	1.30389	41.01754	58.51823	2.68617	1.35340
27	0.15000	1.62071	41.06650	67.88811	2.91012	1.46624
28	0.16000	1.72149	44.09540	67.60269	2.70726	1.36403
29	0.17000	1.88236	50.15258	69.57198	2.62731	1.32375
30	0.18000	2.18710	48.54285	76.34403	2.71928	1.37009
31	0.19000	2.52725	62.31424	83.57457	2.82385	1.42277
32	0.20000	2.78426	67.57803	87.47012	2.80882	1.41520
33	0.22000	3.48753	78.83688	99.60365	2.90507	1.46369
34	0.24000	4.70006	107.05085	123.04720	3.30001	1.66268
35	0.26000	6.47854	144.36736	156.56094	3.87434	1.95205
36	0.28000	6.18094	135.06911	138.69987	3.18791	1.60620
37	0.30000	7.35124	119.41641	153.96407	3.29386	1.65958
38	0.32000	9.95665	119.63722	195.49832	3.92292	1.97653
39	0.34000	10.11292	131.15460	186.88625	3.52985	1.77849
40	0.36000	11.24402	146.44476	196.24522	3.49961	1.76325
41	0.38000	13.76763	179.51230	227.64368	3.84840	1.93899
42	0.40000	13.97713	191.57428	219.55226	3.52630	1.77670
43	0.42000	16.03481	198.59814	239.88028	3.66871	1.84845
44	0.44000	22.08481	231.27536	315.37036	4.60424	2.31981
45	0.46000	26.54074	245.59273	362.52261	5.06805	2.55350
46	0.48000	27.76356	245.77795	363.42419	4.86669	2.45204
47	0.50000	30.42243	264.61752	382.29953	4.91400	2.47588
48	0.55000	31.88265	250.45486	364.22653	4.25512	2.14390
49	0.60000	39.65917	293.58179	415.30988	4.44782	2.24100
50	0.65000	49.08374	360.25385	474.46500	4.69285	2.36445
51	0.70000	47.57417	355.44653	427.02478	3.92107	1.97560
52	0.75000	53.45533	390.81427	447.82629	3.83736	1.93342
53	0.80000	58.30817	407.94235	457.95129	3.68179	1.85504
54	0.85000	64.80088	432.90939	479.00699	3.62627	1.82707
55	0.90000	75.42670	496.75800	526.57776	3.76688	1.89791
56	0.95000	85.55727	545.33972	565.86542	3.83444	1.93195
57	1.00000	93.97634	578.87860	590.47076	3.80002	1.91461
58	1.10000	95.41593	538.06702	545.01453	3.18763	1.60606
59	1.20000	112.27513	596.95123	587.87122	3.15033	1.58727
60	1.30000	140.77206	662.11224	680.38226	3.36967	1.69778
61	1.40000	140.54324	616.96075	630.75659	2.90113	1.46171
62	1.50000	137.66313	518.59802	576.64197	2.47189	1.24544
63	1.60000	162.75066	563.07532	639.12030	2.56710	1.29341
64	1.70000	169.63658	534.31104	626.97534	2.37120	1.19471
65	1.80000	188.95787	538.33093	659.58740	2.35866	1.18839
66	1.90000	222.22061	622.63544	734.87012	2.49233	1.25574
67	2.00000	243.86182	737.95868	766.11450	2.46677	1.24286
68	2.20000	278.55942	880.43506	795.56384	2.32940	1.17365
69	2.40000	287.12702	830.03082	751.95856	2.01439	1.01493
70	2.60000	339.64697	853.42834	820.79419	2.03126	1.02343
71	2.80000	357.49524	814.54437	802.21741	1.84492	0.92955
72	3.00000	358.35995	804.00507	750.54736	1.60911	0.81074
73	3.20000	386.04379	811.28033	757.99518	1.52357	0.76764
74	3.40000	411.84521	788.97583	761.08813	1.44392	0.72751
75	3.60000	424.98984	726.73236	741.74719	1.32634	0.66827
76	3.80000	437.24667	697.89099	722.97418	1.22502	0.61722
77	4.00000	446.33203	711.15918	701.09674	1.12823	0.56845
78	4.20000	442.15222	696.80225	661.45819	1.01552	0.51166
79	4.40000	427.08847	670.88867	609.88092	0.89476	0.45082
80	4.60000	439.20569	664.80591	599.91541	0.83817	0.42231
81	4.80000	461.56882	661.03003	604.19214	0.81185	0.40904
82	5.00000	471.06198	657.77771	591.95398	0.76349	0.38468
83	5.50000	440.60574	612.54425	503.34680	0.59131	0.29792
84	6.00000	431.31061	551.51508	451.66742	0.48394	0.24383
85	6.50000	455.36142	549.03894	440.17233	0.43766	0.22051
86	7.00000	491.33505	577.80762	441.02130	0.40924	0.20619
87	7.50000	478.23444	592.03674	400.64474	0.34859	0.17563
88	8.00000	451.22028	584.24854	354.38757	0.28975	0.14599
89	8.50000	436.46436	568.24866	322.63370	0.24867	0.12529
90	9.00000	433.61514	555.97357	302.72046	0.22063	0.11116
91	9.50000	431.09659	551.90344	285.12207	0.19704	0.09927
92	10.00000	422.61011	554.69977	265.53378	0.17335	0.08734
93	11.00000	402.31384	569.23431	229.80112	0.13713	0.06909
94	12.00000	412.02005	581.72919	215.73320	0.11968	0.06030
95	13.00000	409.21362	587.52234	197.78192	0.10206	0.05142
96	14.00000	399.70505	588.01636	179.38721	0.08664	0.04366
97	15.00000	390.54242	586.26465	163.59003	0.07432	0.03745

S3BB.050

S3BB.050
Set3:
15999 points 0.005 dt parameters are t,sd,sv,psv,sa,Sr
97

1	0.01000	0.00460	0.15847	2.89292	1.85300	1.00321
2	0.01500	0.01055	0.59540	4.41927	1.88691	1.02157
3	0.02000	0.01882	1.15276	5.91316	1.89390	1.02535
4	0.02500	0.03028	1.42485	7.61109	1.94867	1.05501
5	0.03000	0.04201	1.95957	8.79844	1.87922	1.01741
6	0.03500	0.05544	3.02585	9.95307	1.82182	0.98633
7	0.04000	0.07568	4.19633	11.88725	1.90274	1.03014
8	0.04200	0.08407	4.18902	12.57668	1.91950	1.03921
9	0.04400	0.09268	4.56626	13.23460	1.92770	1.04365
10	0.04600	0.10108	4.74113	13.80657	1.92233	1.04075
11	0.04800	0.10994	4.85299	14.39090	1.92014	1.03956
12	0.05000	0.12182	5.37352	15.30859	1.96073	1.06154
13	0.05500	0.14801	7.50476	16.90814	1.96733	1.06511
14	0.06000	0.19254	8.72853	20.16259	2.14721	1.16250
15	0.06500	0.22642	10.13271	21.88704	2.15123	1.16467
16	0.07000	0.24963	12.52575	22.40656	2.04684	1.10816
17	0.07500	0.28708	15.18598	24.05057	2.05074	1.11027
18	0.08000	0.34885	13.93819	27.39865	2.18970	1.18550
19	0.08500	0.39505	15.25790	29.20188	2.19974	1.19093
20	0.09000	0.43199	16.78771	30.15826	2.14205	1.15970
21	0.09500	0.47748	18.11857	31.58003	2.13195	1.15423
22	0.10000	0.52761	16.33610	33.15060	2.12408	1.14997
23	0.11000	0.67617	21.14371	38.62267	2.25150	1.21896
24	0.12000	0.89696	28.01920	46.96492	2.50485	1.35612
25	0.13000	0.98221	35.01755	47.47214	2.34464	1.26938
26	0.14000	0.96951	31.10762	43.51146	1.99416	1.07963
27	0.15000	1.06364	35.78881	44.55370	1.90411	1.03088
28	0.16000	1.47981	39.49683	58.11193	2.32669	1.25966
29	0.17000	2.22634	44.75198	82.28546	3.10338	1.68016
30	0.18000	2.72760	54.18555	95.21104	3.40051	1.84103
31	0.19000	2.62430	61.28790	86.78394	2.93635	1.58973
32	0.20000	2.82188	64.83023	88.65196	2.84842	1.54213
33	0.22000	3.42492	68.15232	97.81561	2.85421	1.54527
34	0.24000	4.54041	72.69936	118.86757	3.18344	1.72351
35	0.26000	5.89264	93.06879	142.40219	3.51835	1.90483
36	0.28000	7.38665	119.55554	165.75610	3.80601	2.06057
37	0.30000	9.40604	155.23842	196.99959	4.22110	2.28529
38	0.32000	10.61831	188.29082	208.49007	4.18901	2.26792
39	0.34000	11.29643	198.68535	208.75746	3.95102	2.13907
40	0.36000	12.20703	204.99718	213.05276	3.80735	2.06129
41	0.38000	13.24864	193.20032	219.06232	3.70351	2.00507
42	0.40000	15.44751	181.14590	242.64888	3.89967	2.11127
43	0.42000	15.30818	170.44685	229.00980	3.50443	1.89729
44	0.44000	14.67945	187.40718	209.62202	3.06601	1.65993
45	0.46000	15.00236	185.01762	204.91873	2.86775	1.55260
46	0.48000	17.47080	209.16124	228.69220	3.06766	1.66082
47	0.50000	20.95103	254.73320	263.27841	3.38982	1.83524
48	0.55000	21.59517	227.76593	246.70267	2.88256	1.56061
49	0.60000	22.66312	182.87566	237.32764	2.54102	1.37570
50	0.65000	33.89962	322.92358	327.68857	3.24015	1.75421
51	0.70000	48.10702	434.34995	431.80759	3.96376	2.14597
52	0.75000	58.58268	446.71576	490.78110	4.20663	2.27746
53	0.80000	65.96758	462.86481	518.10809	4.16510	2.25498
54	0.85000	66.46014	420.65594	491.27222	3.72093	2.01451
55	0.90000	72.39355	414.71210	505.40231	3.61715	1.95832
56	0.95000	78.02312	429.14615	516.03552	3.49616	1.89281
57	1.00000	90.26313	539.78571	567.14001	3.64872	1.97541
58	1.10000	89.72410	508.79486	512.50287	2.99709	1.62262
59	1.20000	99.18491	407.98813	519.33093	2.77812	1.50407
60	1.30000	140.22346	561.56970	677.73077	3.34901	1.81315
61	1.40000	188.60713	779.99554	847.36438	3.88928	2.10565
62	1.50000	202.32301	791.21655	847.48871	3.63323	1.96703
63	1.60000	229.51088	862.09930	901.28711	3.62512	1.96263
64	1.70000	256.40939	925.05908	947.68689	3.58842	1.94276
65	1.80000	272.95389	925.19080	952.78882	3.40521	1.84357
66	1.90000	281.69754	916.94037	931.55676	3.15590	1.70860
67	2.00000	281.94437	882.21155	885.75439	2.85083	1.54343
68	2.20000	277.35315	811.46143	792.11871	2.31615	1.25396
69	2.40000	311.84579	820.86682	816.41034	2.19347	1.18754
70	2.60000	332.41010	841.04236	803.30548	1.98914	1.07692
71	2.80000	358.94620	833.37689	805.47339	1.85466	1.00411
72	3.00000	373.19113	839.05487	781.60968	1.67990	0.90950
73	3.20000	401.02847	866.00275	787.41754	1.58518	0.85821
74	3.40000	412.54004	822.51306	762.37219	1.44461	0.78211
75	3.60000	416.99496	757.49365	727.79352	1.30431	0.70615
76	3.80000	432.41443	719.98352	714.98419	1.21367	0.65708
77	4.00000	458.23871	711.77832	719.79968	1.15897	0.62747
78	4.20000	481.99521	747.16309	721.06317	1.10653	0.59908
79	4.40000	495.14117	776.85107	707.05994	1.03587	0.56082
80	4.60000	492.61536	800.97681	672.86823	0.94276	0.51041
81	4.80000	483.58109	798.39221	633.00616	0.85057	0.46050
82	5.00000	490.26938	775.31995	616.09070	0.79429	0.43002
83	5.50000	471.57980	713.27081	538.73151	0.63300	0.34270
84	6.00000	434.58261	655.85010	455.09387	0.49104	0.26585
85	6.50000	424.92694	614.91016	410.75302	0.40852	0.22117
86	7.00000	450.78082	609.29041	404.61993	0.37261	0.20173
87	7.50000	493.52692	628.47241	413.45615	0.35512	0.19226
88	8.00000	531.80096	654.39447	417.67551	0.33715	0.18253
89	8.50000	551.37848	673.89105	407.57800	0.31115	0.16846
90	9.00000	547.28088	681.33093	382.07413	0.27677	0.14984
91	9.50000	524.02637	676.72717	346.58472	0.23796	0.12883
92	10.00000	488.02524	662.81866	306.63531	0.19921	0.10785
93	11.00000	438.79556	620.84381	250.63943	0.15163	0.08209
94	12.00000	471.32291	576.41846	246.78410	0.13717	0.07426
95	13.00000	486.33691	538.47559	234.09065	0.12057	0.06528
96	14.00000	487.31747	508.97391	218.70758	0.10516	0.05693
97	15.00000	486.12802	486.59799	203.62883	0.09199	0.04980

Attachment G

DEFORMP

Input and Output Excerpts

(see Table 7-7 for listing of files)

PD1ASP.INP

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PD1ASP.DAT
PD1A00.QSC
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(8F10.6)
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(8F10.6)
PD1A00.QSC
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(8F10.6)
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PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
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PD1ASP.DAT

PD1ASP.DAT
Summary of Permanent deformation from Newmark's method

Slip A.(g),	Slip/Amx,	Slip D.(ft),	Amx,	Scaling F.,	file
0.00500	0.00415	0.1999E+03	1.20556	1.00000	PD1A00.QSC
0.01000	0.00829	0.1121E+03	1.20556	1.00000	PD1A00.QSC
0.01500	0.01244	0.8307E+02	1.20556	1.00000	PD1A00.QSC
0.02000	0.01659	0.6432E+02	1.20556	1.00000	PD1A00.QSC
0.03000	0.02488	0.4764E+02	1.20556	1.00000	PD1A00.QSC
0.04000	0.03318	0.4019E+02	1.20556	1.00000	PD1A00.QSC
0.05000	0.04147	0.3383E+02	1.20556	1.00000	PD1A00.QSC
0.06000	0.04977	0.2825E+02	1.20556	1.00000	PD1A00.QSC
0.07000	0.05806	0.2389E+02	1.20556	1.00000	PD1A00.QSC
0.08000	0.06636	0.2082E+02	1.20556	1.00000	PD1A00.QSC
0.09000	0.07465	0.1874E+02	1.20556	1.00000	PD1A00.QSC
0.10000	0.08295	0.1692E+02	1.20556	1.00000	PD1A00.QSC
0.11000	0.09124	0.1534E+02	1.20556	1.00000	PD1A00.QSC
0.12000	0.09954	0.1392E+02	1.20556	1.00000	PD1A00.QSC
0.13000	0.10783	0.1267E+02	1.20556	1.00000	PD1A00.QSC
0.14000	0.11613	0.1161E+02	1.20556	1.00000	PD1A00.QSC
0.15000	0.12442	0.1078E+02	1.20556	1.00000	PD1A00.QSC
0.20000	0.16590	0.7993E+01	1.20556	1.00000	PD1A00.QSC
0.30000	0.24885	0.4723E+01	1.20556	1.00000	PD1A00.QSC
0.40000	0.33180	0.2963E+01	1.20556	1.00000	PD1A00.QSC
0.50000	0.41474	0.1850E+01	1.20556	1.00000	PD1A00.QSC
0.55000	0.45622	0.1423E+01	1.20556	1.00000	PD1A00.QSC
0.60000	0.49769	0.1063E+01	1.20556	1.00000	PD1A00.QSC
0.65000	0.53917	0.7520E+00	1.20556	1.00000	PD1A00.QSC
0.70000	0.58064	0.4783E+00	1.20556	1.00000	PD1A00.QSC
0.75000	0.62212	0.3025E+00	1.20556	1.00000	PD1A00.QSC
0.80000	0.66359	0.2161E+00	1.20556	1.00000	PD1A00.QSC
0.85000	0.70507	0.1490E+00	1.20556	1.00000	PD1A00.QSC
0.90000	0.74654	0.9753E-01	1.20556	1.00000	PD1A00.QSC
0.95000	0.78801	0.5943E-01	1.20556	1.00000	PD1A00.QSC
1.00000	0.82949	0.3254E-01	1.20556	1.00000	PD1A00.QSC
1.10000	0.91244	0.5665E-02	1.20556	1.00000	PD1A00.QSC
1.20000	0.99539	0.1213E-04	1.20556	1.00000	PD1A00.QSC
1.30000	1.07834	0.0000E+00	1.20556	1.00000	PD1A00.QSC
1.40000	1.16128	0.0000E+00	1.20556	1.00000	PD1A00.QSC
1.50000	1.24423	0.0000E+00	1.20556	1.00000	PD1A00.QSC
1.60000	1.32718	0.0000E+00	1.20556	1.00000	PD1A00.QSC

PD1ASN.INP

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PD1ASN.DAT
PD1A00.QSC
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PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
5,12000,0.005,5,0.04,-1.0
(8F10.6)
PD1A00.QSC
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PD1A00.QSC
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PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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PD1A00.QSC
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PD1A00.QSC
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PD1A00.QSC
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PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
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(8F10.6)
PD1A00.QSC
5,12000,0.005,5,1.3,-1.0
(8F10.6)
PD1A00.QSC
5,12000,0.005,5,1.4,-1.0
(8F10.6)
PD1A00.QSC
5,12000,0.005,5,1.5,-1.0
(8F10.6)
PD1A00.QSC
5,12000,0.005,5,1.6,-1.0
(8F10.6)
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PD1ASN.DAT

PD1ASN.DAT
Summary of Permanent deformation from Newmark's method

Slip A.(g),	Slip/Amx,	Slip D.(ft),	Amx,	Scaling F.,	file
0.00500	0.00536	0.1290E+03	0.93294	-1.00000	PD1A00.QSC
0.01000	0.01072	0.8519E+02	0.93294	-1.00000	PD1A00.QSC
0.01500	0.01608	0.6581E+02	0.93294	-1.00000	PD1A00.QSC
0.02000	0.02144	0.5273E+02	0.93294	-1.00000	PD1A00.QSC
0.03000	0.03216	0.3974E+02	0.93294	-1.00000	PD1A00.QSC
0.04000	0.04288	0.3115E+02	0.93294	-1.00000	PD1A00.QSC
0.05000	0.05359	0.2608E+02	0.93294	-1.00000	PD1A00.QSC
0.06000	0.06431	0.2286E+02	0.93294	-1.00000	PD1A00.QSC
0.07000	0.07503	0.2009E+02	0.93294	-1.00000	PD1A00.QSC
0.08000	0.08575	0.1781E+02	0.93294	-1.00000	PD1A00.QSC
0.09000	0.09647	0.1585E+02	0.93294	-1.00000	PD1A00.QSC
0.10000	0.10719	0.1411E+02	0.93294	-1.00000	PD1A00.QSC
0.11000	0.11791	0.1257E+02	0.93294	-1.00000	PD1A00.QSC
0.12000	0.12863	0.1126E+02	0.93294	-1.00000	PD1A00.QSC
0.13000	0.13934	0.1016E+02	0.93294	-1.00000	PD1A00.QSC
0.14000	0.15006	0.9218E+01	0.93294	-1.00000	PD1A00.QSC
0.15000	0.16078	0.8397E+01	0.93294	-1.00000	PD1A00.QSC
0.20000	0.21438	0.5543E+01	0.93294	-1.00000	PD1A00.QSC
0.30000	0.32156	0.2372E+01	0.93294	-1.00000	PD1A00.QSC
0.40000	0.42875	0.8103E+00	0.93294	-1.00000	PD1A00.QSC
0.50000	0.53594	0.2850E+00	0.93294	-1.00000	PD1A00.QSC
0.55000	0.58953	0.1477E+00	0.93294	-1.00000	PD1A00.QSC
0.60000	0.64313	0.8484E-01	0.93294	-1.00000	PD1A00.QSC
0.65000	0.69672	0.5496E-01	0.93294	-1.00000	PD1A00.QSC
0.70000	0.75031	0.3594E-01	0.93294	-1.00000	PD1A00.QSC
0.75000	0.80391	0.2141E-01	0.93294	-1.00000	PD1A00.QSC
0.80000	0.85750	0.1091E-01	0.93294	-1.00000	PD1A00.QSC
0.85000	0.91110	0.4079E-02	0.93294	-1.00000	PD1A00.QSC
0.90000	0.96469	0.6143E-03	0.93294	-1.00000	PD1A00.QSC
0.95000	1.01828	0.0000E+00	0.93294	-1.00000	PD1A00.QSC
1.00000	1.07188	0.0000E+00	0.93294	-1.00000	PD1A00.QSC
1.10000	1.17907	0.0000E+00	0.93294	-1.00000	PD1A00.QSC
1.20000	1.28625	0.0000E+00	0.93294	-1.00000	PD1A00.QSC
1.30000	1.39344	0.0000E+00	0.93294	-1.00000	PD1A00.QSC
1.40000	1.50063	0.0000E+00	0.93294	-1.00000	PD1A00.QSC
1.50000	1.60782	0.0000E+00	0.93294	-1.00000	PD1A00.QSC
1.60000	1.71500	0.0000E+00	0.93294	-1.00000	PD1A00.QSC

PD3ASP.INP

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PD3ASP.DAT
PD3A00.QSC
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.015,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.02,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.03,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.04,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.05,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.06,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.07,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.08,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.09,1.0
(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.3,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.4,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,0.5,1.0
(8F10.6)
PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
5,12000,0.005,5,1.3,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,1.4,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,1.5,1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,1.6,1.0
(8F10.6)
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PD3ASP.DAT

PD3ASP.DAT
Summary of Permanent deformation from Newmark's method

Slip A.(g),	Slip/Amx,	Slip D.(ft),	Amx,	Scaling F.,	file
0.00500	0.00539	0.2029E+03	0.92785	1.00000	PD3A00.QSC
0.01000	0.01078	0.1371E+03	0.92785	1.00000	PD3A00.QSC
0.01500	0.01617	0.1199E+03	0.92785	1.00000	PD3A00.QSC
0.02000	0.02156	0.1073E+03	0.92785	1.00000	PD3A00.QSC
0.03000	0.03233	0.8629E+02	0.92785	1.00000	PD3A00.QSC
0.04000	0.04311	0.7170E+02	0.92785	1.00000	PD3A00.QSC
0.05000	0.05389	0.6261E+02	0.92785	1.00000	PD3A00.QSC
0.06000	0.06467	0.5591E+02	0.92785	1.00000	PD3A00.QSC
0.07000	0.07544	0.5046E+02	0.92785	1.00000	PD3A00.QSC
0.08000	0.08622	0.4559E+02	0.92785	1.00000	PD3A00.QSC
0.09000	0.09700	0.4127E+02	0.92785	1.00000	PD3A00.QSC
0.10000	0.10778	0.3731E+02	0.92785	1.00000	PD3A00.QSC
0.11000	0.11855	0.3375E+02	0.92785	1.00000	PD3A00.QSC
0.12000	0.12933	0.3045E+02	0.92785	1.00000	PD3A00.QSC
0.13000	0.14011	0.2767E+02	0.92785	1.00000	PD3A00.QSC
0.14000	0.15089	0.2525E+02	0.92785	1.00000	PD3A00.QSC
0.15000	0.16166	0.2320E+02	0.92785	1.00000	PD3A00.QSC
0.20000	0.21555	0.1600E+02	0.92785	1.00000	PD3A00.QSC
0.30000	0.32333	0.7647E+01	0.92785	1.00000	PD3A00.QSC
0.40000	0.43110	0.3451E+01	0.92785	1.00000	PD3A00.QSC
0.50000	0.53888	0.1377E+01	0.92785	1.00000	PD3A00.QSC
0.55000	0.59277	0.8141E+00	0.92785	1.00000	PD3A00.QSC
0.60000	0.64666	0.4289E+00	0.92785	1.00000	PD3A00.QSC
0.65000	0.70055	0.2457E+00	0.92785	1.00000	PD3A00.QSC
0.70000	0.75443	0.1372E+00	0.92785	1.00000	PD3A00.QSC
0.75000	0.80832	0.7418E-01	0.92785	1.00000	PD3A00.QSC
0.80000	0.86221	0.3439E-01	0.92785	1.00000	PD3A00.QSC
0.85000	0.91610	0.1071E-01	0.92785	1.00000	PD3A00.QSC
0.90000	0.96999	0.9560E-03	0.92785	1.00000	PD3A00.QSC
0.95000	1.02387	0.0000E+00	0.92785	1.00000	PD3A00.QSC
1.00000	1.07776	0.0000E+00	0.92785	1.00000	PD3A00.QSC
1.10000	1.18554	0.0000E+00	0.92785	1.00000	PD3A00.QSC
1.20000	1.29331	0.0000E+00	0.92785	1.00000	PD3A00.QSC
1.30000	1.40109	0.0000E+00	0.92785	1.00000	PD3A00.QSC
1.40000	1.50887	0.0000E+00	0.92785	1.00000	PD3A00.QSC
1.50000	1.61664	0.0000E+00	0.92785	1.00000	PD3A00.QSC
1.60000	1.72442	0.0000E+00	0.92785	1.00000	PD3A00.QSC

PD3ASN.INP

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PD3ASN.DAT
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
5,12000,0.005,5,0.4,-1.0
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
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PD3A00.QSC
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PD3A00.QSC
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(8F10.6)
PD3A00.QSC
5,12000,0.005,5,1.4,-1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,1.5,-1.0
(8F10.6)
PD3A00.QSC
5,12000,0.005,5,1.6,-1.0
(8F10.6)
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PD3ASN.DAT

PD3ASN.DAT
Summary of Permanent deformation from Newmark's method

Slip A.(g),	Slip/Amx,	Slip D.(ft),	Amx,	Scaling F.,	file
0.00500	0.00425	0.1249E+03	1.17737	-1.00000	PD3A00.QSC
0.01000	0.00849	0.1068E+03	1.17737	-1.00000	PD3A00.QSC
0.01500	0.01274	0.9412E+02	1.17737	-1.00000	PD3A00.QSC
0.02000	0.01699	0.8529E+02	1.17737	-1.00000	PD3A00.QSC
0.03000	0.02548	0.7293E+02	1.17737	-1.00000	PD3A00.QSC
0.04000	0.03397	0.6323E+02	1.17737	-1.00000	PD3A00.QSC
0.05000	0.04247	0.5508E+02	1.17737	-1.00000	PD3A00.QSC
0.06000	0.05096	0.4840E+02	1.17737	-1.00000	PD3A00.QSC
0.07000	0.05945	0.4293E+02	1.17737	-1.00000	PD3A00.QSC
0.08000	0.06795	0.3849E+02	1.17737	-1.00000	PD3A00.QSC
0.09000	0.07644	0.3506E+02	1.17737	-1.00000	PD3A00.QSC
0.10000	0.08493	0.3224E+02	1.17737	-1.00000	PD3A00.QSC
0.11000	0.09343	0.2966E+02	1.17737	-1.00000	PD3A00.QSC
0.12000	0.10192	0.2730E+02	1.17737	-1.00000	PD3A00.QSC
0.13000	0.11042	0.2511E+02	1.17737	-1.00000	PD3A00.QSC
0.14000	0.11891	0.2310E+02	1.17737	-1.00000	PD3A00.QSC
0.15000	0.12740	0.2126E+02	1.17737	-1.00000	PD3A00.QSC
0.20000	0.16987	0.1405E+02	1.17737	-1.00000	PD3A00.QSC
0.30000	0.25480	0.6440E+01	1.17737	-1.00000	PD3A00.QSC
0.40000	0.33974	0.3098E+01	1.17737	-1.00000	PD3A00.QSC
0.50000	0.42467	0.1634E+01	1.17737	-1.00000	PD3A00.QSC
0.55000	0.46714	0.1185E+01	1.17737	-1.00000	PD3A00.QSC
0.60000	0.50961	0.8577E+00	1.17737	-1.00000	PD3A00.QSC
0.65000	0.55208	0.6309E+00	1.17737	-1.00000	PD3A00.QSC
0.70000	0.59454	0.4770E+00	1.17737	-1.00000	PD3A00.QSC
0.75000	0.63701	0.3544E+00	1.17737	-1.00000	PD3A00.QSC
0.80000	0.67948	0.2551E+00	1.17737	-1.00000	PD3A00.QSC
0.85000	0.72195	0.1763E+00	1.17737	-1.00000	PD3A00.QSC
0.90000	0.76441	0.1155E+00	1.17737	-1.00000	PD3A00.QSC
0.95000	0.80688	0.7047E-01	1.17737	-1.00000	PD3A00.QSC
1.00000	0.84935	0.3890E-01	1.17737	-1.00000	PD3A00.QSC
1.10000	0.93428	0.5674E-02	1.17737	-1.00000	PD3A00.QSC
1.20000	1.01922	0.0000E+00	1.17737	-1.00000	PD3A00.QSC
1.30000	1.10415	0.0000E+00	1.17737	-1.00000	PD3A00.QSC
1.40000	1.18909	0.0000E+00	1.17737	-1.00000	PD3A00.QSC
1.50000	1.27402	0.0000E+00	1.17737	-1.00000	PD3A00.QSC
1.60000	1.35896	0.0000E+00	1.17737	-1.00000	PD3A00.QSC

PD1BSP.INP

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PD1BSP.DAT
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PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
5,12000,0.005,5,0.02,1.0
(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
5,12000,0.005,5,0.05,1.0
(8F10.6)
PD1B01.QSC
5,12000,0.005,5,0.06,1.0
(8F10.6)
PD1B01.QSC
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PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
5,12000,0.005,5,1.4,1.0
(8F10.6)
PD1B01.QSC
5,12000,0.005,5,1.5,1.0
(8F10.6)
PD1B01.QSC
5,12000,0.005,5,1.6,1.0
(8F10.6)
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PD1BSP.DAT

PD1BSP.DAT
Summary of Permanent deformation from Newmark's method

Slip A.(g),	Slip/Amx,	Slip D.(ft),	Amx,	Scaling F.,	file
0.00500	0.00266	0.1915E+03	1.88243	1.00000	PD1B01.QSC
0.01000	0.00531	0.1218E+03	1.88243	1.00000	PD1B01.QSC
0.01500	0.00797	0.9619E+02	1.88243	1.00000	PD1B01.QSC
0.02000	0.01062	0.8603E+02	1.88243	1.00000	PD1B01.QSC
0.03000	0.01594	0.7245E+02	1.88243	1.00000	PD1B01.QSC
0.04000	0.02125	0.6133E+02	1.88243	1.00000	PD1B01.QSC
0.05000	0.02656	0.5349E+02	1.88243	1.00000	PD1B01.QSC
0.06000	0.03187	0.4816E+02	1.88243	1.00000	PD1B01.QSC
0.07000	0.03719	0.4346E+02	1.88243	1.00000	PD1B01.QSC
0.08000	0.04250	0.3932E+02	1.88243	1.00000	PD1B01.QSC
0.09000	0.04781	0.3623E+02	1.88243	1.00000	PD1B01.QSC
0.10000	0.05312	0.3349E+02	1.88243	1.00000	PD1B01.QSC
0.11000	0.05843	0.3105E+02	1.88243	1.00000	PD1B01.QSC
0.12000	0.06375	0.2895E+02	1.88243	1.00000	PD1B01.QSC
0.13000	0.06906	0.2706E+02	1.88243	1.00000	PD1B01.QSC
0.14000	0.07437	0.2533E+02	1.88243	1.00000	PD1B01.QSC
0.15000	0.07968	0.2374E+02	1.88243	1.00000	PD1B01.QSC
0.20000	0.10625	0.1864E+02	1.88243	1.00000	PD1B01.QSC
0.30000	0.15937	0.1255E+02	1.88243	1.00000	PD1B01.QSC
0.40000	0.21249	0.8951E+01	1.88243	1.00000	PD1B01.QSC
0.50000	0.26561	0.6797E+01	1.88243	1.00000	PD1B01.QSC
0.55000	0.29217	0.6028E+01	1.88243	1.00000	PD1B01.QSC
0.60000	0.31874	0.5378E+01	1.88243	1.00000	PD1B01.QSC
0.65000	0.34530	0.4803E+01	1.88243	1.00000	PD1B01.QSC
0.70000	0.37186	0.4291E+01	1.88243	1.00000	PD1B01.QSC
0.75000	0.39842	0.3835E+01	1.88243	1.00000	PD1B01.QSC
0.80000	0.42498	0.3427E+01	1.88243	1.00000	PD1B01.QSC
0.85000	0.45154	0.3061E+01	1.88243	1.00000	PD1B01.QSC
0.90000	0.47810	0.2725E+01	1.88243	1.00000	PD1B01.QSC
0.95000	0.50467	0.2414E+01	1.88243	1.00000	PD1B01.QSC
1.00000	0.53123	0.2124E+01	1.88243	1.00000	PD1B01.QSC
1.10000	0.58435	0.1607E+01	1.88243	1.00000	PD1B01.QSC
1.20000	0.63747	0.1168E+01	1.88243	1.00000	PD1B01.QSC
1.30000	0.69059	0.8029E+00	1.88243	1.00000	PD1B01.QSC
1.40000	0.74372	0.5091E+00	1.88243	1.00000	PD1B01.QSC
1.50000	0.79684	0.2885E+00	1.88243	1.00000	PD1B01.QSC
1.60000	0.84996	0.1405E+00	1.88243	1.00000	PD1B01.QSC

PD1BSN.INP

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PD1BSN.DAT
PD1B01.QSC
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PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
5,12000,0.005,5,0.05,-1.0
(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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(8F10.6)
PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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PD1B01.QSC
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(8F10.6)
PD1B01.QSC
5,12000,0.005,5,1.4,-1.0
(8F10.6)
PD1B01.QSC
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(8F10.6)
PD1B01.QSC
5,12000,0.005,5,1.6,-1.0
(8F10.6)
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PD1BSN.DAT

PD1BSN.DAT
Summary of Permanent deformation from Newmark's method

Slip A.(g),	Slip/Amx,	Slip D.(ft),	Amx,	Scaling F.,	file
0.00500	0.00583	0.5173E+03	0.85821	-1.00000	PD1B01.QSC
0.01000	0.01165	0.4079E+03	0.85821	-1.00000	PD1B01.QSC
0.01500	0.01748	0.2999E+03	0.85821	-1.00000	PD1B01.QSC
0.02000	0.02330	0.2271E+03	0.85821	-1.00000	PD1B01.QSC
0.03000	0.03496	0.1563E+03	0.85821	-1.00000	PD1B01.QSC
0.04000	0.04661	0.1218E+03	0.85821	-1.00000	PD1B01.QSC
0.05000	0.05826	0.9825E+02	0.85821	-1.00000	PD1B01.QSC
0.06000	0.06991	0.8488E+02	0.85821	-1.00000	PD1B01.QSC
0.07000	0.08156	0.7327E+02	0.85821	-1.00000	PD1B01.QSC
0.08000	0.09322	0.6422E+02	0.85821	-1.00000	PD1B01.QSC
0.09000	0.10487	0.5764E+02	0.85821	-1.00000	PD1B01.QSC
0.10000	0.11652	0.5176E+02	0.85821	-1.00000	PD1B01.QSC
0.11000	0.12817	0.4636E+02	0.85821	-1.00000	PD1B01.QSC
0.12000	0.13983	0.4232E+02	0.85821	-1.00000	PD1B01.QSC
0.13000	0.15148	0.3870E+02	0.85821	-1.00000	PD1B01.QSC
0.14000	0.16313	0.3537E+02	0.85821	-1.00000	PD1B01.QSC
0.15000	0.17478	0.3222E+02	0.85821	-1.00000	PD1B01.QSC
0.20000	0.23304	0.2083E+02	0.85821	-1.00000	PD1B01.QSC
0.30000	0.34956	0.9382E+01	0.85821	-1.00000	PD1B01.QSC
0.40000	0.46608	0.3266E+01	0.85821	-1.00000	PD1B01.QSC
0.50000	0.58261	0.1380E+01	0.85821	-1.00000	PD1B01.QSC
0.55000	0.64087	0.8971E+00	0.85821	-1.00000	PD1B01.QSC
0.60000	0.69913	0.5500E+00	0.85821	-1.00000	PD1B01.QSC
0.65000	0.75739	0.3051E+00	0.85821	-1.00000	PD1B01.QSC
0.70000	0.81565	0.1442E+00	0.85821	-1.00000	PD1B01.QSC
0.75000	0.87391	0.4968E-01	0.85821	-1.00000	PD1B01.QSC
0.80000	0.93217	0.8963E-02	0.85821	-1.00000	PD1B01.QSC
0.85000	0.99043	0.9982E-04	0.85821	-1.00000	PD1B01.QSC
0.90000	1.04869	0.0000E+00	0.85821	-1.00000	PD1B01.QSC
0.95000	1.10695	0.0000E+00	0.85821	-1.00000	PD1B01.QSC
1.00000	1.16521	0.0000E+00	0.85821	-1.00000	PD1B01.QSC
1.10000	1.28173	0.0000E+00	0.85821	-1.00000	PD1B01.QSC
1.20000	1.39825	0.0000E+00	0.85821	-1.00000	PD1B01.QSC
1.30000	1.51478	0.0000E+00	0.85821	-1.00000	PD1B01.QSC
1.40000	1.63130	0.0000E+00	0.85821	-1.00000	PD1B01.QSC
1.50000	1.74782	0.0000E+00	0.85821	-1.00000	PD1B01.QSC
1.60000	1.86434	0.0000E+00	0.85821	-1.00000	PD1B01.QSC

PD3BSP.INP

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PD3BSP.DAT
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PD3B01.QSC
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(8F10.6)
PD3B01.QSC
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PD3B01.QSC
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PD3B01.QSC
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(8F10.6)
PD3B01.QSC
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(8F10.6)
PD3B01.QSC
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PD3B01.QSC
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PD3B01.QSC
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(8F10.6)
PD3B01.QSC
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(8F10.6)
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PD3B01.QSC
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PD3B01.QSC
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PD3B01.QSC
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(8F10.6)
PD3B01.QSC
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(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.9,1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.95,1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.0,1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.1,1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.2,1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.3,1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.4,1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.5,1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.6,1.0
(8F10.6)
```

PD3BSP.DAT

PD3BSP.DAT
Summary of Permanent deformation from Newmark's method

Slip A.(g),	Slip/Amx,	Slip D.(ft),	Amx,	Scaling F.,	file
0.00500	0.00446	0.3271E+03	1.12135	1.00000	PD3B01.QSC
0.01000	0.00892	0.2200E+03	1.12135	1.00000	PD3B01.QSC
0.01500	0.01338	0.1626E+03	1.12135	1.00000	PD3B01.QSC
0.02000	0.01784	0.1441E+03	1.12135	1.00000	PD3B01.QSC
0.03000	0.02675	0.1156E+03	1.12135	1.00000	PD3B01.QSC
0.04000	0.03567	0.9587E+02	1.12135	1.00000	PD3B01.QSC
0.05000	0.04459	0.8047E+02	1.12135	1.00000	PD3B01.QSC
0.06000	0.05351	0.6810E+02	1.12135	1.00000	PD3B01.QSC
0.07000	0.06242	0.5839E+02	1.12135	1.00000	PD3B01.QSC
0.08000	0.07134	0.5135E+02	1.12135	1.00000	PD3B01.QSC
0.09000	0.08026	0.4595E+02	1.12135	1.00000	PD3B01.QSC
0.10000	0.08918	0.4210E+02	1.12135	1.00000	PD3B01.QSC
0.11000	0.09810	0.3864E+02	1.12135	1.00000	PD3B01.QSC
0.12000	0.10701	0.3560E+02	1.12135	1.00000	PD3B01.QSC
0.13000	0.11593	0.3300E+02	1.12135	1.00000	PD3B01.QSC
0.14000	0.12485	0.3063E+02	1.12135	1.00000	PD3B01.QSC
0.15000	0.13377	0.2844E+02	1.12135	1.00000	PD3B01.QSC
0.20000	0.17836	0.1936E+02	1.12135	1.00000	PD3B01.QSC
0.30000	0.26753	0.8796E+01	1.12135	1.00000	PD3B01.QSC
0.40000	0.35671	0.4039E+01	1.12135	1.00000	PD3B01.QSC
0.50000	0.44589	0.1602E+01	1.12135	1.00000	PD3B01.QSC
0.55000	0.49048	0.9138E+00	1.12135	1.00000	PD3B01.QSC
0.60000	0.53507	0.5161E+00	1.12135	1.00000	PD3B01.QSC
0.65000	0.57966	0.3512E+00	1.12135	1.00000	PD3B01.QSC
0.70000	0.62425	0.2434E+00	1.12135	1.00000	PD3B01.QSC
0.75000	0.66884	0.1717E+00	1.12135	1.00000	PD3B01.QSC
0.80000	0.71343	0.1227E+00	1.12135	1.00000	PD3B01.QSC
0.85000	0.75801	0.8489E-01	1.12135	1.00000	PD3B01.QSC
0.90000	0.80260	0.5520E-01	1.12135	1.00000	PD3B01.QSC
0.95000	0.84719	0.3267E-01	1.12135	1.00000	PD3B01.QSC
1.00000	0.89178	0.1643E-01	1.12135	1.00000	PD3B01.QSC
1.10000	0.98096	0.5638E-03	1.12135	1.00000	PD3B01.QSC
1.20000	1.07014	0.0000E+00	1.12135	1.00000	PD3B01.QSC
1.30000	1.15932	0.0000E+00	1.12135	1.00000	PD3B01.QSC
1.40000	1.24849	0.0000E+00	1.12135	1.00000	PD3B01.QSC
1.50000	1.33767	0.0000E+00	1.12135	1.00000	PD3B01.QSC
1.60000	1.42685	0.0000E+00	1.12135	1.00000	PD3B01.QSC

PD3BSN.INP

```
PD3BSN.DAT
PD3B01.QSC
5,12000,0.005,5,0.005,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.01,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.015,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.02,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.03,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.04,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.05,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.06,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.07,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.08,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.09,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.10,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.11,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.12,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.13,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.14,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.15,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.2,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.3,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.4,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.5,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.55,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.6,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.65,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.7,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.75,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.8,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.85,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.9,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,0.95,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.0,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.1,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.2,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.3,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.4,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.5,-1.0
(8F10.6)
PD3B01.QSC
5,12000,0.005,5,1.6,-1.0
(8F10.6)
```

PD3BSN.DAT

PD3BSN.DAT
Summary of Permanent deformation from Newmark's method

Slip A.(g),	Slip/Amx,	Slip D.(ft),	Amx,	Scaling F.,	file
0.00500	0.00351	0.3783E+03	1.42349	-1.00000	PD3B01.QSC
0.01000	0.00702	0.2648E+03	1.42349	-1.00000	PD3B01.QSC
0.01500	0.01054	0.1911E+03	1.42349	-1.00000	PD3B01.QSC
0.02000	0.01405	0.1581E+03	1.42349	-1.00000	PD3B01.QSC
0.03000	0.02107	0.1214E+03	1.42349	-1.00000	PD3B01.QSC
0.04000	0.02810	0.9732E+02	1.42349	-1.00000	PD3B01.QSC
0.05000	0.03512	0.8218E+02	1.42349	-1.00000	PD3B01.QSC
0.06000	0.04215	0.7330E+02	1.42349	-1.00000	PD3B01.QSC
0.07000	0.04917	0.6672E+02	1.42349	-1.00000	PD3B01.QSC
0.08000	0.05620	0.6074E+02	1.42349	-1.00000	PD3B01.QSC
0.09000	0.06322	0.5565E+02	1.42349	-1.00000	PD3B01.QSC
0.10000	0.07025	0.5187E+02	1.42349	-1.00000	PD3B01.QSC
0.11000	0.07727	0.4848E+02	1.42349	-1.00000	PD3B01.QSC
0.12000	0.08430	0.4549E+02	1.42349	-1.00000	PD3B01.QSC
0.13000	0.09132	0.4291E+02	1.42349	-1.00000	PD3B01.QSC
0.14000	0.09835	0.4055E+02	1.42349	-1.00000	PD3B01.QSC
0.15000	0.10537	0.3838E+02	1.42349	-1.00000	PD3B01.QSC
0.20000	0.14050	0.2952E+02	1.42349	-1.00000	PD3B01.QSC
0.30000	0.21075	0.1852E+02	1.42349	-1.00000	PD3B01.QSC
0.40000	0.28100	0.1258E+02	1.42349	-1.00000	PD3B01.QSC
0.50000	0.35125	0.8564E+01	1.42349	-1.00000	PD3B01.QSC
0.55000	0.38637	0.7013E+01	1.42349	-1.00000	PD3B01.QSC
0.60000	0.42150	0.5684E+01	1.42349	-1.00000	PD3B01.QSC
0.65000	0.45662	0.4565E+01	1.42349	-1.00000	PD3B01.QSC
0.70000	0.49175	0.3638E+01	1.42349	-1.00000	PD3B01.QSC
0.75000	0.52687	0.2845E+01	1.42349	-1.00000	PD3B01.QSC
0.80000	0.56200	0.2146E+01	1.42349	-1.00000	PD3B01.QSC
0.85000	0.59712	0.1525E+01	1.42349	-1.00000	PD3B01.QSC
0.90000	0.63225	0.1070E+01	1.42349	-1.00000	PD3B01.QSC
0.95000	0.66737	0.8368E+00	1.42349	-1.00000	PD3B01.QSC
1.00000	0.70250	0.6471E+00	1.42349	-1.00000	PD3B01.QSC
1.10000	0.77275	0.3461E+00	1.42349	-1.00000	PD3B01.QSC
1.20000	0.84300	0.1402E+00	1.42349	-1.00000	PD3B01.QSC
1.30000	0.91325	0.2593E-01	1.42349	-1.00000	PD3B01.QSC
1.40000	0.98350	0.6227E-03	1.42349	-1.00000	PD3B01.QSC
1.50000	1.05375	0.0000E+00	1.42349	-1.00000	PD3B01.QSC
1.60000	1.12400	0.0000E+00	1.42349	-1.00000	PD3B01.QSC

Attachment H

CD-Rom

Table of Contents

Table of Contents.txt file
GEO.HBIP.02.07 Rev. 1 07/18/03

All files listed are ASCII files that can be read by any text file such as Notepad.

Directory UTEXAS4_files:

Section A-A'
bluffs5.txt
bluffs5.out
bluffs5(dyn).txt
bluffs5(dyn).out

Section B-B'
plant_s5c.txt
plant_s5c.out
plant_s5c(dyn).txt
plant_s5c(dyn).out

*.txt files are input files. *.out are output files. (dyn) files are used to determine (dynamic) yield acceleration for each section.

Directory EXCEL_files:

For use in DEFORMP analyses:

Section A-A'
Set 1 set1rot.xls s1aa.prn
Set 2 set2rot.xls s2aa.prn
Set 3 set3rot.xls s3aa.prn
Set 4 set4rot.xls s4aa.prn

Section B-B'
Set 1 set1rot.xls s1bb.prn
Set 2 set2rot.xls s2bb.prn
Set 3 set3rot.xls s3bb.prn
Set 4 set4rot.xls s4bb.prn

*.xls files are spreadsheet files. *.prn files are rotated motions output from the spreadsheets.

For use in SHAKE analyses:

Section A-A'

SET 1

SET1_FP.ACC
SET1_FN_FLING_BC.ACC
SET1ROT.XLS
S1AA.AC8

SET 3

SET3_FP.ACC
SET3_FN_FLING_BC.ACC

SET3ROT.XLS
S3AA.AC8

Section B-B'

SET 1

SET1_FP.ACC
SET1_FN_FLING_BC.ACC
SET1ROT.XLS
S1BB.AC8

SET 3

SET3_FP.ACC
SET3_FN_FLING_BC.ACC
SET3ROT.XLS
S3BB.AC8

*.ACC files are input components of ground motion from time history calculations. *.AC8 files are rotated surface motions used in SHAKE analyses.

Directory SHAKE_files:

Section A-A'

SET 1

PD1A.INP
S1AA.AC8
PD1A.OUT
PD1A.PUN

SET 3

PD3A.INP
S3AA.AC8
PD3A.OUT
PD3A.PUN

Section B-B'

SET 1

PD1B.INP
S1BB.AC8
PD1B.OUT
PD1B.PUN

SET 3

PD3B.INP
S3BB.AC8
PD3B.OUT
PD3B.PUN

*.IN files are input files. *.OUT files are output files. *.PUN files are rotated outcrop motion files for use in QUAD4MU analyses.

Directory QUAD4MU files:

Section A-A'

SET 1

PD1A.Q4I
PD1A.O11
HBSOILNW.DAT
PD1A.Q4O
PD1A00.QSC
PD1A01.QSC
PD1A00.Q4A
PD1A01.Q4A
PD1A02.Q4A
PD1A03.Q4A
PD1A04.Q4A
PD1A05.Q4A

SET 3

PD3A.Q4I
PD3A.O11
HBSOILNW.DAT
PD3A.Q4O
PD3A00.QSC
PD3A01.QSC
PD3A00.Q4A
PD3A01.Q4A
PD3A02.Q4A
PD3A03.Q4A
PD3A04.Q4A
PD3A05.Q4A

Section B-B'

SET 1

PD1B.Q4I
PD1B.O11
HBSOILNW.DAT
PD1B.Q4O
PD1B00.QSC
PD1B01.QSC
PD1B00.Q4A
PD1B01.Q4A
PD1B02.Q4A
PD1B03.Q4A
PD1B04.Q4A
PD1B05.Q4A

SET 3

PD3B.Q4I

PD3B.011
HBSOILNW.DAT
PD3B.Q4O
PD3B00.QSC
PD3B01.QSC
PD3B00.Q4A
PD3B01.Q4A
PD3B02.Q4A
PD3B03.Q4A
PD3B04.Q4A
PD3B05.Q4A

*.011 files are rotated outcrop motions from SHAKE analyses. HBSOILNW.DAT is input dynamic soil properties file. *.Q4O files are output files. *.QSC files are seismic coefficient files. *.Q4A files are nodal response time history files.

Directory SPECTRAD_files:

Section A-A'

SET 1

SPECTRA1.INP
SPECTRA2.INP
S1AA.050
PD1A00. 050
PD1A01. 050
PD1A02. 050

SET 3

SPECTRA1.INP
SPECTRA2.INP
S3AA.050
PD3A00. 050
PD3A01. 050
PD3A02. 050

Section B-B'

SET 1

SPECTRA1.INP
SPECTRA2.INP
S1BB.050
PD1B00. 050
PD1B01. 050
PD1B02. 050

SET 3

SPECTRA1.INP
SPECTRA2.INP
S3BB.050
PD3B00. 050
PD3B01. 050

PD3B02. 050

S*.050 files are spectra of rotated surface motion. PD*.050 files are spectra of nodes.

Directory DEFORMP_files:

From QUAD4MU output:

Section A-A'

SET 1

PD1ASP.INP
PD1ASN.INP
PD1A00.QSC
PD1ASP.DAT
PD1ASN.DAT

SET 3

PD3ASP.INP
PD3ASN.INP
PD3A00.QSC
PD3ASP.DAT
PD3ASN.DAT

Section B-B'

SET 1

PD1BSP.INP
PD1BSN.INP
PD1B01.QSC
PD1BSP.DAT
PD1BSN.DAT

SET 3

PD3BSP.INP
PD3BSN.INP
PD3B01.QSC
PD3BSP.DAT
PD3BSN.DAT

*.QSC files are seismic coefficient input files from QUAD4MU output.
*.DAT files are output displacement files.

Directly from EXCEL output:

SECTION A-A'

(*.inp files)
s1ap
s1an
s2ap
s2an

s3ap
s3an
s4ap
s4an

SECTION B-B'

s1bp
s1bn
s2bp
s2bn
s3bp
s3bn
s4bp
s4bn

*.inp files are input files from EXCEL.

SECTION A-A'

(*.dat files)
s1ap
s1an
s2ap
s2an
s3ap
s3an
s4ap
s4an

SECTION B-B'

s1bp
s1bn
s2bp
s2bn
s3bp
s3bn
s4bp
s4bn

*.dat files are output displacement files.

PACIFIC GAS AND ELECTRIC COMPANY
GEOSCIENCES DEPARTMENT
CALCULATION DOCUMENT

Calc Number: GEO.HBIP.02.07
Calc Revision: 1
Calc Date: 7/18/03
Calc Preparer: Z. –L. Wang/
C. C. chin
ITR Verification Method: A

ITR Faiz I. Makdisi
(name)

ITR: 7/18/03
(signature/date)

ITR: _____
(name)

ITR: _____
(signature/date)

1. INTRODUCTION

As required by Geosciences Department Level Administrative Procedure CF3-GE1, Revision A for Quality Related Calculations, I have performed an independent technical review of Revision 1 of the above listed calculation. I have performed a step-by-step check of the calculation (Verification Method A). This ITR report is structured with similar section headings as those in the calculation. All issues raised with the preparers of this calculation have been addressed and resolved.

2. CALCULATION PURPOSE

The purpose of the calculation in this Revision 1 is to repeat the dynamic response analyses performed in Revision 0, using an updated version (QUAD4MU) of the dynamic finite element program QUAD4M, and to update the earthquake-induced deformations. I have verified that the purpose for performing the additional analyses is clearly stated

3. CALCULATION ASSUMPTIONS

Except for minor editorial changes, no changes were made to this section.

4. CALCULATION INPUTS

No changes have been made to this section from the previous revision.

5. CALCULATION METHODOLOGY AND EQUATION SUMMARY

Except for minor editorial changes, no changes were made to the methodology as described in this section in Revision 0. I have verified that the reference made to the original program QUAD4M, was changed to the updated (modified) version, QUAD4MU.

6. CALCULATION SOFTWARE

The reference to the program QUAD4M has been changed to QUAD4MU (the updated version of the program). I have checked and verified that the updated program QUAD4MU has been documented and verified in Calculation GEO.DCPP.01.34. No other changes were made to this section in this revision.

7. CALCULATION BODY

No changes have been made to Steps 1 though 6 of this section. In step 7, reference to the program QUAD4M has been changed to QUAD4MU.

Step 8 describes the repeat of the dynamic finite element analyses to compute the seismic coefficient time-histories for potential sliding masses on slopes adjacent to the ISFSI sites. It is stated that for expediency, the two cross-sections representing the slopes on either side of the ISFSI site (the bluff-side and the plant-side) were included in one finite element model. I concur with this practical approach and find it appropriate and reasonable.

I have checked and verified input files for the QUAD4MU analyses. I have verified that the outcrop time histories from the SHAKE runs were correctly used as input at the base of the finite element model in QUAD4MU. I compared and verified the seismic coefficient time history outputs from QUAD4MU by comparing the peak values listed in the output files with the plots shown on Figures 7-14 through 7-17.

I have verified that the seismic coefficient time histories from the output of QUAD4MU were correctly used as input to the DEFORMP displacement program. I have compared the peak seismic coefficient values with those shown on the displacement plots in Figures 7-22 through 7-25 and found them to be the same.

8. CALCULATION RESULTS AND CONCLUSIONS

I have reviewed the results in this revision of the calculation and found them reasonable and consistent with the stated purpose and conclusions. The maximum revised earthquake-induced displacement for section A-A' (0.5 ft) are consistent and slightly lower than the 1.1 ft estimated in Revision 0. The maximum computed displacement for section B-B' (4.7) ft is similar and slightly greater than the 3.7 feet estimated in Revision 0.

9. CALCULATION LIMITATIONS

I have reviewed and verified that the stated limitations are appropriate.

10. CALCULATION IMPACT EVALUATION

I concur with the stated impact of the results of the calculation.

11. CALCULATION REFERENCES

Except for the updated reference to the QUAD4MU program, no changes were made to this section in this revision.

12. CALCULATION ATTACHMENTS

Attachments A, B, C and D remain unchanged from Revision 0. I have verified that the listed files and the printed excerpts of the input and output files in Attachments E, F and G, are accurate and sufficient to reproduce the analyses and calculations included in the CD. In addition, I have checked and verified that copies of the CD's are readable, and that each contained a "Read Me" file describing its contents.