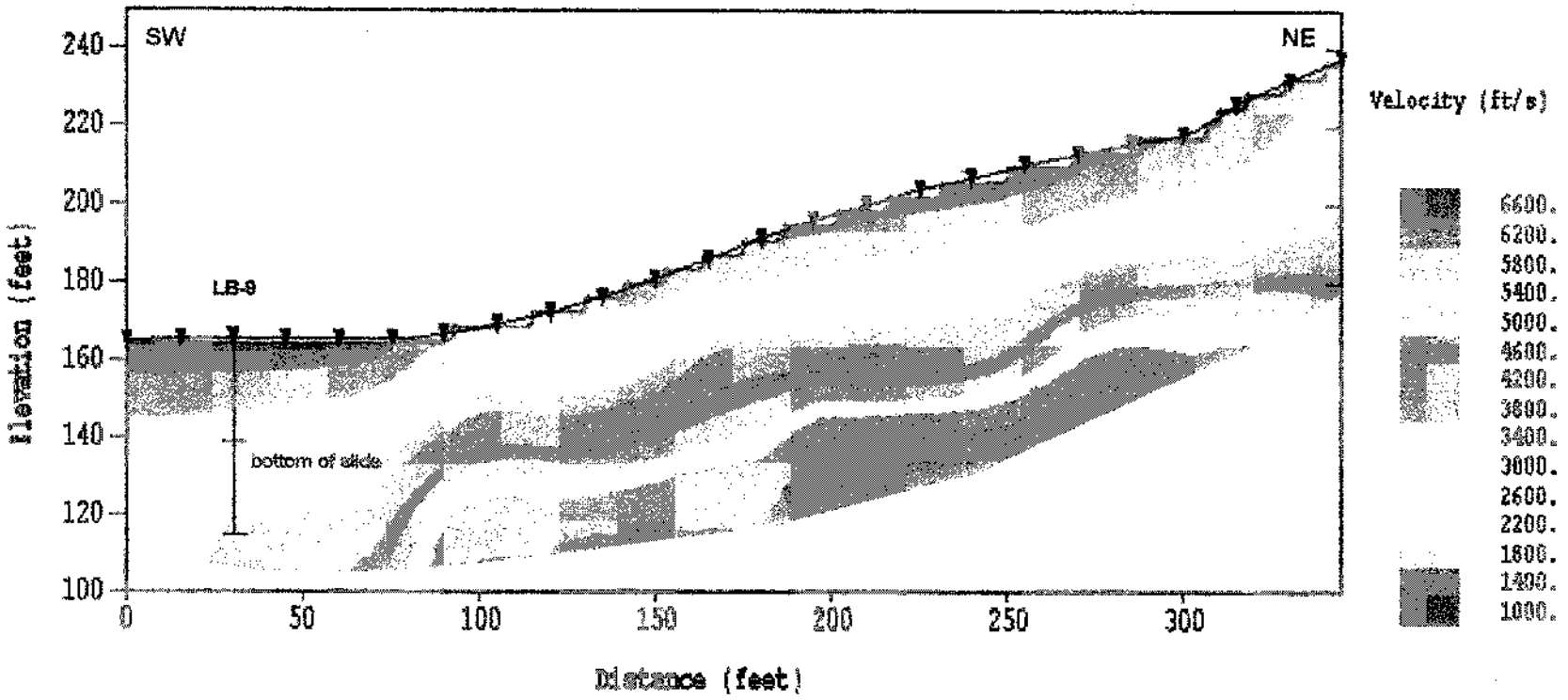
Seismic Refraction Survey
August 5, 2002

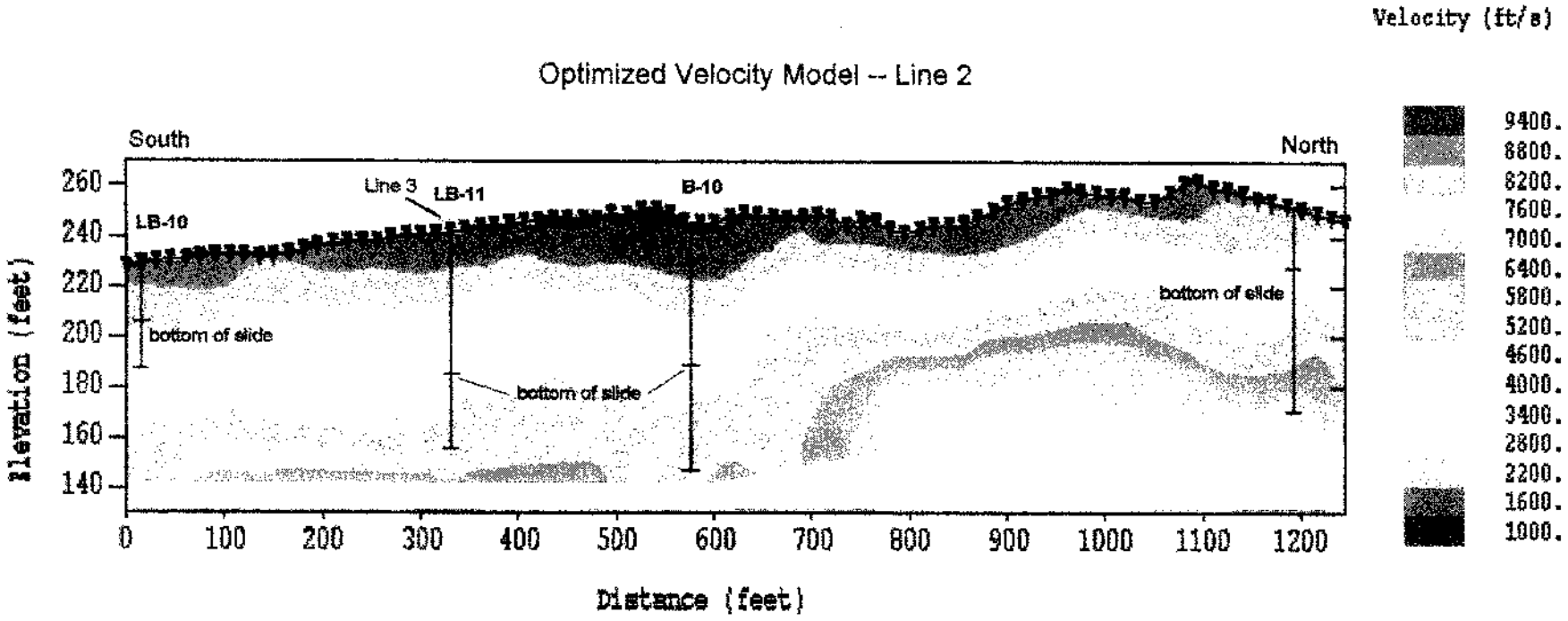
Project No. 030381-002
Mountaingate Property
Los Angeles, California

Optimized Velocity Model -- Line 1



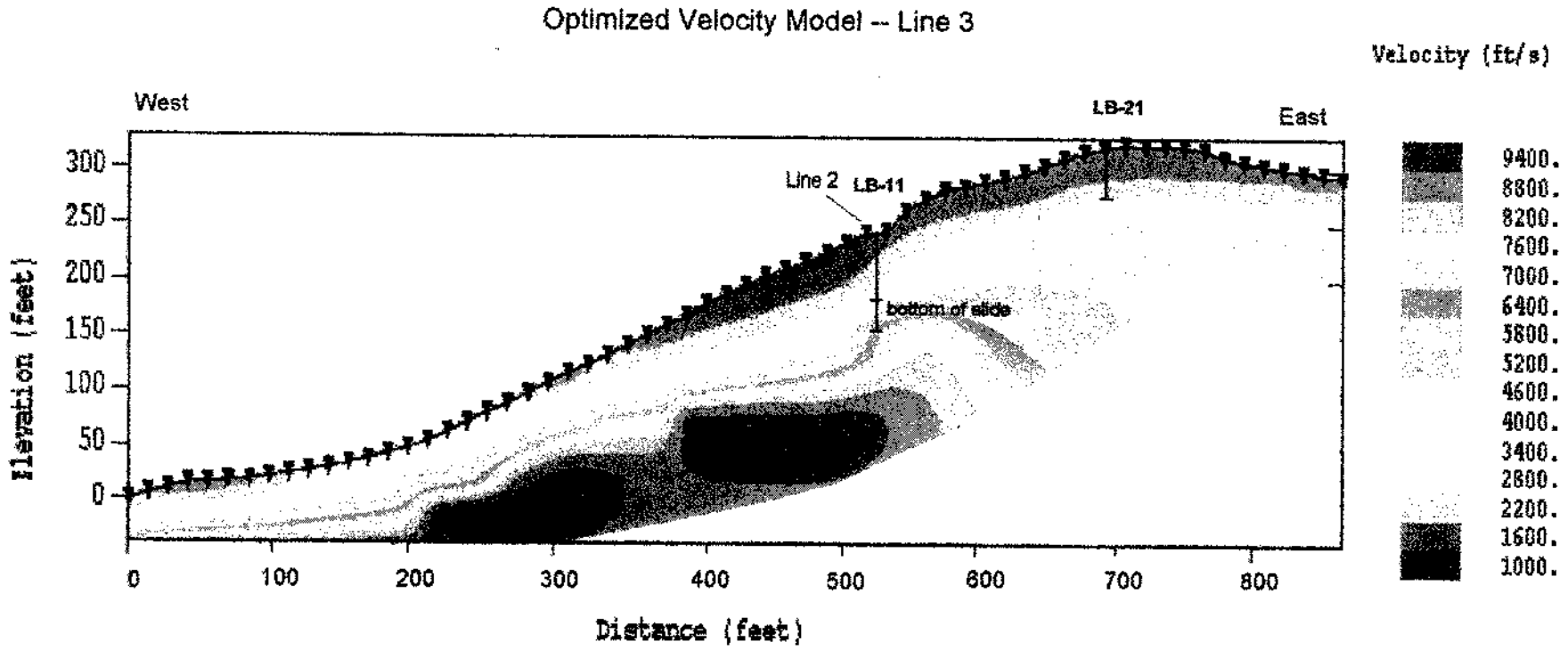
Seismic Refraction Survey
August 5, 2002

Project No. 030381-002
Mountaingate Property
Los Angeles, California



Seismic Refraction Survey
August 5, 2002

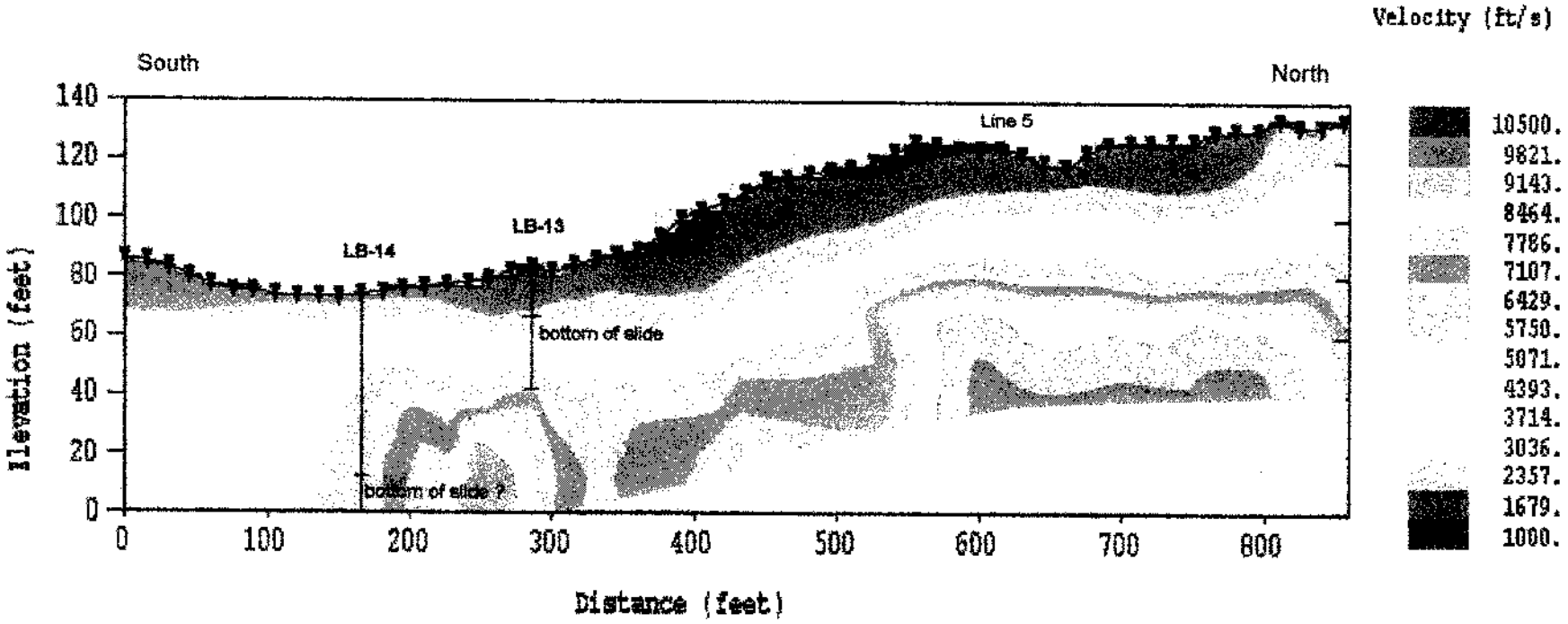
Project No. 030381-002
Mountaingate Property
Los Angeles, California



Seismic Refraction Survey
August 5, 2002

Project No. 030381-002
Mountaingate Property
Los Angeles, California

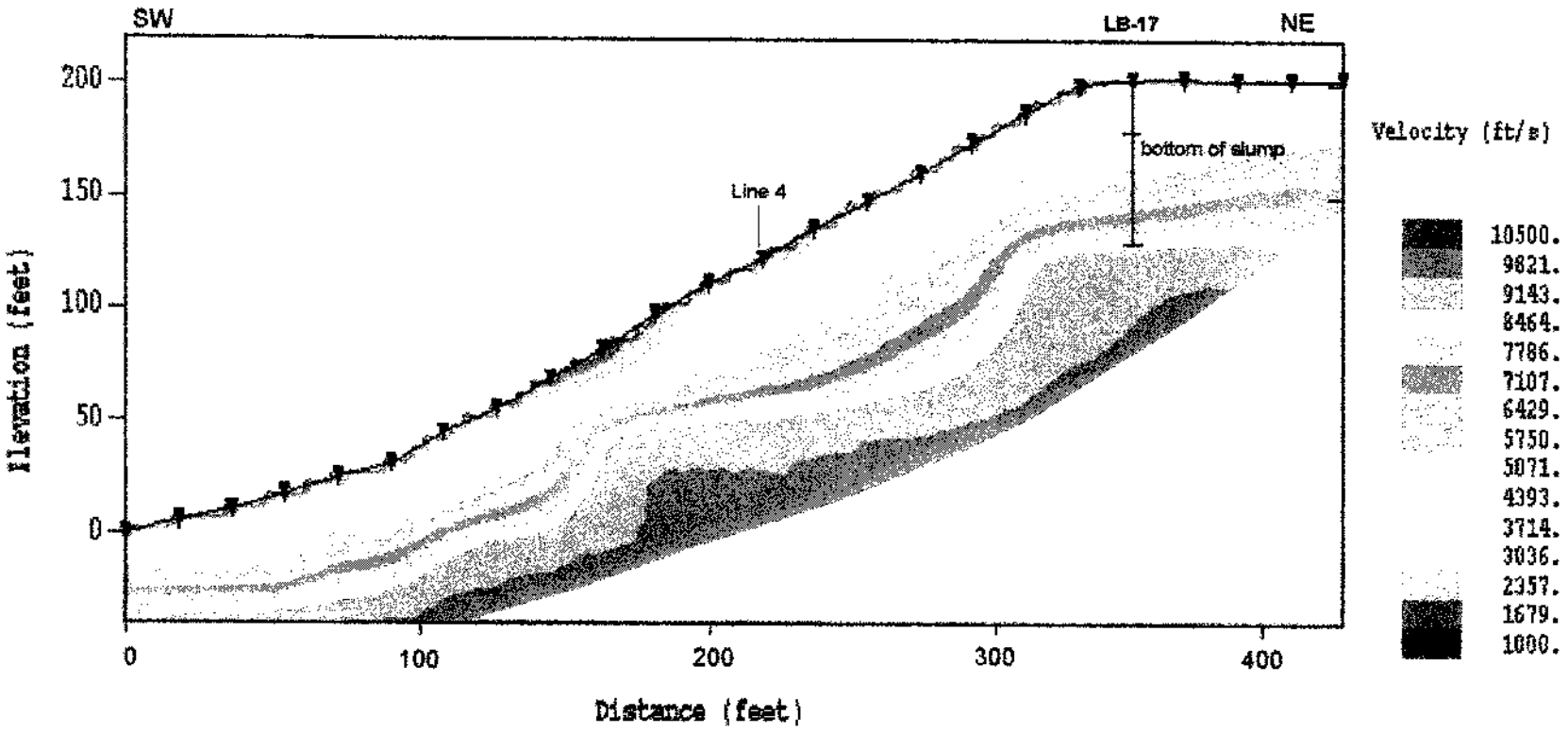
Optimized Velocity Model -- Line 4

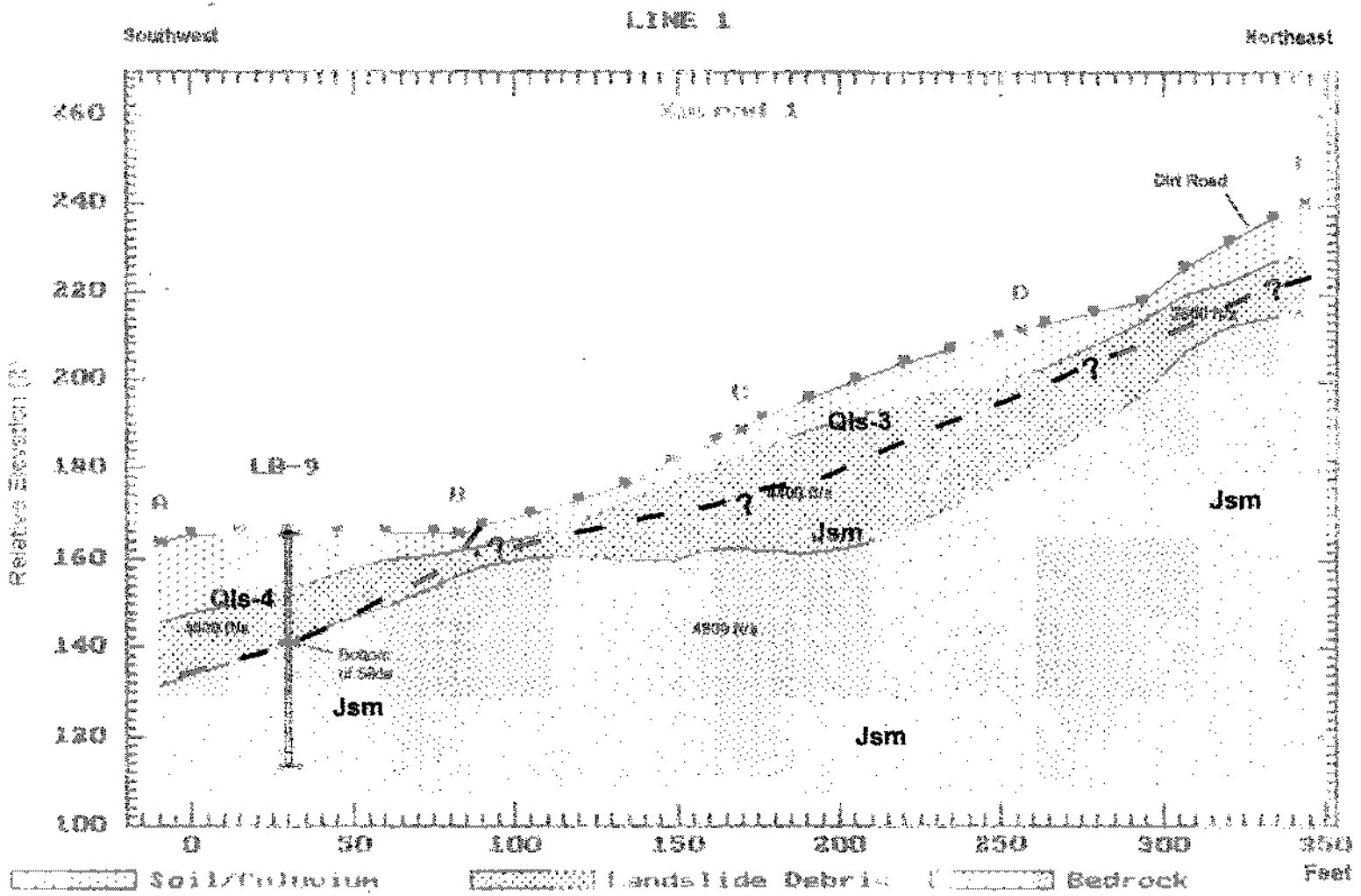


Seismic Refraction Survey
August 5, 2002

Project No. 030381-002
Mountaingate Property
Los Angeles, California

Optimized Velocity Model -- Line 5





Modified from SubSurface Surveys Report, dated August 30, 2002.

SEISMIC LINE SL-1
VTTM No. 53072
C&C/Mountaingate Project

Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

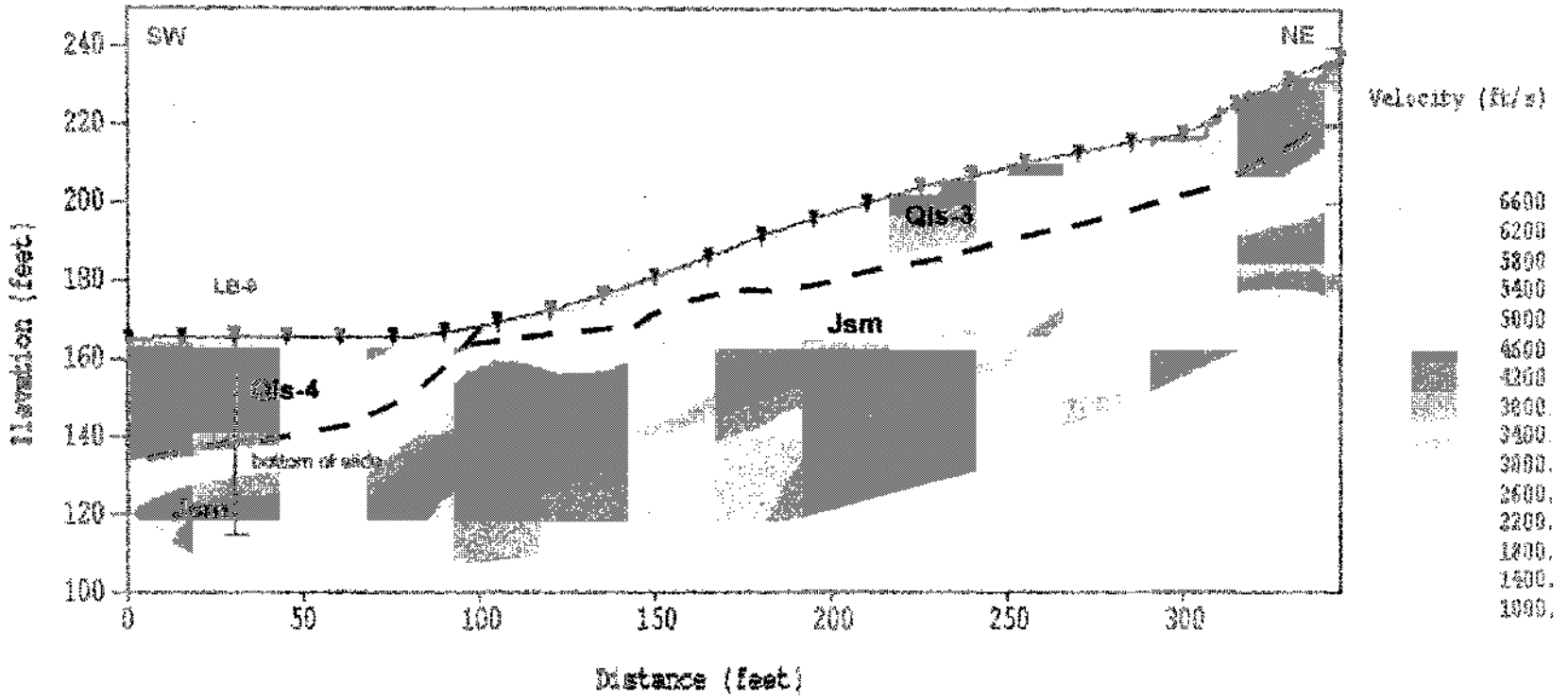
Leighton Consulting, Inc.

Figure No. C-1

Seismic Refraction Survey
August 5, 2002

Project No. 030381-002
Mountaingate Property
Los Angeles, California

Optimized Velocity Model -- Line 1



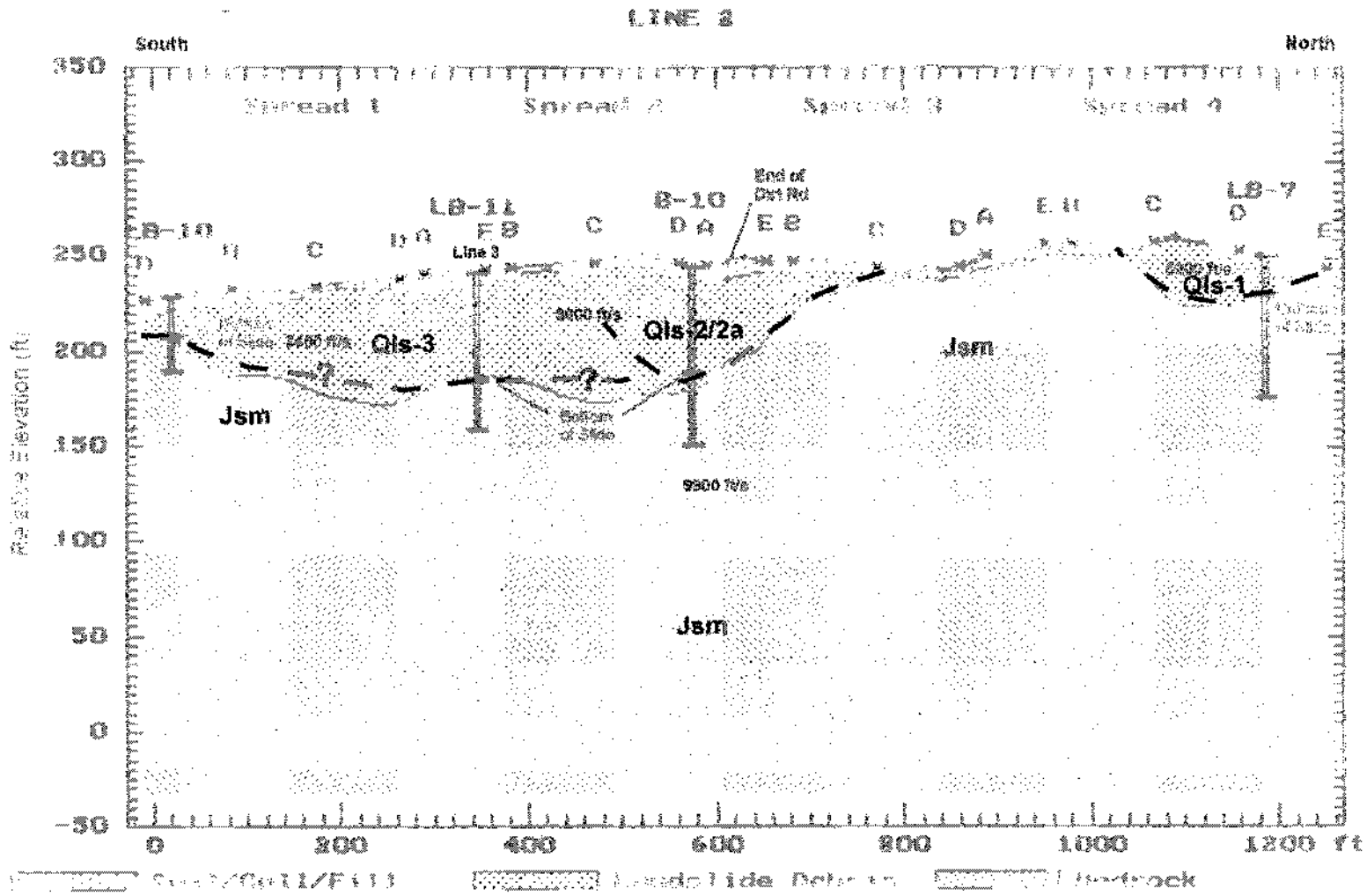
Modified from SubSurface Surveys Report, dated September 26, 2002.

SEISMIC LINE SL-1
VTTM No. 53072
C&C/Mountaingate Project

Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

Leighton Consulting, Inc.

Figure No. C-1a



Modified from SubSurface Surveys Report, dated August 30, 2002.

SEISMIC LINE SL-2
VTTM No. 53072
C&C/Mountaingate Project

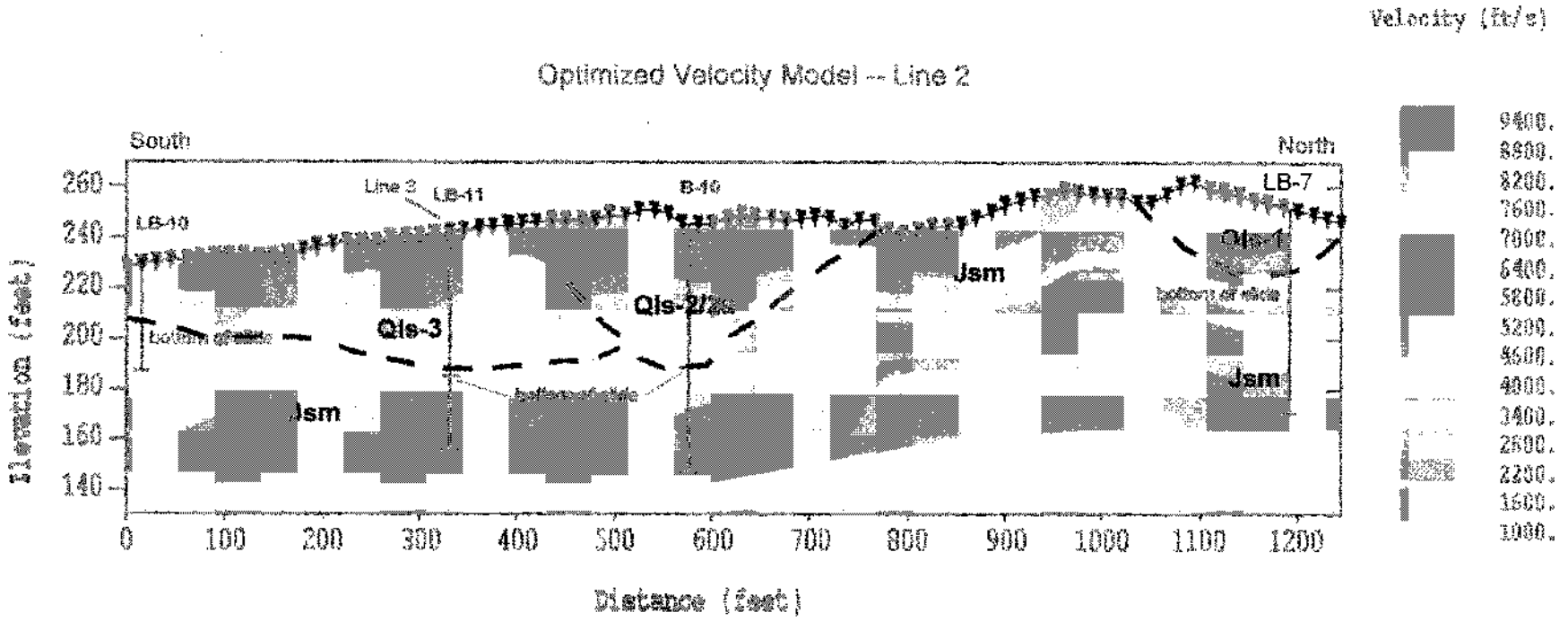
Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

Leighton Consulting, Inc.

Figure No. C-2

Seismic Refraction Survey
August 5, 2002

Project No. 030381-002
Mountaingate Property
Los Angeles, California

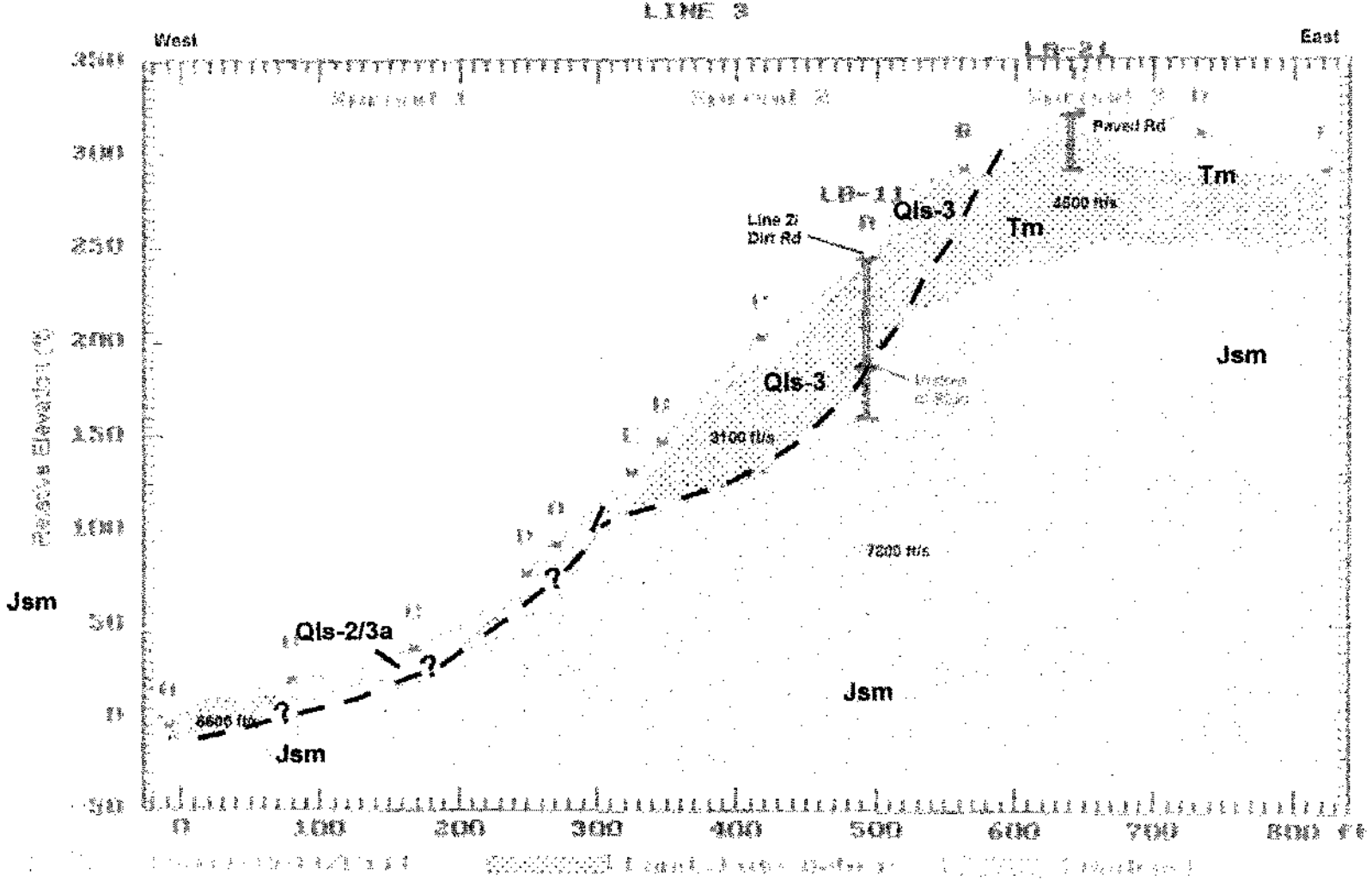


Modified from SubSurface Surveys Report, dated September 26, 2002.

SEISMIC LINE SL-2
VTTM No. 53072
C&C/Mountaingate Project

Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

Figure No. C-2a



Modified from SubSurface Surveys Report, dated August 30, 2002.

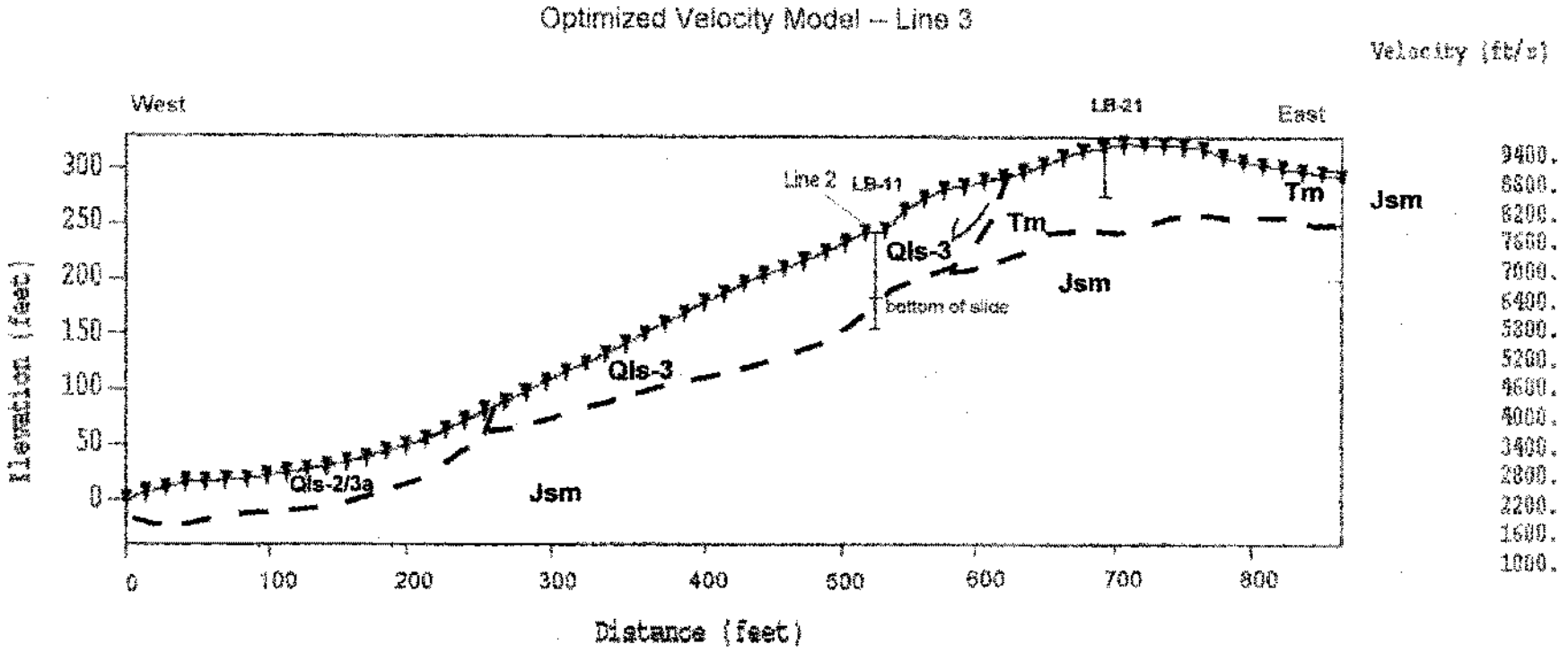
SEISMIC LINE SL-3
VTTM No. 53072
C&C/Mountaingate Project

Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

Figure No. C-3

Seismic Refraction Survey
August 5, 2002

Project No. 030381-002
Mountaingate Property
Los Angeles, California

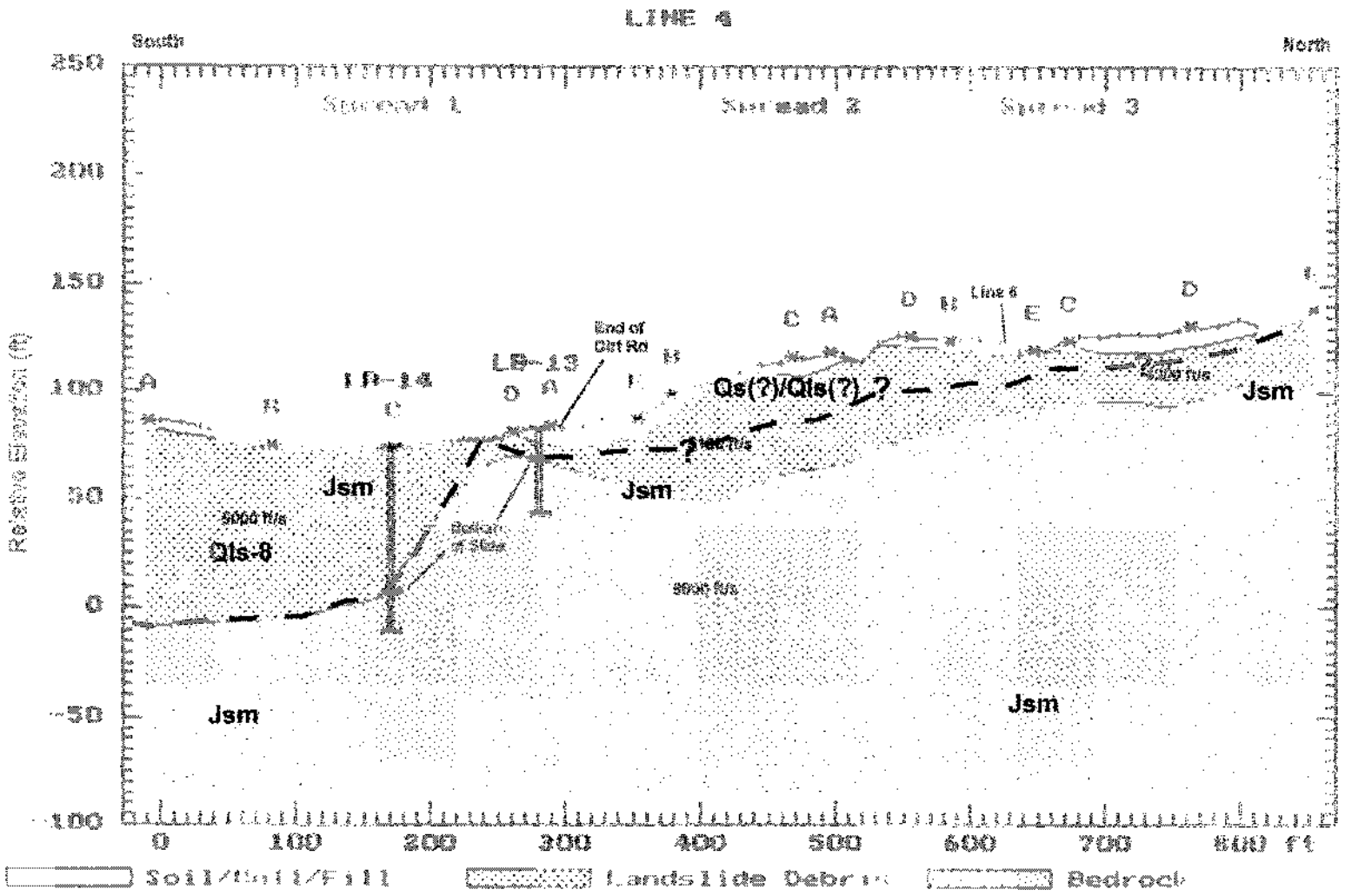


Modified from SubSurface Surveys Report, dated September 26, 2002.

SEISMIC LINE SL-3
VTTM No. 53072
C&C/Mountaingate Project

Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

Figure No. C-.3a



Modified from SubSurface Surveys Report, dated August 30, 2002.

SEISMIC LINE SL-4
VTTM No. 53072
C&C/Mountaingate Project

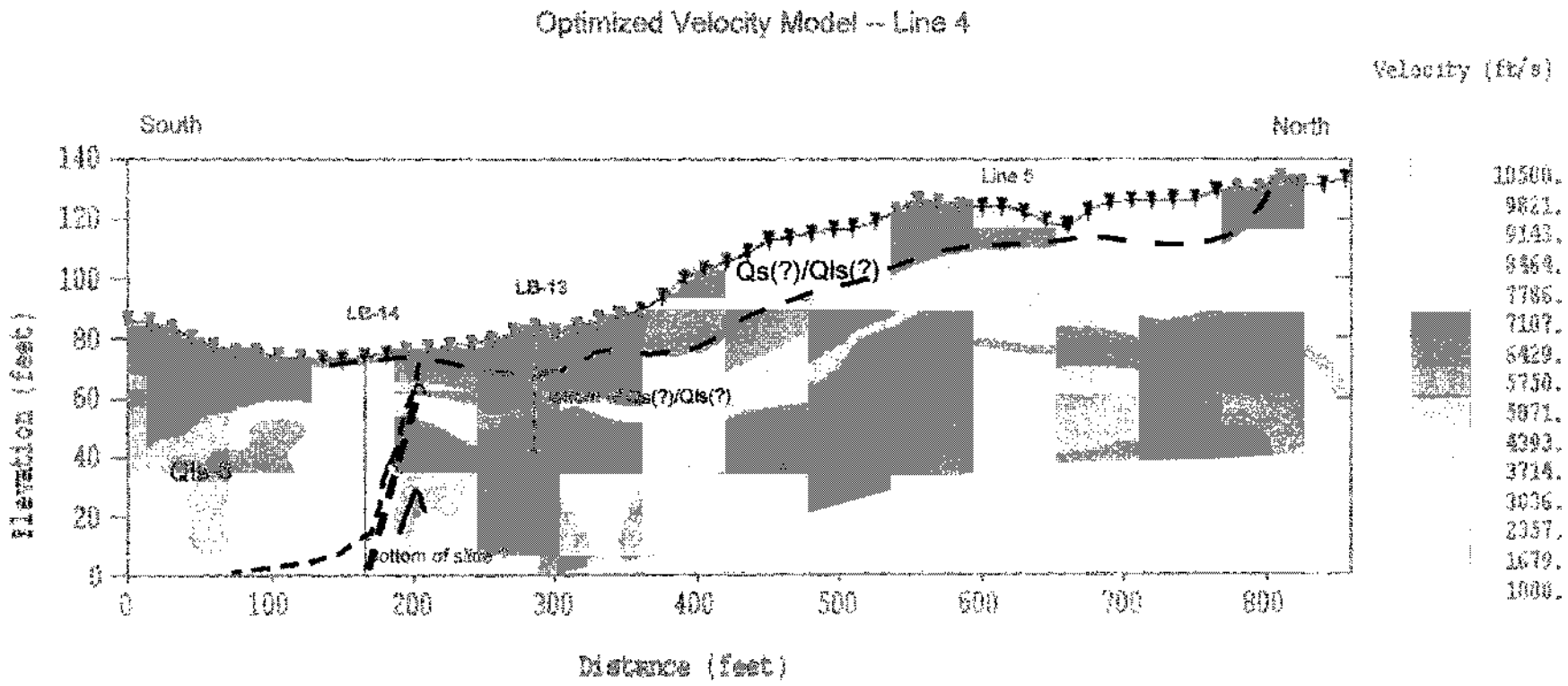
Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

Leighton Consulting Inc

Figure No. C-4

Seismic Refraction Survey
August 5, 2002

Project No. 030381-002
Mountaingate Property
Los Angeles, California



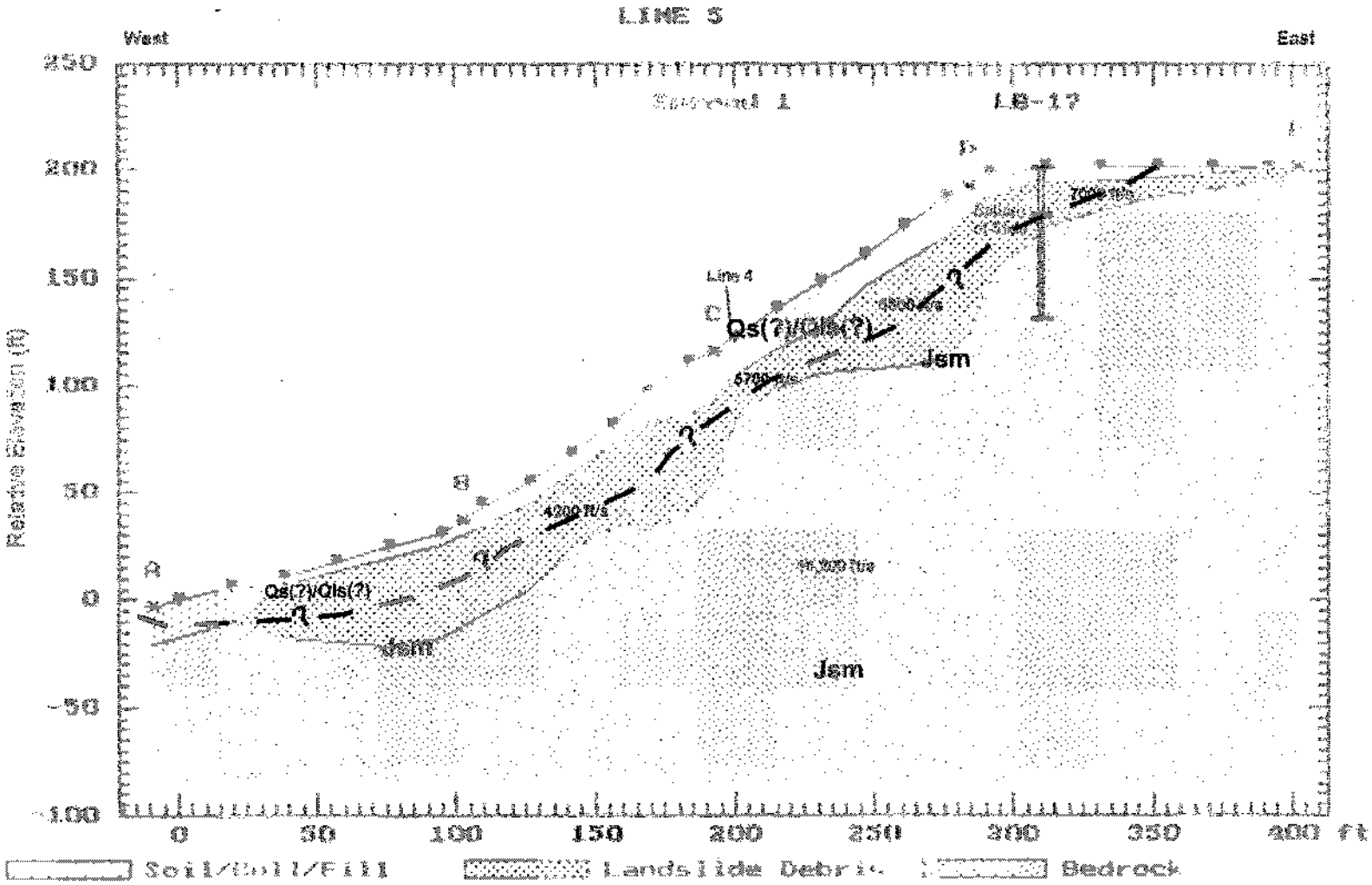
Modified from SubSurface Surveys Report, dated September 26, 2002.

SEISMIC LINE SL-4
VTTM No. 53072
C&C/Mountaingate Project

Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

Leighton Consulting, Inc.

Figure No. C-4a



Modified from SubSurface Surveys Report, dated August 30, 2002.

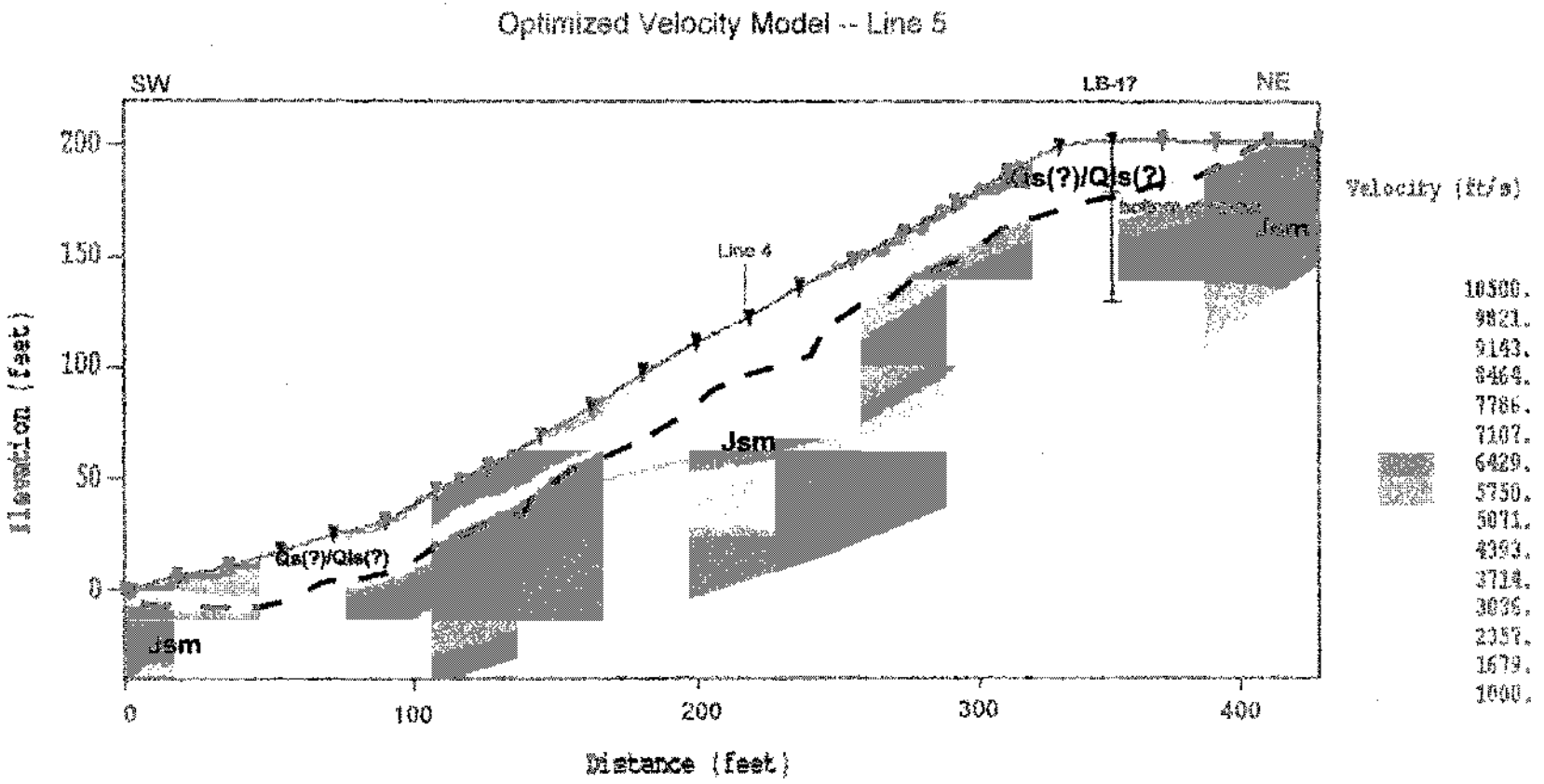
SEISMIC LINE SL-5
VTTM No. 53072
C&C/Mountaingate Project

Project No.	030381-002
Engr./Geol.	BIH/JGS
Drafted By	JGS
Date	March, 2003

Figure No. C-5

Seismic Refraction Survey
August 5, 2002

Project No. 030381-002
Mountaingate Property
Los Angeles, California



Modified from SubSurface Surveys Report, dated September 26, 2002.

SEISMIC LINE SL-5
VTTM No. 53072
C&C/Mountaingate Project

Project No.	030381-002
Engr./Geol.	BH/JGS
Drafted By	JGS
Date	March, 2003

Leighton Consulting, Inc.

Figure No. C-5a

APPENDIX D

LABORATORY TESTING PROGRAM

APPENDIX D

LABORATORY TEST PROGRAM

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APPENDIX D

LABORATORY TEST PROGRAM

D-1 General

The laboratory test program comprised the testing of selected representative specimens prepared from representative samples of the earth materials to obtain the following properties and characteristics: in-situ moisture content and dry density; maximum dry density and optimum moisture content; and direct shear strength.

The laboratory tests were performed in substantial accordance with the applicable procedures of: American Society for Testing and Materials (ASTM), Department of Transportation, Standard Test Methods (CTM); and Uniform Building Code Standards (UBC Std), as relevant.

D-2 Soil Classification: Visual Method (ASTM D2488)

Classifying soils in accordance with standardized methods enables their properties and characteristics to be evaluated in a broad-based manner, and to correlate soils found on various sites. Visual classifications made in the field are often refined after more detailed observations of the materials are made in the laboratory, and after subsequent laboratory testing.

The classifications made in respect of selected soil samples are shown on the Logs of Borings in Appendix B. The classifications of specific specimens that were tested are indicated with the respective test results in Appendix C.

D-3 In-Situ Dry Density and Moisture Content (ASTM D 2937, 2216)

The in-situ dry density provides a measure of the degree of densification of a material, while the moisture content serves to establish a correlation between the properties and behavior of a soil.

The in-situ dry density (in lb/ft^3) and moisture content (as a percentage of dry weight of soil) were determined for relatively undisturbed specimens. The results are presented on the Logs of Borings (Appendix B).

D-4 Maximum Dry Density and Optimum Moisture Content (ASTM D 1557)

This test establishes the relationship between varying moisture contents and dry density when the soil is compacted under standardized conditions. The maximum dry density achievable under these conditions, and the corresponding (optimum) moisture content, are then obtained.

Two bulk samples were tested and results are presented Table D-1.

D-5 Direct Shear Strength (ASTM D 3080)

The shear strength of an earth material is obtained by successively shearing separate specimens partially contained within rings, utilizing a direct-shear machine. Varying normal pressures are applied, and the perpendicularly applied stress required to shear the specimen is recorded. The cohesion (c, in lb/ft^2) and angle of internal friction (, in degrees) are then calculated: these constitute the shear strength characteristics of the material. The shearing stress is applied at a constant rate of strain. In order to simulate possibly adverse moisture conditions, the specimens are soaked prior to the test, and are sheared under water.

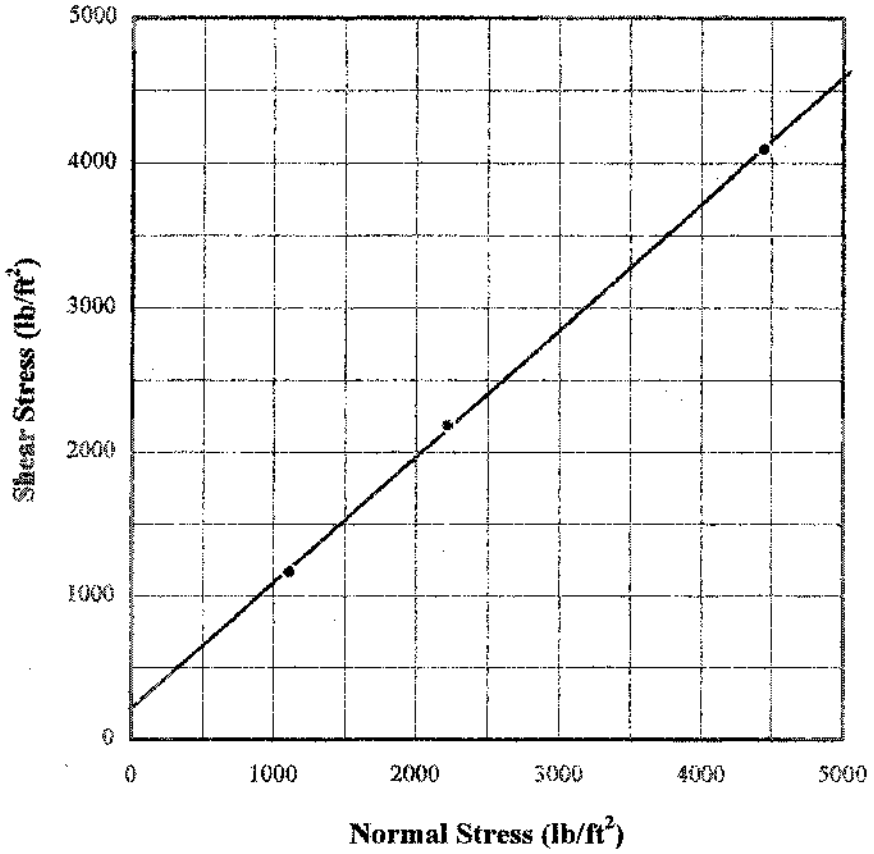
Three undisturbed specimens and two remolded specimens compacted to 90 % relative compaction were tested. The test results are presented Figures D-1 through D-6.

Samples of a clay bed material obtained at the site were tested in a direct shear machine to obtain the resheared residual strength. Again, as in regular tests, in order to simulate possible adverse moisture conditions, each specimen is soaked, consolidated under a normal stress, and then sheared under water, at a constant rate of horizontal deformation. Different normal stresses are applied to each specimen. The specimens are sheared in the forward direction till a horizontal deformation of 0.3 inch is attained; following that, the direction of shearing is reversed till the upper half of the sample is displaced 0.6 inch in the reverse direction (i.e., 0.3 inch in the other direction measured from its initial position). Each forward and reverse motion is termed as a "pass." The specimen was sheared for a number of passes, or alternately, tills the cumulative horizontal deformations reach 3-inch. Throughout each pass, the resistance that the soil specimen offers to shearing is measured (through a proving-ring) along with the horizontal displacement. From the plot of shearing resistance versus horizontal displacement, the lowest value of shearing resistance at the end of any passes is taken to obtain the "resheared-residual" shearing resistance. The "resheared-residual" values of shearing resistance are plotted in terms of shearing stresses versus normal stress to obtain a resheared-residual shearing strength envelope. The test results are presented in Figure D-7.

TABLE D-1

MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT RESULTS

Specimen	Sample Location	Material Description	Optimum Moisture Content (%)	Maximum Dry Density (lb/ft^3)
1	LB-3 @ 10 ft	Clayey Silty Sand w/gravel	7.5	136.0
2	LB-8 @ 22 ft	Silty Clay	25.0	90.0



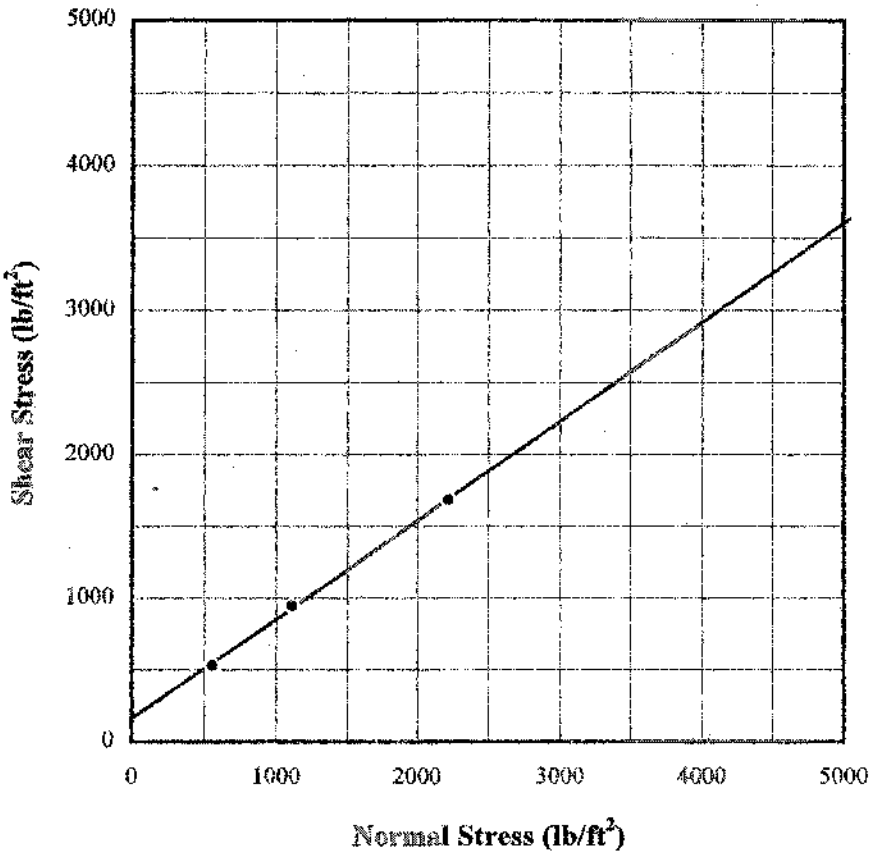
—— Least-Squares Best Fit Line (c =214 lb/ft2, phi = 41.2 degrees)

• Leighton 2001, LB-3 at 26', Bag-1, Remolded to 90% R.C., Fill

DIRECT SHEAR TEST

1 st RUN ULTIMATE (RESIDUAL) STRENGTH

Project No: 03-0381-001
Drafted By: VGG
Date November 30, 2001
Figure No : D 1



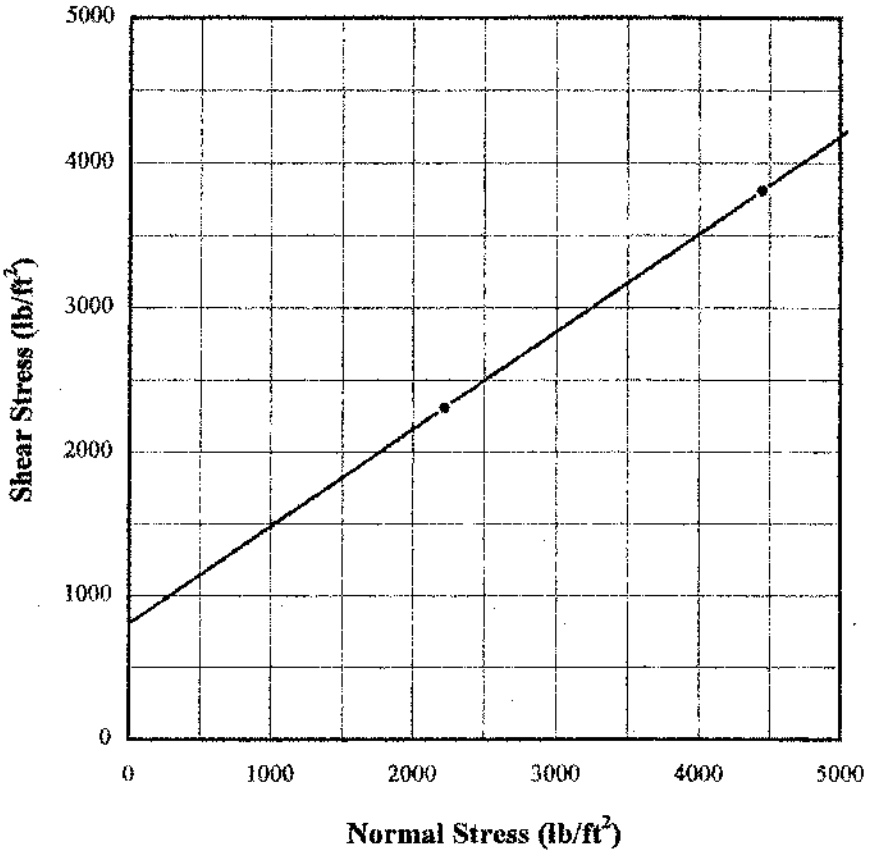
——Least-Squares Best Fit Line (c =162 lb/ft2, phi = 34.5 degrees)

● Leighton 2001, LB-8 at 6', Bag-1, Remolded to 90% R.C., Fill

DIRECT SHEAR TEST

1 st RUN ULTIMATE (RESIDUAL) STRENGTH

Project No: 03-0381-001
Drafted By: VGG
Date November 30, 2001
Figure No : D.2



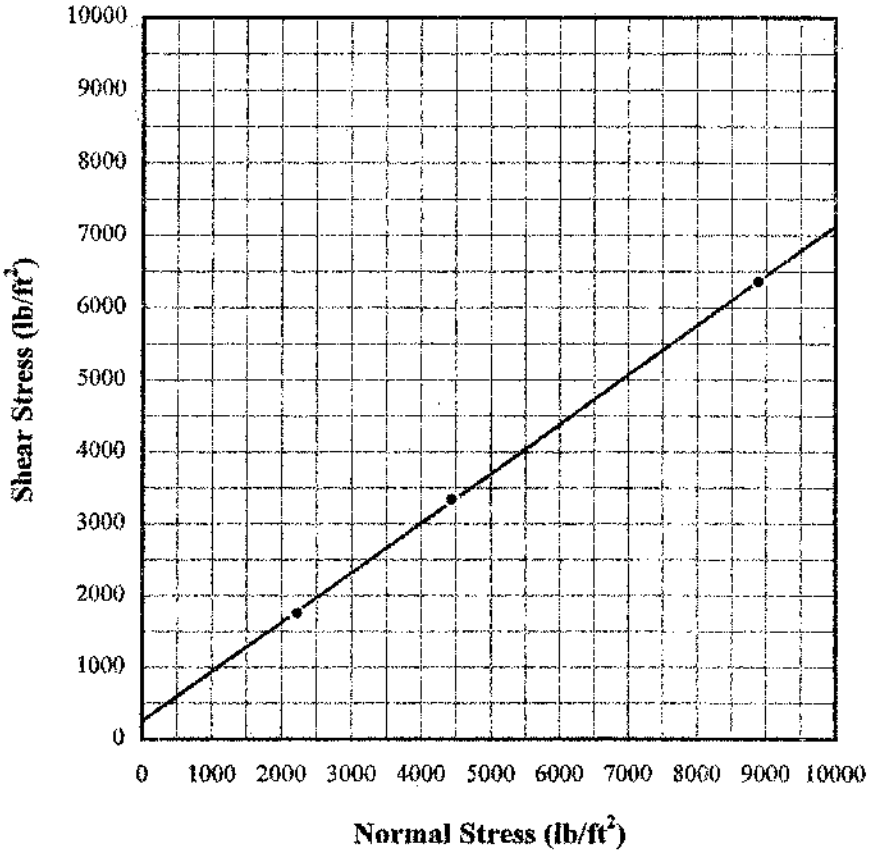
——Least-Squares Best Fit Line (c =805 lb/ft2, phi = 34 degrees)

• Leighton 2001, LB-6 at 35', R-7, Ring Sample, Bedrock (Tm)

DIRECT SHEAR TEST

1 st RUN ULTIMATE (RESIDUAL) STRENGTH

Project No: 03-0381-001
Drafted By: VGG
Date November 30, 2001
Figure No : D3



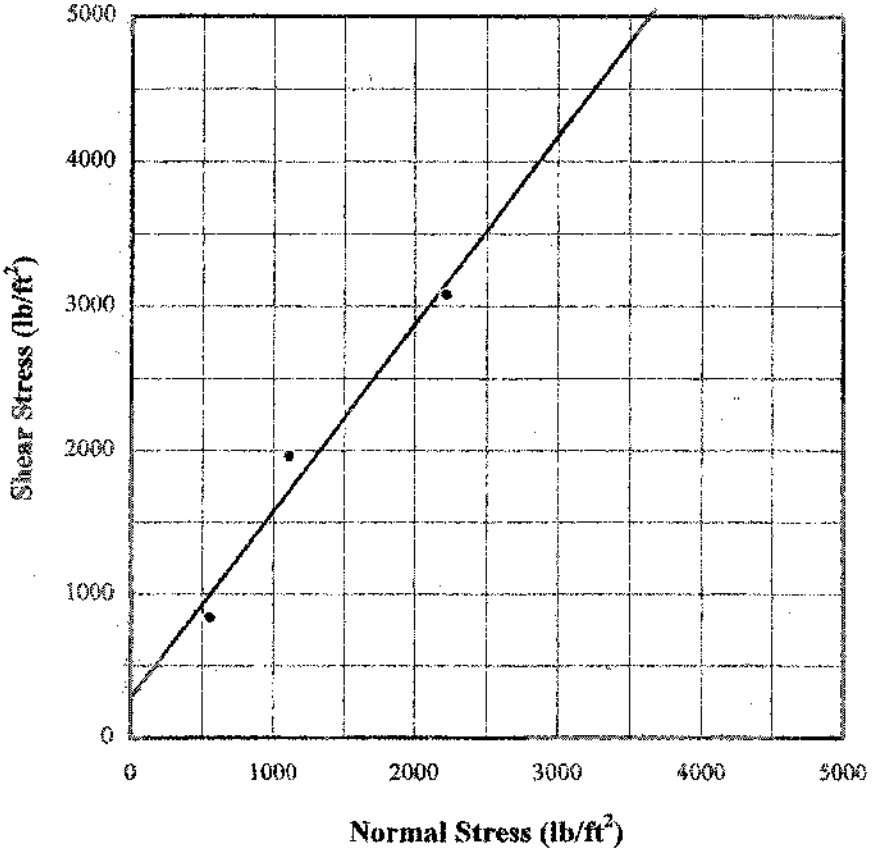
——— Least-Squares Best Fit Line (c =251 lb/ft2, phi = 34.5 degrees)

• Leighton 2001, LB-8 at35', R-7, Ring Sample, Bedrock (Tm)

DIRECT SHEAR TEST

1 st RUN ULTIMATE (RESIDUAL) STRENGTH

Project No: 03-0381-001
Drafted By: VGG
Date November 30, 2001
Figure No : D4



——— Least-Squares Best Fit Line (c =277 lb/ft2, phi = 52.4 degrees)

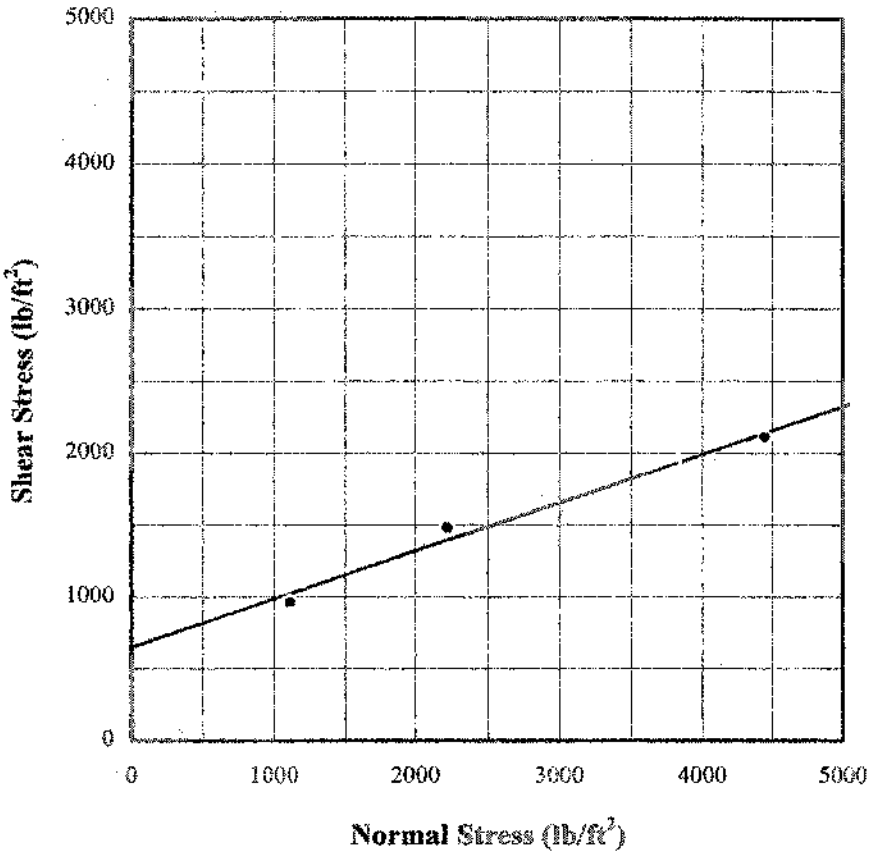
* Leighton 2001, LB-7 at 5', R-1, Ring Sample, Landslide Material (Qls)

DIRECT SHEAR TEST

1 st RUN ULTIMATE (RESIDUAL) STRENGTH

Project No: 03-0381-001
Drafted By: VGG
Date November 30, 2001

Figure No : D 5



——— Least-Squares Best Fit Line (c =650 lb/ft2, phi =18.5 degrees)

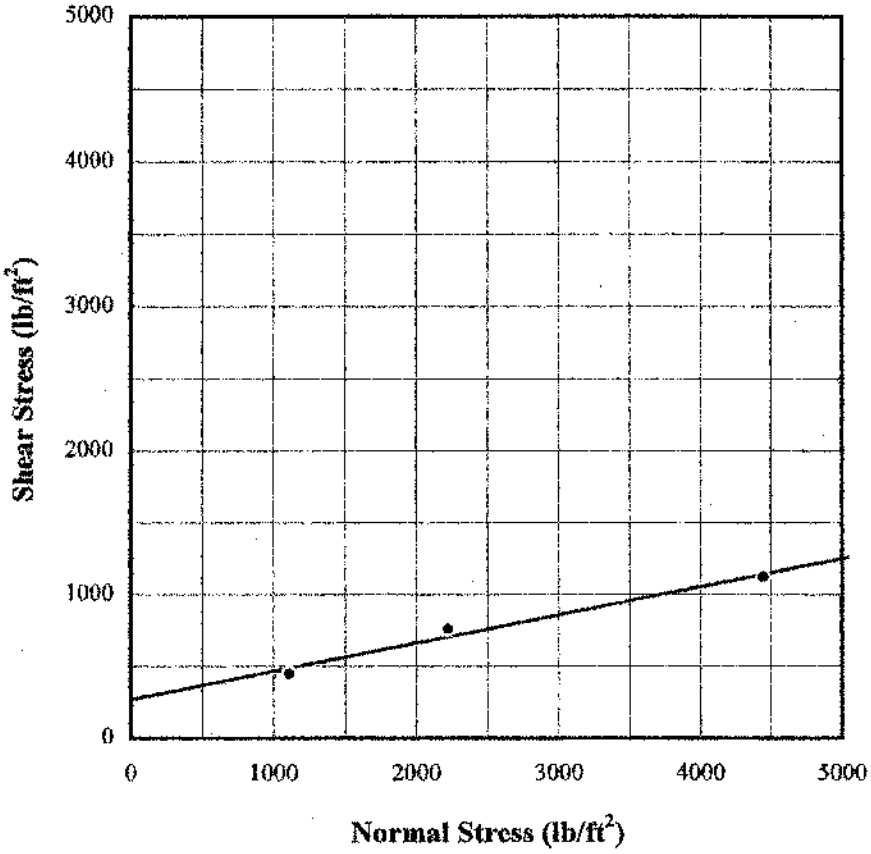
• Leighton 2001, LB-2 at 36', B-3, Sandy Silty Clay, Bag Sample

DIRECT SHEAR TEST

1 st RUN ULTIMATE (RESIDUAL) STRENGTH

Project No: 03-0381-001
Drafted By: VGG
Date November 30, 2001

Figure No : D 6



——— Least-Squares Best Fit Line (c =270 lb/ft2, phi =11.1 degrees)

• Leighton 2001, LB-2 at 36', B-3, Sandy Silty Clay, Bag Sample, Slide Plane

DIRECT SHEAR TEST

RE-SHEARED RESIDUAL STRENGTH

Project No: 03-0381-001
Drafted By: VGG
Date November 30, 2001

Figure No : D7

APPENDIX B

Laboratory Testing Program

The laboratory testing program was directed towards providing quantitative data relating to the relevant engineering properties of the soils. Samples representative of those obtained in the field were tested as described below. (Results from previous investigations were also utilized in the analyses, where applicable.)

a) Moisture-Density

Moisture-density information usually provides a gross indication of soil consistency. Local variations at the time of the investigation can be delineated, and a correlation obtained between soils found on this site and nearby sites. The dry unit weights and field moisture contents were determined for selected samples. The results are shown on the Logs of Borings.

b) Direct Shear

Direct shear tests were made on relatively undisturbed samples, using a direct shear machine at a constant rate of strain. Variable normal or confining loads are applied vertically and the soil shear strengths are obtained at these loads. The angle of internal friction and the cohesion are then evaluated. The samples were tested at saturated

moisture contents. The test results are shown in terms of the Coulomb shear strength parameters as follows:

Boring No.	Sample Depth (ft.)	Soil Description	Coulomb Cohesion (lb/ft^2)	Angle of Internal Friction (°)	Peak/ Residual	Undisturbed/ Remolded
B-2	79.5	SLATE	(80	44	Peak	Undisturbed
			(0	45	Residual	Undisturbed
			(60	44	Reshear	Undisturbed
B-2	80.0	SLATE	(750	27	Peak	Remolded
			(500	26	Residual	Remolded
B-2	89.0	SLATE	(1,000	35	Peak	Undisturbed
			(860	31	Residual	Undisturbed
B-3	8-10, 26-28, and 61	SANDSTONE	(220	28	Peak	Remolded
			(220	25	Residual	Remolded
B-3	60	SILSTONE	(900	34	Peak	Undisturbed
			(300	31	Residual	Undisturbed
B-4	20, 30 and 40	SLATE	(1,500	15	Peak	Undisturbed
			(1,200	11	Residual	Undisturbed

c) Compaction

Representative soil samples were tested in the laboratory to determine the maximum dry density and optimum moisture content, using the ASTM D1557 compaction test method. This test procedure requires 25 blows of a 10-pound hammer falling a height of 18 inches on each of five layers, in a 1/30 cubic foot cylinder. The results of the tests are presented overleaf:

Boring No.	Sample Depth (ft.)	Soil Description	Optimum Moisture Content (%)	Maximum Dry Density (lb/ft^3)
B-2	27 and 46	Silty SAND	11.1	128.3
B-3	8-10, 26-28, and 61	SANDSTONE MIX	23.7	98.0
B-4	45	SLATE	9.0	135.1
B-7	8-10	SAND	11.1	120.8

APPENDIX E

SLOPE STABILITY ANALYSIS

APPENDIX E

SLOPE STABILITY ANALYSIS

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APPENDIX E

SLOPE STABILITY ANALYSIS

E-1 Approach

After a review of the Tentative Tract 53072 plan, the previous investigations on the site, and our current subsurface field investigations, twenty six cross-sections A-A', B-B', BB-BB', C-C', D-D', DD-DD', F-F', H-H', I-I', J-J', K-K', L-L', LL-LL', M-M', N-N', O-O', P-P', Q-Q', R-R', S-S', T-T', U-U', UU-UU', V-V', W-W' and X-X', were considered representative and critical with regards to slope stability. Critical proposed natural slopes in bedrock were identified in these sections and analyses were performed. Cross-sections were constructed through all identified landslides and slumps throughout the proposed development, and were analyzed to develop remedial mitigations, such as setback lines, buttress keys, or caissons.

Slope stability analyses were conducted using the computer program GSTABL7. The Modified Bishop and Janbu Methods were used to analyze rotational and block failure modes. A coefficient of horizontal acceleration of 0.15g was used for pseudostatic stability analyses.

Cross-sections A-A' is constructed through Landslide 1 (Qls-1), B-B', BB-BB', and C-C' are constructed through Landslide (Qls-2), D-D' and DD-DD' are constructed through Landslide (Qls-3), and M-M', S-S', U-U', and UU-UU' are constructed through Slump (Qs(?)/Qls(?)). Results of preliminary analyses through Qls-1, Qls-2, Qls-3 (slide planes), and Qs(?)/Qls(?) indicate that these failure surfaces have factors of safety below 1.5 within the proposed or existing lots. The slump (Qs(?)/Qls(?)) was conservatively analyzed using the slide plane strength as was used for the landslides. The depth to the failure surfaces (at the proposed caisson locations) for Lots 28, and 29, 22, and the three existing units at the existing terminus of Stoney Hill Road are 30 to 40 and 20 feet, respectively. The caissons should be designed as a retaining wall to retain up to 20 to 40 feet of material within the proposed affected lots and should be founded into competent bedrock a minimum of 10 feet below the failure surface. The caisson design parameters are included in Appendix G. The analysis of these sections depict caissons at the back of the proposed lots outside the limits of the slides and slump), however no resistance load is included for these analysis. Our analysis shows that failures within the bedrock and through the landslide material and through or below the location of a proposed caisson will maintain Factors of Safety of 1.5 or greater.

E-2 Design Shear Strength

The design shear strength parameters used in the analysis were developed based on our direct shear testing, our review and discussion with the CDMG about the Santa Monica Slate shear strength parameters database for the Beverly Hills Quadrangle, our numerous visits to the City of Los Angeles to review reports, along with review of the previously published shear strength parameters from investigations performed for this site or adjacent sites within the Mountaingate area, and other sites such as The Getty Center site. Direct shear test data performed by Leighton (Appendix D) formed the basis for the design shear strength parameters for the artificial fill, Modelo Formation Bedrock, landslide material, and landslide surface. Design strength values are generally based on residual (ultimate) strength. The artificial fill, Modelo Formation Bedrock, landslide material shear strength values were graphed, and then a "best-fit" value deemed reasonable and representative was selected for use in the stability analyses. The design shear strength parameters for the landslide surface were based on our direct shear strength testing and preliminary back calculations of our cross-section, which depict the landslide surface.

The design shear strength parameters for the Santa Monica Slate were based on the previous investigations for the subject site by G.A. Nicholl and Associates, Inc., and other in-situ testing of the Santa Monica Slate for the Getty Center project by Woodward Clyde. The shear strength parameters used (cohesion, pounds per square foot (psf) and friction angle, degrees) developed previously for the subject site and The Getty Center are 200 psf and 43 degrees and 3000 psf and 36 degrees, respectively. Based on review of the available shear strength parameters for the Santa Monica Slate we developed conservative design shear strength values of a cohesion of 1500 psf and a friction angle of 35 degrees. These shear strength values are as conservative or more conservative then previously used values. In cases where the joints are in an adverse condition, analysis was performed with a lower more conservative shear strength of cohesion of 0 and a friction angle of 35 degrees.

Design shear strength and density parameters for the slope stability analyses are shown in Table E-1.

TABLE E-1

DESIGN SHEAR STRENGTH PARAMETERS FOR SLOPE STABILITY ANALYSES

Material	Static		Pseudostatic		Saturated Bulk Density (lb/ft^3)
	Cohesion (lb/ft^2)	Angle of Internal Friction (Degrees)	Cohesion (lb/ft^2)	Angle of Internal Friction (Degrees)	
Fill	200	33	200	33	120
Qls (Landslide Material)	250	33	250	33	120
Qls (Landslide Plane)	600	18.5	600	18.5	120
Bedrock (Santa Monica Slate - Jsm)	1500	35	1500	35	125
Bedrock (Santa Monica Slate - Jsm) weaker layer along joints when joints are adverse	0	35	0	35	125
Bedrock (Modelo Formation - Tm)	400	34	400	34	125

E-3 Presentation of Analyses and Results

The stability analyses are presented in Figures E- 1 through E-122 (sets). The results are summarized in Table E-2.

TABLE E-2

SUMMARY OF SLOPE STABILITY ANALYSES

No	Cross-Section	Reference	Condition	Factor of Safety
1	A-A'	Figure E-1 (sets)	Global Stability Static Block Failure (Check Qls)	1.52
2	A-A'	Figure E-2 (sets)	Pseudostatic for the above	1.12
3	B-B'	Figure E-3 (sets)	Global Stability Static Block Failure (Check Qls)	1.52
4	B-B'	Figure E-4 (sets)	Pseudostatic for the above	1.10
5	B-B'	Figure E-5 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	1.65
6	BB-BB'	Figure E-6 (sets)	Global Stability Static Block Failure (Check Qls)	1.73
7	BB-BB'	Figure E-7 (sets)	Pseudostatic for the above	1.26
8	BB-BB'	Figure E-8 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	1.92
9	C-C'	Figure E-9 (sets)	Global Stability Static Block Failure (Check Qls)	1.92
10	C-C'	Figure E-10 (sets)	Pseudostatic for the above	1.42
11	C-C'	Figure E-11 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	1.90
12	D-D'	Figure E-12 (sets)	Global Stability Static Block Failure (Check Qls)	1.56
13	D-D'	Figure E-13 (sets)	Pseudostatic for the above	1.11
14	D-D'	Figure E-14 (sets)	Global Stability Static Block Failure (Check Qls)	1.88
15	D-D'	Figure E-15 (sets)	Pseudostatic for the above	1.34
16	DD-DD'	Figure E-16 (sets)	Global Stability Static Block Failure (Check Qls)	1.58

TABLE E-2

SUMMARY OF SLOPE STABILITY ANALYSES

No	Cross Section	Reference	Condition	Factor of Safety
17	DD-DD'	Figure E-17 (sets)	Pseudostatic for the above	1.11
18	DD-DD'	Figure E-18 (sets)	Global Stability Static Block Failure (Check Qls)	1.87
19	F-F'	Figure E-19 (sets)	Global Stability Static Circular Failure Surface	2.43
20	F-F'	Figure E-20 (sets)	Global Stability Static Block Failure Surface	3.05
21	H-H'	Figure E-21 (sets)	Global Stability Static Circular Failure Surface	2.03
22	H-H'	Figure E-22 (sets)	Pseudostatic for the above	1.40
23	H-H'	Figure E-23 (sets)	Global Stability Static Block Failure Surface	3.10
24	H-H'	Figure E-24 (sets)	Pseudostatic for the above	1.89
25	H-H'	Figure E-25 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	3.10
26	H-H'	Figure E-26 (sets)	Pseudostatic for the above	2.02
27	H-H'	Figure E-27 (sets)	Global Stability Static Circular Failure Surface (Right)	2.11
28	H-H'	Figure E-28 (sets)	Pseudostatic for the above	1.67
29	H-H'	Figure E-29 (sets)	Global Stability Static Block Failure Surface (Right)	2.15
30	H-H'	Figure E-30 (sets)	Pseudostatic for the above	1.67

TABLE E-2 (continued)

SUMMARY OF SLOPE STABILITY ANALYSES

No.	Cross-Section	Reference	Condition	Factor of Safety
31	I-I'	Figure E-31 (sets)	Global Stability Static Circular Failure Surface	2.04
32	I-I'	Figure E-32 (sets)	Pseudostatic for the above	1.57
33	I-I'	Figure E-33 (sets)	Global Stability Static Block Failure Surface	2.16
34	I-I'	Figure E-34 (sets)	Pseudostatic for the above	1.64
35	I-I'	Figure E-35 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	2.16
36	J-J'	Figure E-36 (sets)	Global Stability Static Circular Failure Surface	1.72
37	J-J'	Figure E-37 (sets)	Global Stability Static Block Failure Surface	2.85
38	J-J'	Figure E-38 (sets)	Pseudostatic for the above	2.08
39	J-J'	Figure E-39 (sets)	Global Stability Static Block Failure Surface	1.88
40	J-J'	Figure E-40 (sets)	Pseudostatic for the above	1.38
41	K-K'	Figure E-41 (sets)	Global Stability Static Circular Failure Surface	1.51
42	K-K'	Figure E-42 (sets)	Pseudostatic for the above	1.15

TABLE E-2 (continued)

SUMMARY OF SLOPE STABILITY ANALYSES

No	Cross-Section	Reference	Condition	Factor of Safety
43	K-K'	Figure E-43 (sets)	Global Stability Static Block Failure Surface	1.51
44	K-K'	Figure E-44 (sets)	Pseudostatic for the above	1.17
45	L-L'	Figure E-45 (sets)	Global Stability Static Block Failure Surface	1.52
46	L-L'	Figure E-46 (sets)	Pseudostatic for the above	1.10
47	L-L'	Figure E-47 (sets)	Global Stability Static Block Failure Surface	1.50
48	L-L'	Figure E-48 (sets)	Pseudostatic for the above	1.10
49	LL-LL'	Figure E-49 (sets)	Global Stability Static Block Failure (Check Qls)	1.53
50	LL-LL'	Figure E-50 (sets)	Pseudostatic for the above	1.11
51	LL-LL'	Figure E-51 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	2.34
52	M-M'	Figure E-52 (sets)	Global Stability Static Block Failure (Check Qls)	1.53
53	M-M'	Figure E-53 (sets)	Pseudostatic for the above	1.12
54	M-M'	Figure E-54 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	2.60
55	N-N'	Figure E-55 (sets)	Global Stability Static Block Failure (Check Qls)	1.78
56	N-N'	Figure E-56 (sets)	Pseudostatic for the above	1.27
57	N-N'	Figure E-57 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	2.80

TABLE E-2 (continued)

SUMMARY OF SLOPE STABILITY ANALYSES

No.	Cross-Section	Reference	Condition	Factor of Safety
58	O-O'	Figure E-58 (sets)	Global Stability Static Circular Failure Surface	2.13
59	O-O'	Figure E-59 (sets)	Pseudostatic for the above	1.58
60	O-O'	Figure E-60 (sets)	Global Stability Static Block Failure Surface	2.18
61	O-O'	Figure E-61 (sets)	Pseudostatic for the above	1.60
62	O-O'	Figure E-62 (sets)	Global Stability Static Block Failure/Lower Strength Along Joints	2.16
63	P-P'	Figure E-63 (sets)	Global Stability Static Circular Failure Surface	2.15
64	P-P'	Figure E-64 (sets)	Pseudostatic for the above	1.62
65	P-P'	Figure E-65 (sets)	Global Stability Static Block Failure Surface	2.17
66	P-P'	Figure E-66 (sets)	Pseudostatic for the above	1.60
67	P-P'	Figure E-67 (sets)	Global Stability Static Block Failure Surface	2.64
68	P-P'	Figure E-68 (sets)	Pseudostatic for the above	1.99
69	Q-Q'	Figure E-69 (sets)	Global Stability Static Circular Failure Surface	2.04
70	Q-Q'	Figure E-70 (sets)	Pseudostatic for the above	1.38
71	Q-Q'	Figure E-71(sets)	Global Stability Static Block Failure/Lower Strength Along Joints	2.67
72	R-R'	Figure E-72 (sets)	Global Stability Static Block Failure Surface (Check Qls)	2.93
73	R-R'	Figure E-73 (sets)	Pseudostatic for the above	1.67
74	R-R'	Figure E-74 (sets)	Global Stability Static Circular Failure Surface	2.44

TABLE E-2 (continued)

SUMMARY OF SLOPE STABILITY ANALYSES

No	Cross-Section	Reference	Condition	Factor of Safety
75	R-R'	Figure E-75 (sets)	Pseudostatic for the above	1.48
76	R-R'	Figure E-76 (sets)	Global Stability Static Block Failure Surface (Check Qls)	2.82
77	P-P'	Figure E-77 (sets)	Pseudostatic for the above	1.60
78	P-P'	Figure E-78 (sets)	Global Stability Static Block Failure Surface	2.64
79	P-P'	Figure E-79 (sets)	Pseudostatic for the above	1.99
80	Q-Q'	Figure E-80 (sets)	Global Stability Static Circular Failure Surface	1.93
81	Q-Q'	Figure E-81 (sets)	Pseudostatic for the above	1.33
82	Q-Q'	Figure E-82(sets)	Global Stability Static Block Failure Surface	2.83
83	Q-Q'	Figure E-83 (sets)	Pseudostatic for the above	1.95
84	S-S'	Figure E-84 (sets)	Global Stability Static Block Failure Surface (Check Qls)	1.50
85	S-S'	Figure E-85 (sets)	Pseudostatic for the above	1.14
86	S-S'	Figure E-86 (sets)	Global Stability Static Block Failure Surface	2.13
87	T-T'	Figure E-87 (sets)	Global Stability Static Block Failure Surface (Check Qls)	1.59
88	T-T'	Figure E-88 (sets)	Pseudostatic for the above	1.10
89	T-T'	Figure E-89 (sets)	Global Stability Static Block Failure Surface	3.62
90	U-U'	Figure E-90 (sets)	Global Stability Static Circular Failure Surface	1.53
91	U-U'	Figure E-91 (sets)	Pseudostatic for the above	1.21

TABLE E-2 (continued)

SUMMARY OF SLOPE STABILITY ANALYSES

No	Cross-Section	Reference	Condition	Factor of Safety
92	U-U'	Figure E-92 (sets)	Global Stability Static Block Failure Surface (Check Qls)	1.52
93	U-U'	Figure E-93 (sets)	Pseudostatic for the above	1.20
94	U-U'	Figure E-94 (sets)	Global Stability Static Block Failure Surface	2.25
95	UU-UU'	Figure E-95 (sets)	Global Stability Static Block Failure Surface	1.52
96	UU-UU'	Figure E-96 (sets)	Pseudostatic for the above	1.16
97	UU-UU'	Figure E-97 (sets)	Global Stability Static Block Failure Surface	2.02
98	V-V'	Figure E-98 (sets)	Global Stability Static Circular Failure Surface	1.77
99	V-V'	Figure E-99 (sets)	Pseudostatic for the above	1.39
100	V-V'	Figure E-100 (sets)	Global Stability Static Block Failure Surface	1.72
101	V-V'	Figure E-101 (sets)	Pseudostatic for the above	1.36
102	V-V'	Figure E-102 (sets)	Global Stability Static Block Failure Surface	2.07
103	V-V'	Figure E-103 (sets)	Pseudostatic for the above	1.60
104	W-W'	Figure E-104 (sets)	Global Stability Static Block Failure Surface (Check Qls)	1.50
105	W-W'	Figure E-105 (sets)	Pseudostatic for the above	1.10
106	W-W'	Figure E-106 (sets)	Global Stability Static Block Failure Surface	1.65
107	W-W'	Figure E-107 (sets)	Pseudostatic for the above	1.23
108	X-X'	Figure E-108 (sets)	Global Stability Static Circular Failure Surface	2.43
109	X-X'	Figure E-109 (sets)	Pseudostatic for the above	1.85
110	X-X'	Figure E-110 (sets)	Global Stability Static Block Failure Surface	2.47

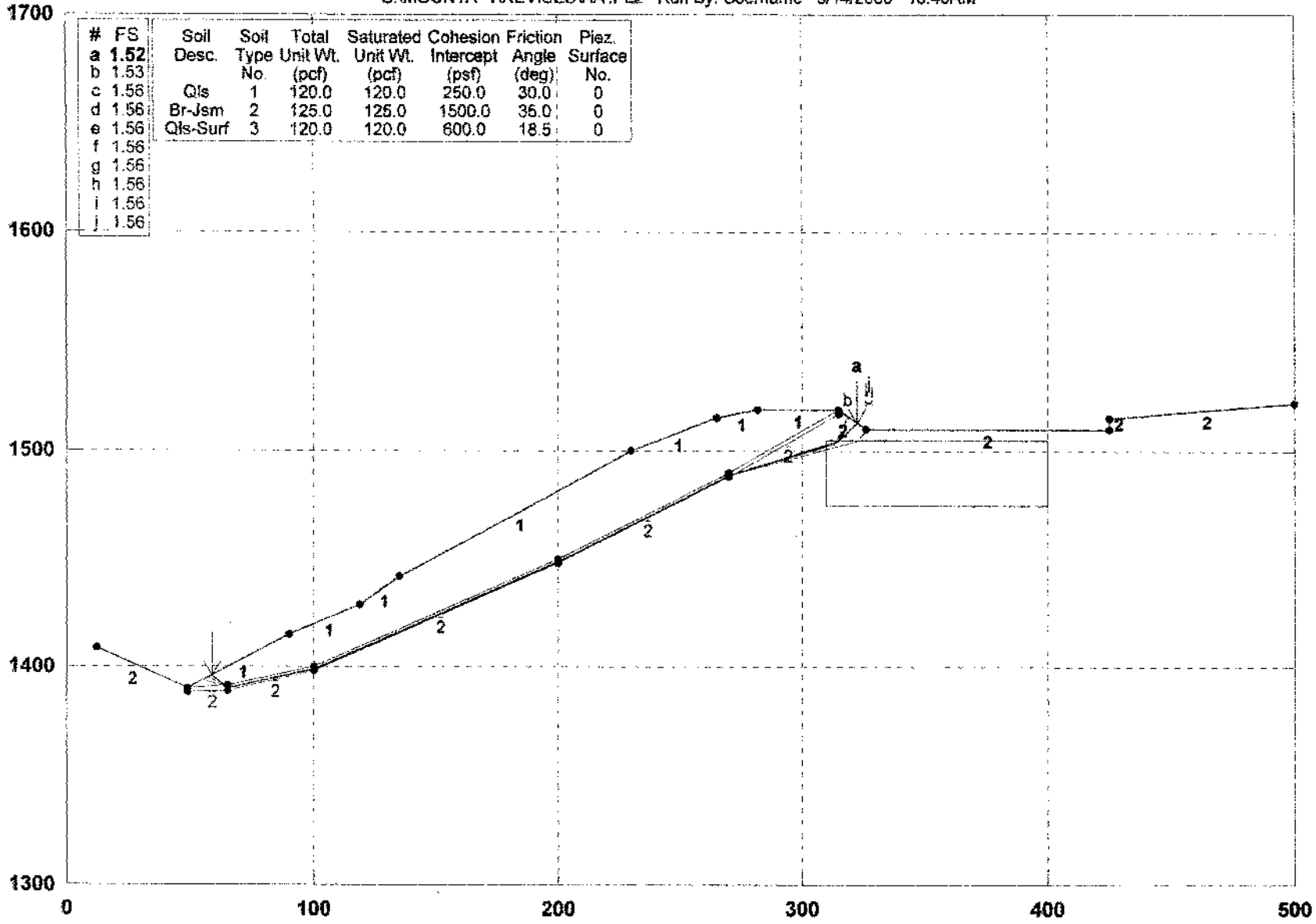
TABLE E-2 (continued)

SUMMARY OF SLOPE STABILITY ANALYSES

No	Cross-Section	Reference	Condition	Factor of Safety
111	X-X'	Figure E-111 (sets)	Pseudostatic for the above	1.86
112	X-X'	Figure E-112 (sets)	Global Stability Static Block Failure Surface	2.45
113	X-X'	Figure E-113 (sets)	Pseudostatic for the above	1.86
114	X-X'	Figure E-114 (sets)	Surficial Stability	1.66
115	X-X'	Figure E-115 (sets)	Bedrock Tm	2.73
116	X-X'	Figure E-116 (sets)	Bedrock Tsm	6.77

Mountain Gate / Section A-A' , Static

S:\MOUNTA~1\REVISED\AA'.PLZ Run By: Username 3/14/2003 10:40AM



#	FS
a	**1.52**
b	1.53
c	1.56
d	1.56
e	1.56
f	1.56
g	1.56
h	1.56
i	1.56
j	1.56

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Qls	1	120.0	120.0	250.0	30.0	0
Br-Jsm	2	125.0	125.0	1500.0	35.0	0
Qls-Surf	3	120.0	120.0	600.0	18.5	0

GSTABL7 FSmin=1.52

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-1

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 3/14/2003
Time of Run: 10:40AM
Run By: Username
Input Data Filename: S:aa'.
Output Filename: S:aa'.OUT
Unit System: English

Plotted Output Filename: S:aa'.PLT

PROBLEM DESCRIPTION Mountain Gate / Section A-A'
, Static

BOUNDARY COORDINATES

12 Top Boundaries
22 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	12.00	109.00	49.00	90.00	2
2	49.00	90.00	90.00	115.00	1
3	90.00	115.00	119.00	129.00	1
4	119.00	129.00	135.00	142.00	1
5	135.00	142.00	230.00	200.00	1
6	230.00	200.00	265.00	215.00	1
7	265.00	215.00	282.00	219.00	1
8	282.00	219.00	315.00	219.00	1
9	315.00	219.00	326.00	210.00	2
10	326.00	210.00	425.00	210.00	2
11	425.00	210.00	425.10	215.00	2
12	425.10	215.00	500.00	222.00	2
13	49.00	90.00	65.00	91.00	3
14	65.00	91.00	100.00	100.00	3
15	100.00	100.00	200.00	150.00	3
16	200.00	150.00	270.00	190.00	3
17	270.00	190.00	315.00	219.00	3
18	49.00	88.00	65.00	89.00	2
19	65.00	89.00	100.00	98.00	2
20	100.00	98.00	200.00	148.00	2
21	200.00	148.00	270.00	188.00	2
22	270.00	188.00	315.00	217.00	2

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	120.0	120.0	250.0	30.0	0.00	0.0	0
2	125.0	125.0	1500.0	35.0	0.00	0.0	0
3	120.0	120.0	600.0	18.5	0.00	0.0	0

Janbus Empirical Coef is being used for the case of c & phi both > 0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated.

5 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 40.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	65.00	90.00	65.10	90.00	0.00
2	100.00	99.00	100.10	99.00	0.00
3	200.00	149.00	200.10	149.00	0.00
4	270.00	189.00	270.10	189.00	0.00
5	310.00	190.00	400.00	190.00	30.00

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.45	95.76
2	65.05	90.00
3	100.09	99.00

4	200.07	149.00
5	270.06	189.00
6	314.10	204.21
7	322.60	212.78

*** 1.526 ***

Individual data on the 19 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	5.5	2721.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.0	1095.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.1	63.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	24.9	42480.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	10.0	23666.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.1	232.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	18.4	46984.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	16.0	44243.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	65.0	227222.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.1	277.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	29.9	119637.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	35.0	133850.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	5.0	16830.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.1	192.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	3.2	10423.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	8.7	27654.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	22.1	79528.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.9	1596.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	7.6	6596.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	312.88	202.95
7	318.95	215.77

*** 1.530 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.562 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.562 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.562 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)

1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.562 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.562 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.562 ***

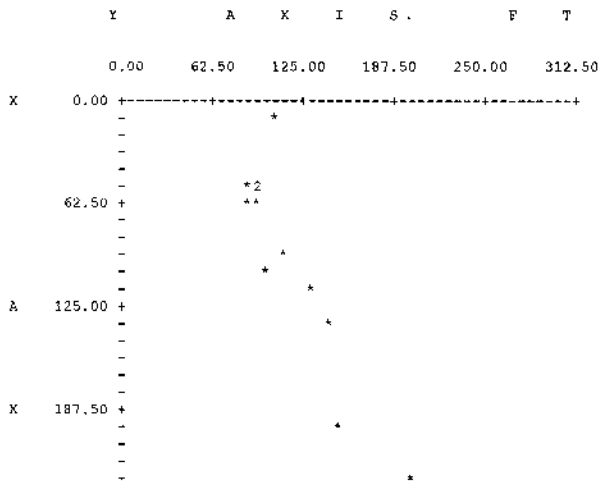
1

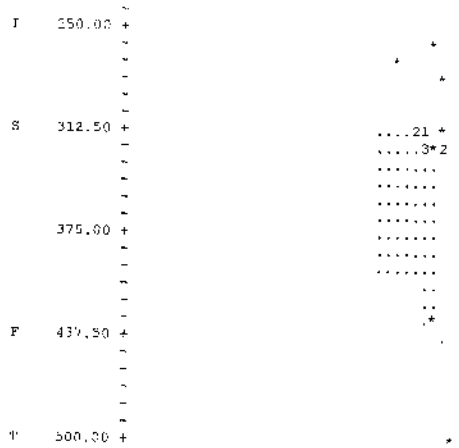
Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.562 ***

1

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250.00
S
312.50
375.00
F
437.50
T
500.00

Mountain Gate / Section A-A' , Pseudo Static

S:\MOUNTA~1\REVISED\AA'E.PL2 Run By: Username 3/14/2003 10:41AM

#	FS	Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
a	1.12							
b	1.12							
c	1.15	Qls	1	120.0	120.0	250.0	30.0	0
d	1.15	Br-Jsm	2	125.0	125.0	1500.0	35.0	0
e	1.15	Qls-Surf	3	120.0	120.0	600.0	18.5	0
f	1.15							
g	1.15							
h	1.15							
i	1.15							
j	1.15							

Load	Value
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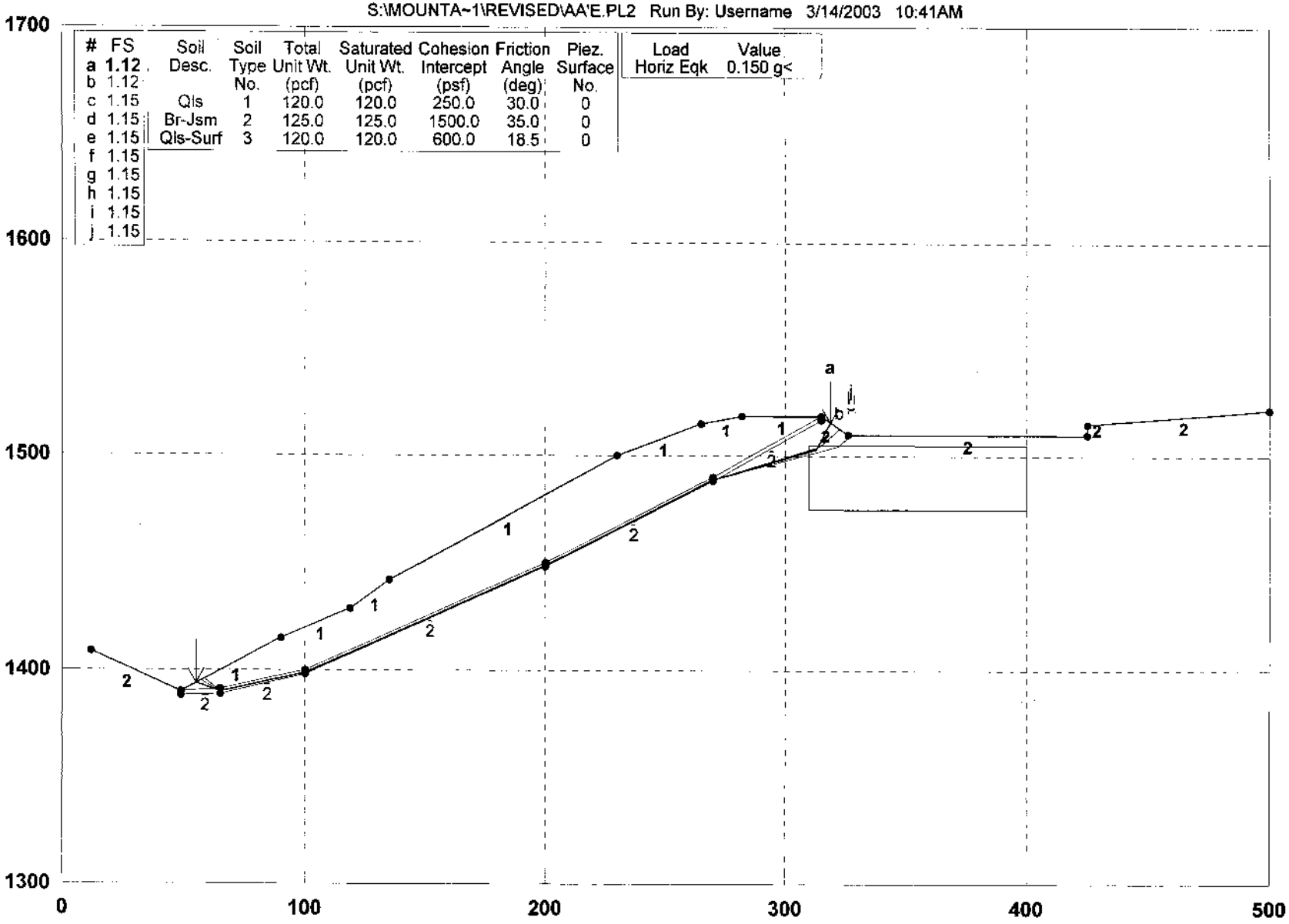


GSTABL7 FSmin=1.12

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-2

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 3/14/2003
Time of Run: 10:41AM
Run By: Username
Input Data Filename: S:aa'e.
Output Filename: S:AA'e.OUT
Unit System: English

Plotfac Output Filename: S:aa'e.PLT

PROBLEM DESCRIPTION Mountain Gate / Section A-A'
, Pseudo Static

BOUNDARY COORDINATES

12 Top Boundaries
22 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	10.00	109.00	49.00	90.00	2
2	49.00	90.00	90.00	115.00	1
3	90.00	115.00	119.00	129.00	1
4	119.00	129.00	135.00	142.00	1
5	135.00	142.00	230.00	200.00	1
6	230.00	200.00	265.00	215.00	1
7	265.00	215.00	282.00	219.00	1
8	282.00	219.00	315.00	219.00	1
9	315.00	219.00	326.00	210.00	2
10	326.00	210.00	425.00	210.00	2
11	425.00	210.00	425.10	215.00	2
12	425.10	215.00	500.00	222.00	2
13	49.00	90.00	65.00	91.00	3
14	65.00	91.00	100.00	100.00	3
15	100.00	100.00	200.00	150.00	3
16	200.00	150.00	270.00	190.00	3
17	270.00	190.00	315.00	219.00	3
18	49.00	80.00	65.00	89.00	2
19	65.00	89.00	100.00	98.00	2
20	100.00	98.00	200.00	148.00	2
21	200.00	148.00	270.00	188.00	2
22	270.00	188.00	315.00	217.00	2

1

ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	120.0	120.0	250.0	30.0	0.00	0.0	0
2	125.0	125.0	1500.0	35.0	0.00	0.0	0
3	120.0	120.0	600.0	18.5	0.00	0.0	0

A Horizontal Earthquake Loading Coefficient
Of0.150 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of0.000 Has Been Assigned

Cavitation Pressure = 0.0(psf)

Janbus Empirical Coef is being used for the case of c & phi both > 0

1

A Critical Failure Surface Searching Method, Using A Random
Technique For Generating Sliding Block Surfaces, Has Been
Specified.

3000 Trial Surfaces Have Been Generated.

5 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of
Sliding Block Is 40.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	65.00	90.00	65.10	90.00	0.00
2	100.00	99.00	100.10	99.00	0.00
3	200.00	149.00	200.10	149.00	0.00
4	270.00	189.00	270.10	189.00	0.00
5	310.00	190.00	400.00	190.00	30.00

1

Following Are Displayed The Ten Most Critical Of The Trial
Failure Surfaces Examined. They Are Ordered - Most Critical
First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	55.23	93.80
2	65.09	90.00
3	100.09	99.00
4	200.01	149.00
5	270.08	189.00
6	312.89	202.95
7	318.95	215.77

*** 1.117 ***

Individual data on the 19 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	7.6	3460.6	0.0	0.0	0.0	0.0	519.1	0.0	0.0
2	2.2	2236.2	0.0	0.0	0.0	0.0	335.4	0.0	0.0
3	0.1	104.7	0.0	0.0	0.0	0.0	15.7	0.0	0.0
4	24.9	42455.9	0.0	0.0	0.0	0.0	6368.4	0.0	0.0
5	10.0	23667.6	0.0	0.0	0.0	0.0	3550.1	0.0	0.0
6	0.1	229.9	0.0	0.0	0.0	0.0	34.5	0.0	0.0
7	18.9	46979.3	0.0	0.0	0.0	0.0	7046.9	0.0	0.0
8	16.0	44226.9	0.0	0.0	0.0	0.0	6634.0	0.0	0.0
9	65.0	227060.1	0.0	0.0	0.0	0.0	34059.0	0.0	0.0
10	0.0	37.5	0.0	0.0	0.0	0.0	5.6	0.0	0.0
11	30.0	119786.2	0.0	0.0	0.0	0.0	17967.9	0.0	0.0
12	35.0	131832.5	0.0	0.0	0.0	0.0	19774.9	0.0	0.0
13	5.0	16835.6	0.0	0.0	0.0	0.0	2525.3	0.0	0.0
14	0.1	251.3	0.0	0.0	0.0	0.0	37.7	0.0	0.0
15	3.0	9688.7	0.0	0.0	0.0	0.0	1453.3	0.0	0.0
16	8.9	28511.3	0.0	0.0	0.0	0.0	4276.7	0.0	0.0
17	30.9	79350.7	0.0	0.0	0.0	0.0	11902.6	0.0	0.0
18	2.1	3607.8	0.0	0.0	0.0	0.0	541.2	0.0	0.0
19	3.9	2868.9	0.0	0.0	0.0	0.0	429.1	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.45	95.76
2	65.09	90.00
3	100.09	99.00
4	200.07	149.00
5	270.06	189.00
6	314.10	204.21
7	322.68	212.78

*** 1.119 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.146 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.146 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.146 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.146 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

*** 1.146 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

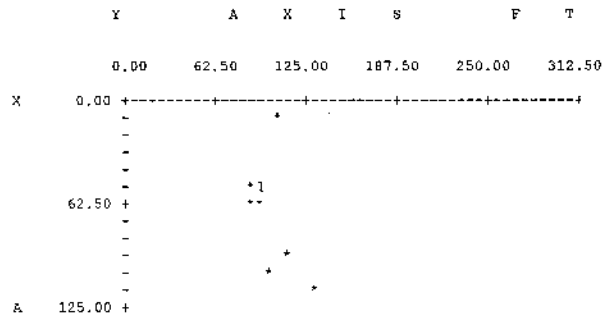
*** 1.146 ***

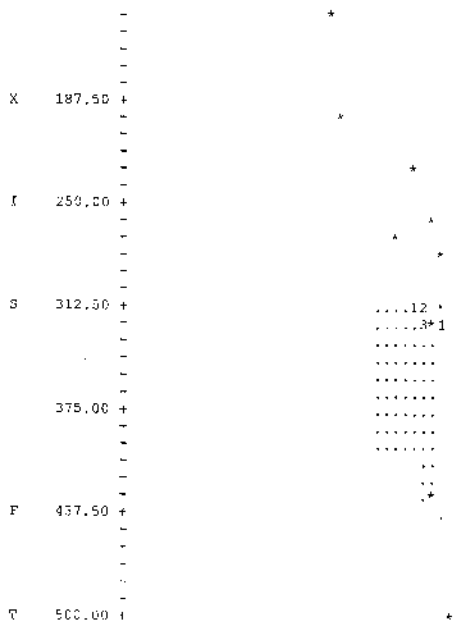
1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	56.98	94.87
2	65.07	90.00
3	100.07	99.00
4	200.08	149.00
5	270.00	189.00
6	321.88	204.63
7	327.25	210.00

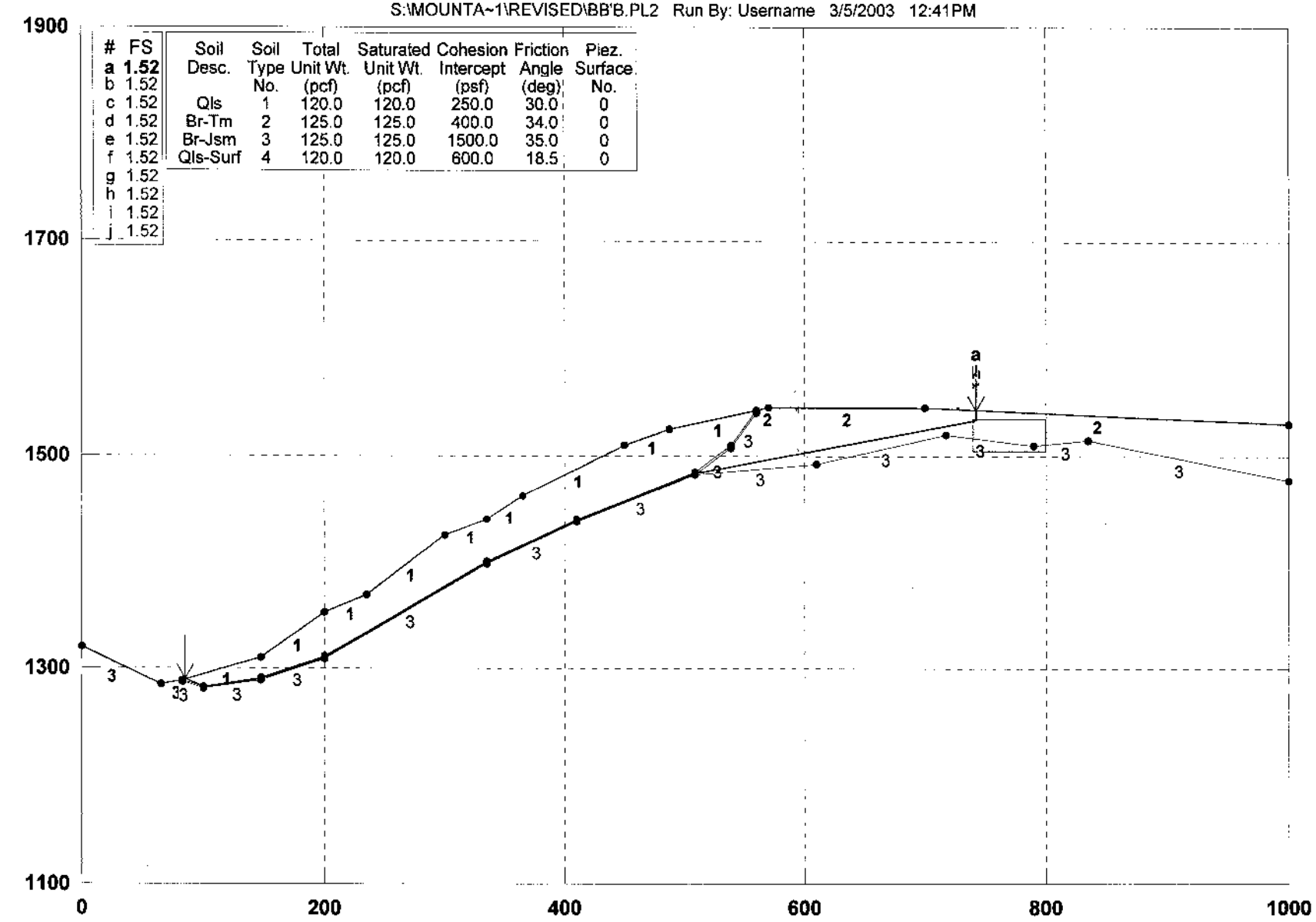
*** 1.146 ***




X
187.50
I
250.00
S
312.50
375.00
F
437.50
T
500.00

Mountain Gate / Section: B-B', Static

S:\MOUNTA~1\REVISED\BB'B.PL2 Run By: Username 3/5/2003 12:41PM



#	FS
a	**1.52**
b	1.52
c	1.52
d	1.52
e	1.52
f	1.52
g	1.52
h	1.52
i	1.52
j	1.52

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Qls	1	120.0	120.0	250.0	30.0	0
Br-Tm	2	125.0	125.0	400.0	34.0	0
Br-Jsm	3	125.0	125.0	1500.0	35.0	0
Qls-Surf	4	120.0	120.0	600.0	18.5	0

GSTABL7 FSmin=1.52

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-3

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date:	3/5/2003
Time of Run:	12:41PM
Run By:	Username
Input Data Filename:	S:bb'b.
Output Filename:	S:bb'b.OUT
Unit System:	English

Plotted Output Filename: S:bb'b.PLT

PROBLEM DESCRIPTION Mountain Gate / Section: B-B',
Static

BOUNDARY COORDINATES

14 Top Boundaries
35 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	220.00	65.00	185.00	3
2	65.00	185.00	82.00	189.00	3
3	82.00	189.00	148.00	210.00	1
4	148.00	210.00	200.00	252.00	1
5	200.00	252.00	235.00	269.00	1
6	235.00	269.00	300.00	325.00	1
7	300.00	325.00	335.00	340.00	1
8	335.00	340.00	365.00	362.00	1
9	365.00	362.00	450.00	410.00	1
10	450.00	410.00	488.00	425.00	1
11	488.00	425.00	560.00	442.00	1
12	560.00	442.00	570.00	445.00	2
13	570.00	445.00	700.00	445.00	2
14	700.00	445.00	1000.00	430.00	2
15	82.00	189.00	100.00	183.00	4
16	100.00	183.00	148.00	191.00	4
17	148.00	191.00	200.00	211.00	4
18	200.00	211.00	335.00	300.00	4
19	335.00	300.00	410.00	340.00	4
20	410.00	340.00	509.00	385.00	4
21	509.00	385.00	539.00	410.00	4
22	539.00	410.00	560.00	442.00	3
23	82.00	187.00	100.00	181.00	3
24	100.00	181.00	148.00	189.00	3
25	148.00	189.00	200.00	209.00	3
26	200.00	209.00	335.00	298.00	3
27	335.00	298.00	410.00	338.00	3
28	410.00	338.00	509.00	383.00	3
29	509.00	383.00	539.00	408.00	3
30	539.00	408.00	560.00	440.00	3
31	509.00	383.00	610.00	392.00	3
32	610.00	392.00	718.00	420.00	3
33	718.00	420.00	790.00	410.00	3
34	790.00	410.00	835.00	415.00	3
35	835.00	415.00	1000.00	377.00	3

1

ISOTROPIC SOIL PARAMETERS

4 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	120.0	120.0	250.0	30.0	0.00	0.0	0
2	125.0	125.0	400.0	34.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0
4	120.0	120.0	600.0	18.5	0.00	0.0	0

Janbus Empirical Coef is being used for the case of c & phi both > 0

1

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated.

7 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 35.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)

1	100.00	182.00	100.10	182.00	0.00
2	148.00	190.00	148.10	190.00	0.00
3	200.00	210.00	200.10	210.00	0.00
4	335.00	299.00	335.10	299.00	0.00
5	410.00	339.00	410.10	339.00	0.00
6	509.00	384.00	509.10	384.00	0.00
7	740.00	420.00	800.00	420.00	30.00

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

*** 1.525 ***

Individual data on the 25 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	9.9	4961.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	5.2	6584.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	69.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	48.0	94236.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.1	149.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	51.9	193427.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.1	262.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	34.9	163529.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	65.0	331792.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	35.0	189323.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.1	304.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	29.9	158195.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	45.0	257692.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	77.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	40.0	242899.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	38.0	235684.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	21.0	121599.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	19.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.6	8844.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	28.4	159182.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	21.0	121861.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	10.0	59585.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	130.0	558637.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	42.5	80207.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.2	95.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34

9	742.69	442.87

*** 1.525 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

*** 1.525 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

*** 1.525 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

*** 1.525 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

*** 1.525 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

*** 1.525 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

*** 1.525 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

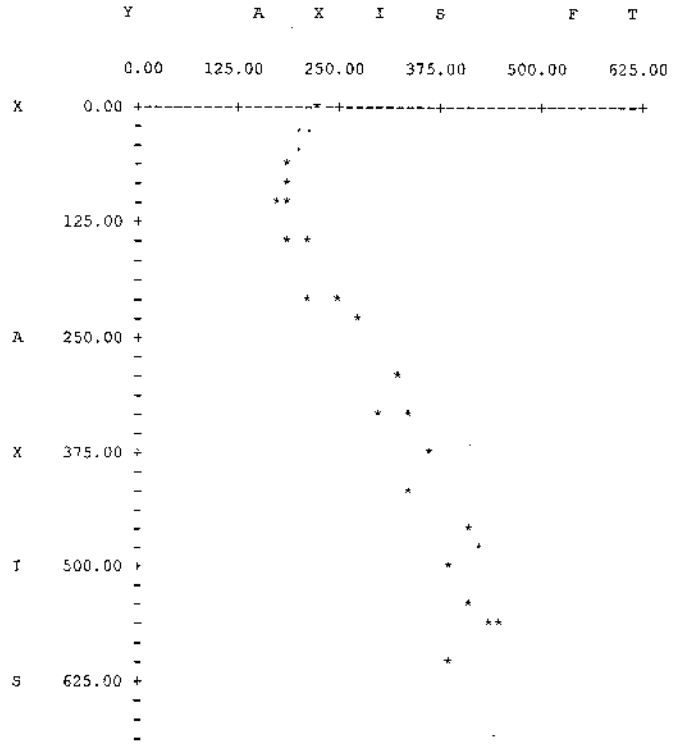
*** 1.525 ***

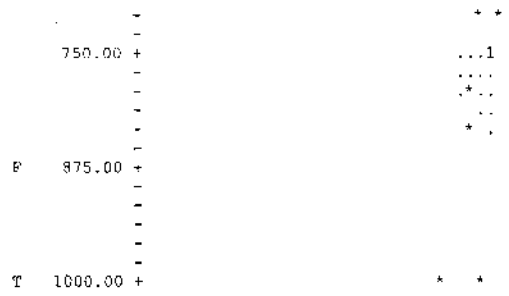
Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	84.85	189.91
2	100.05	182.00
3	148.06	190.00
4	200.05	210.00
5	335.06	299.00
6	410.01	339.00
7	509.00	384.00
8	742.53	433.34
9	742.69	442.87

*** 1.525 ***

1




750.00
875.00
1000.00

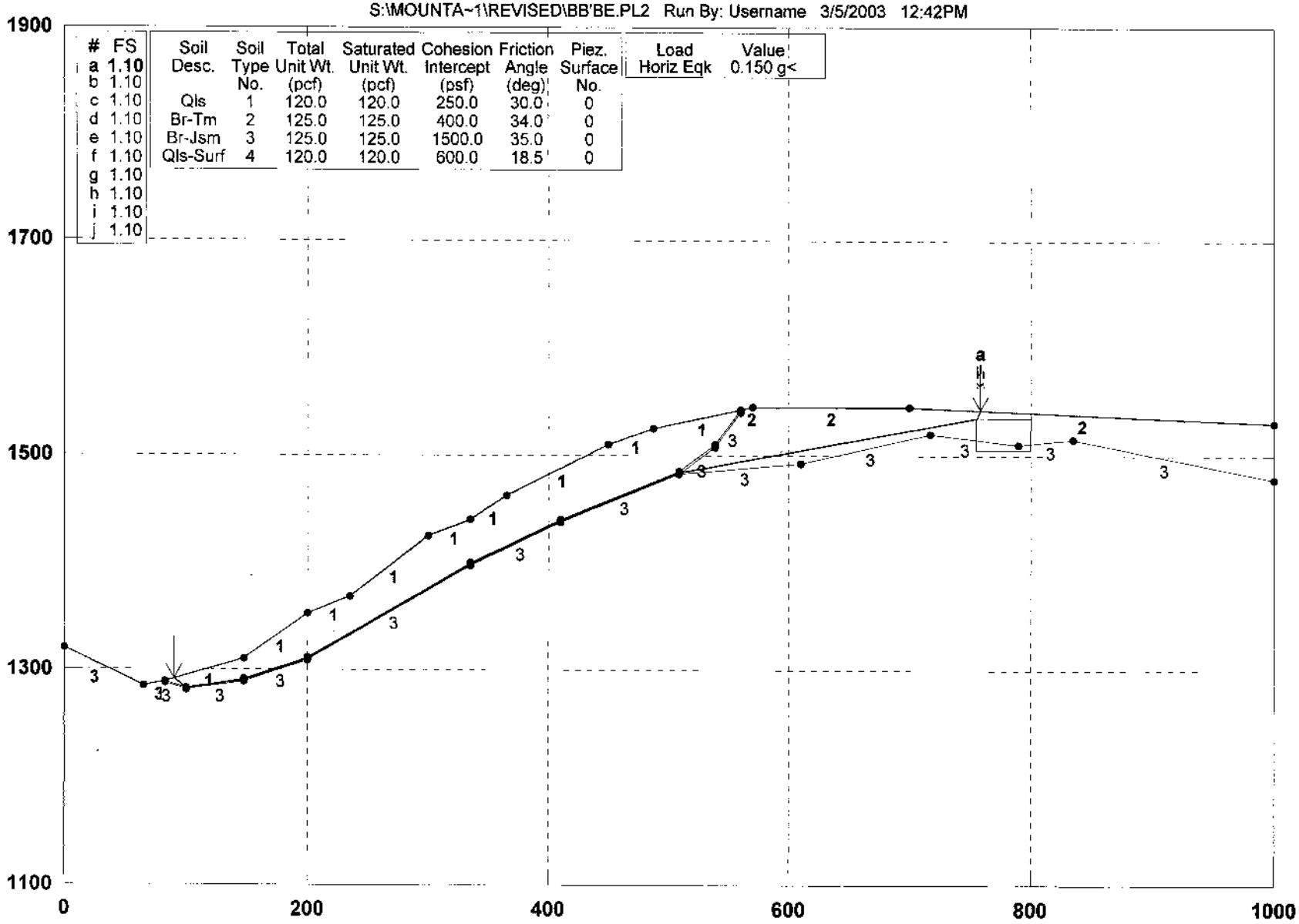
Mountain Gate / Section: B-B', Pseudo Static

S:\MOUNTA~1\REVISED\BB'BE.PL2 Run By: Username 3/5/2003 12:42PM

#	FS
a	**1.10**
b	1.10
c	1.10
d	1.10
e	1.10
f	1.10
g	1.10
h	1.10
i	1.10
j	1.10

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Qls	1	120.0	120.0	250.0	30.0	0
Br-Tm	2	125.0	125.0	400.0	34.0	0
Br-Jsm	3	125.0	125.0	1500.0	35.0	0
Qls-Surf	4	120.0	120.0	600.0	18.5	0

Load	Value
Horiz Eqk	0.150 g<



GSTABL7 FSmin=1.10

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-4

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date:	3/5/2003
Time of Run:	12:42PM
Run By:	Username
Input Data Filename:	S:bb'be.
Output Filename:	S:bb'be.OUT
Unit System:	English

Plotted Output Filename: S:bb'be.PLT

PROBLEM DESCRIPTION Mountain Gate / Section: B-B', Pseudo Static

BOUNDARY COORDINATES

14 Top Boundaries
35 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	220.00	65.00	185.00	3
2	65.00	185.00	82.00	189.00	3
3	82.00	189.00	148.00	210.00	1
4	148.00	210.00	200.00	252.00	1
5	200.00	252.00	235.00	269.00	1
6	235.00	269.00	300.00	325.00	1
7	300.00	325.00	335.00	340.00	1
8	335.00	340.00	365.00	362.00	1
9	365.00	362.00	450.00	410.00	1
10	450.00	410.00	488.00	425.00	1
11	488.00	425.00	560.00	442.00	1
12	560.00	442.00	570.00	445.00	2
13	570.00	445.00	700.00	445.00	2
14	700.00	445.00	1000.00	430.00	2
15	82.00	189.00	100.00	183.00	4
16	100.00	183.00	148.00	191.00	4
17	148.00	191.00	200.00	211.00	4
18	200.00	211.00	335.00	300.00	4
19	335.00	300.00	410.00	340.00	4
20	410.00	340.00	509.00	385.00	4
21	509.00	385.00	539.00	410.00	4
22	539.00	410.00	560.00	442.00	3
23	82.00	187.00	100.00	191.00	3
24	100.00	181.00	148.00	189.00	3
25	148.00	189.00	200.00	209.00	3
26	200.00	209.00	335.00	298.00	3
27	335.00	298.00	410.00	338.00	3
28	410.00	338.00	509.00	383.00	3
29	509.00	383.00	539.00	408.00	3
30	539.00	408.00	560.00	440.00	3
31	509.00	383.00	610.00	392.00	3
32	610.00	392.00	718.00	420.00	3
33	718.00	420.00	790.00	410.00	3
34	790.00	410.00	835.00	415.00	3
35	835.00	415.00	1000.00	377.00	3

1

ISOTROPIC SOIL PARAMETERS

4 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	120.0	120.0	250.0	30.0	0.00	0.0	0
2	125.0	125.0	400.0	34.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0
4	120.0	120.0	600.0	18.5	0.00	0.0	0

A Horizontal Earthquake Loading Coefficient
Of0.150 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of0.000 Has Been Assigned

Cavitation Pressure = 0.0(psf)

Janbus Empirical Coef is being used for the case of c & phi both > 0

1

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated.

7 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 35.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	100.00	182.00	100.10	182.00	0.00
2	148.00	190.00	148.10	190.00	0.00
3	200.00	210.00	200.10	210.00	0.00
4	335.00	299.00	335.10	299.00	0.00
5	410.00	339.00	410.10	339.00	0.00
6	509.00	384.00	509.10	384.00	0.00
7	755.00	420.00	800.00	420.00	30.00

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.31	181.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

Individual data on the 25 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	8.2	5314.9	0.0	0.0	0.0	0.0	797.2	0.0	0.0
2	1.5	2062.5	0.0	0.0	0.0	0.0	309.4	0.0	0.0
3	0.0	54.1	0.0	0.0	0.0	0.0	8.1	0.0	0.0
4	48.0	94232.6	0.0	0.0	0.0	0.0	14134.9	0.0	0.0
5	0.0	76.1	0.0	0.0	0.0	0.0	11.4	0.0	0.0
6	52.0	193513.5	0.0	0.0	0.0	0.0	29027.0	0.0	0.0
7	0.1	470.0	0.0	0.0	0.0	0.0	70.5	0.0	0.0
8	34.9	163418.3	0.0	0.0	0.0	0.0	24512.7	0.0	0.0
9	65.0	331879.2	0.0	0.0	0.0	0.0	49781.9	0.0	0.0
10	35.0	189319.8	0.0	0.0	0.0	0.0	28398.0	0.0	0.0
11	0.1	267.2	0.0	0.0	0.0	0.0	40.1	0.0	0.0
12	29.9	158225.6	0.0	0.0	0.0	0.0	23733.8	0.0	0.0
13	45.0	257707.6	0.0	0.0	0.0	0.0	38656.1	0.0	0.0
14	0.0	141.3	0.0	0.0	0.0	0.0	21.2	0.0	0.0
15	40.0	242891.5	0.0	0.0	0.0	0.0	36433.7	0.0	0.0
16	38.0	235797.7	0.0	0.0	0.0	0.0	35369.7	0.0	0.0
17	21.0	121687.5	0.0	0.0	0.0	0.0	18253.1	0.0	0.0
18	0.1	484.2	0.0	0.0	0.0	0.0	72.6	0.0	0.0
19	1.5	8138.6	0.0	0.0	0.0	0.0	1220.8	0.0	0.0
20	28.4	159862.4	0.0	0.0	0.0	0.0	23979.4	0.0	0.0
21	21.0	122613.6	0.0	0.0	0.0	0.0	18392.0	0.0	0.0
22	10.0	60072.5	0.0	0.0	0.0	0.0	9010.9	0.0	0.0
23	130.0	572536.8	0.0	0.0	0.0	0.0	85880.5	0.0	0.0
24	56.8	104323.9	0.0	0.0	0.0	0.0	15648.6	0.0	0.0
25	1.8	829.6	0.0	0.0	0.0	0.0	124.4	0.0	0.0

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf	Y-Surf

No.	(ft)	(ft)
1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)

1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.31	191.64
2	100.04	182.00
3	148.03	190.00
4	200.09	210.00
5	335.05	299.00
6	410.02	339.00
7	509.09	384.00
8	756.76	434.68
9	758.53	442.07

*** 1.101 ***

1

```
           Y          A     X     I     S          F     T

          0.00   125.00   250.00   375.00   500.00   625.00

X   0.00 +---------+-------*-+---------+---------+---------+
         -               .
         -               .
         -              *
         -              *
         -             **
  125.00 +
         -              * *
         -
         -
         -                *  *
         -                     *
A 250.00 +
         -
         -                         *
         -
         -                       *  *
         -
X 375.00 +                            *
         -
         -                          *
         -
         -                                *
         -                                 *
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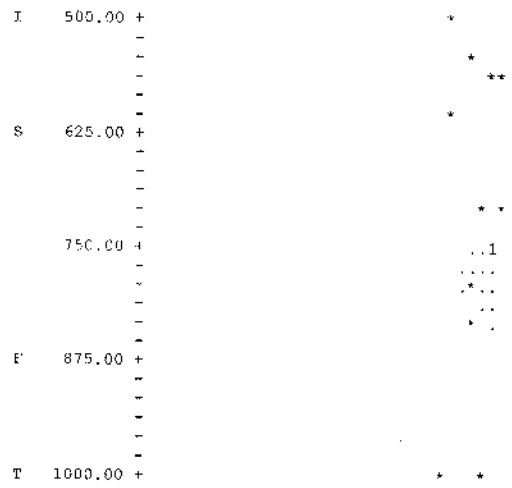
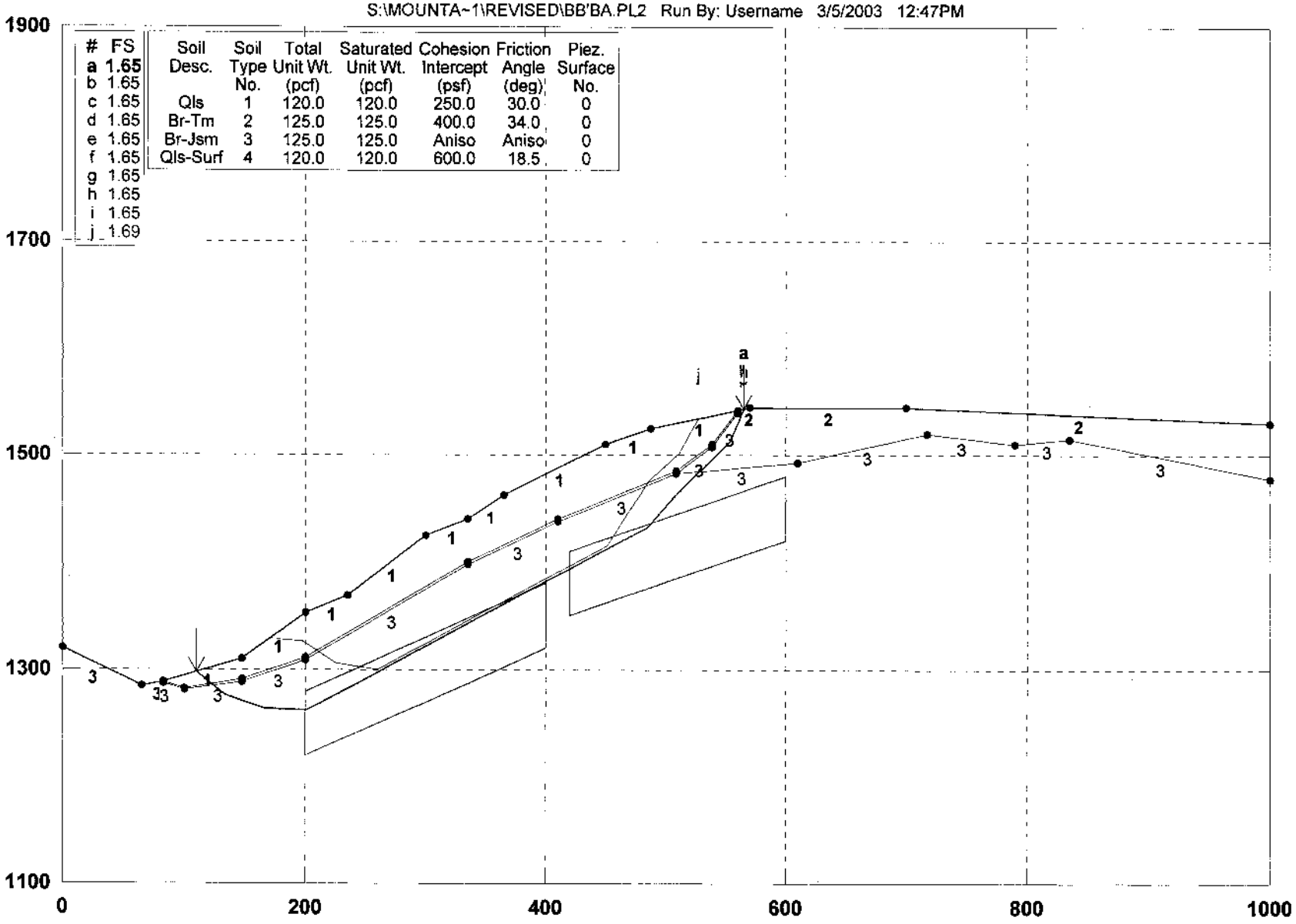

I 500.00
S 625.00
750.00
F 875.00
T 1000.00

Mountain Gate / Section: B-B', Static

S:\MOUNTA~1\REVISED\BB'BA.PL2 Run By: Username 3/5/2003 12:47PM



#	FS
a	1.65
b	1.65
c	1.65
d	1.65
e	1.65
f	1.65
g	1.65
h	1.65
i	1.65
j	1.69

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Qls	1	120.0	120.0	250.0	30.0	0
Br-Tm	2	125.0	125.0	400.0	34.0	0
Br-Jsm	3	125.0	125.0	Aniso	Aniso	0
Qls-Surf	4	120.0	120.0	600.0	18.5	0

GSTABL7 FSmin=1.65

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-5

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date:	3/5/2003
Time of Run:	12:47PM
Run By:	Username
Input Data Filename:	S:bb'ba.
Output Filename:	S:bb'ba.OUT
Unit System:	English

Plotted Output Filename: S:bb'ba.PLT

PROBLEM DESCRIPTION Mountain Gate / Section: B-B',
Static

BOUNDARY COORDINATES

14 Top Boundaries
35 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	220.00	65.00	185.00	3
2	65.00	185.00	82.00	189.00	3
3	82.00	189.00	148.00	210.00	1
4	148.00	210.00	200.00	252.00	1
5	200.00	252.00	235.00	269.00	1
6	235.00	269.00	300.00	325.00	1
7	300.00	325.00	335.00	340.00	1
8	335.00	340.00	365.00	362.00	1
9	365.00	362.00	450.00	410.00	1
10	450.00	410.00	488.00	425.00	1
11	488.00	425.00	560.00	442.00	1
12	560.00	442.00	570.00	445.00	2
13	570.00	445.00	700.00	445.00	2
14	700.00	445.00	1000.00	430.00	2
15	82.00	189.00	100.00	183.00	4
16	100.00	183.00	148.00	191.00	4
17	148.00	191.00	200.00	211.00	4
18	200.00	211.00	335.00	300.00	4
19	335.00	300.00	410.00	340.00	4
20	410.00	340.00	509.00	385.00	4
21	509.00	385.00	539.00	410.00	4
22	539.00	410.00	560.00	442.00	3
23	82.00	187.00	100.00	181.00	3
24	100.00	181.00	148.00	189.00	3
25	148.00	189.00	200.00	209.00	3
26	200.00	209.00	335.00	298.00	3
27	335.00	298.00	410.00	338.00	3
28	410.00	338.00	509.00	383.00	3
29	509.00	383.00	539.00	408.00	3
30	539.00	408.00	560.00	440.00	3
31	509.00	383.00	610.00	392.00	3
32	610.00	392.00	718.00	420.00	3
33	718.00	420.00	790.00	410.00	3
34	790.00	410.00	835.00	415.00	3
35	835.00	415.00	1000.00	377.00	3

1

ISOTROPIC SOIL PARAMETERS

4 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	120.0	120.0	250.0	30.0	0.00	0.0	0
2	125.0	125.0	400.0	34.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0
4	120.0	120.0	600.0	18.5	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 3 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	28.0	1500.0	35.0
2	32.0	0.0	35.0
3	90.0	1500.0	35.0

Janbus Empirical Coef is being used for the case of c & phi both > 0

1

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated.

2 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 35.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	200.00	150.00	400.00	250.00	60.00
2	420.00	280.00	600.00	350.00	60.00

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	110.36	196.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

*** 1.653 ***

Individual data on the 23 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	12.3	11193.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.9	3621.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	9.2	25647.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	14.3	59469.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	18.0	110748.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	34.0	314481.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	1.0	10601.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	34.0	367391.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	65.0	753469.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	35.0	429200.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	30.0	364217.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	45.0	552147.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	40.0	482587.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	34.4	396651.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	3.6	39065.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	17.9	171032.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	3.1	25061.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	19.7	139248.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.1	6714.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	9.1	49912.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	14.3	60894.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	6.7	17028.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	5.5	4319.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 9 Coordinate Points

Point	X-Surf	Y-Surf

No.	(ft)	(ft)
1	110.34	198.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

*** 1.653 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	110.34	198.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

*** 1.653 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	110.34	198.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

*** 1.653 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	110.34	198.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

*** 1.653 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	110.34	198.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

*** 1.653 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)

1	110.34	198.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

*** 1.653 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	110.34	198.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

*** 1.653 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	110.34	198.02
2	133.68	176.70
3	165.97	163.21
4	200.96	162.56
5	484.41	332.80
6	505.95	360.40
7	529.86	385.96
8	553.32	411.93
9	565.47	443.64

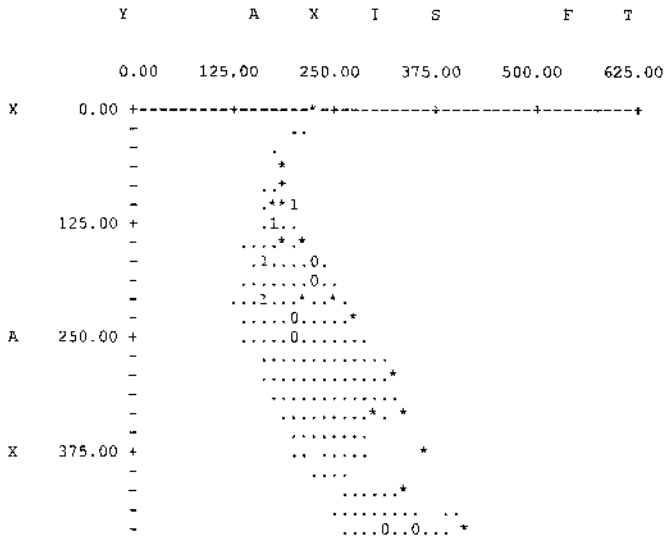
*** 1.653 ***

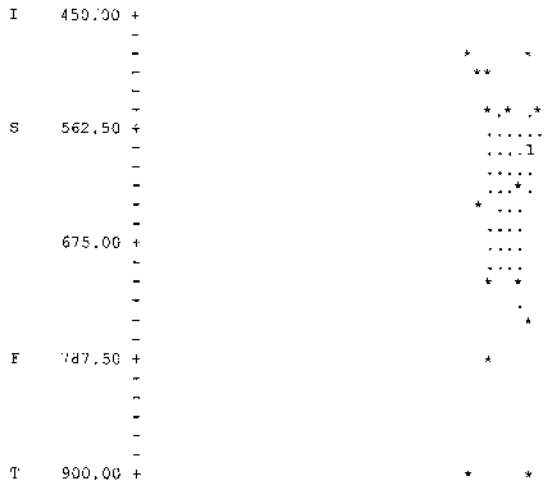
Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	171.06	228.63
2	197.38	226.53
3	225.60	205.83
4	260.19	200.51
5	450.88	315.56
6	468.34	345.90
7	486.79	375.64
8	511.09	400.83
9	526.55	432.23
10	527.28	434.28

*** 1.689 ***

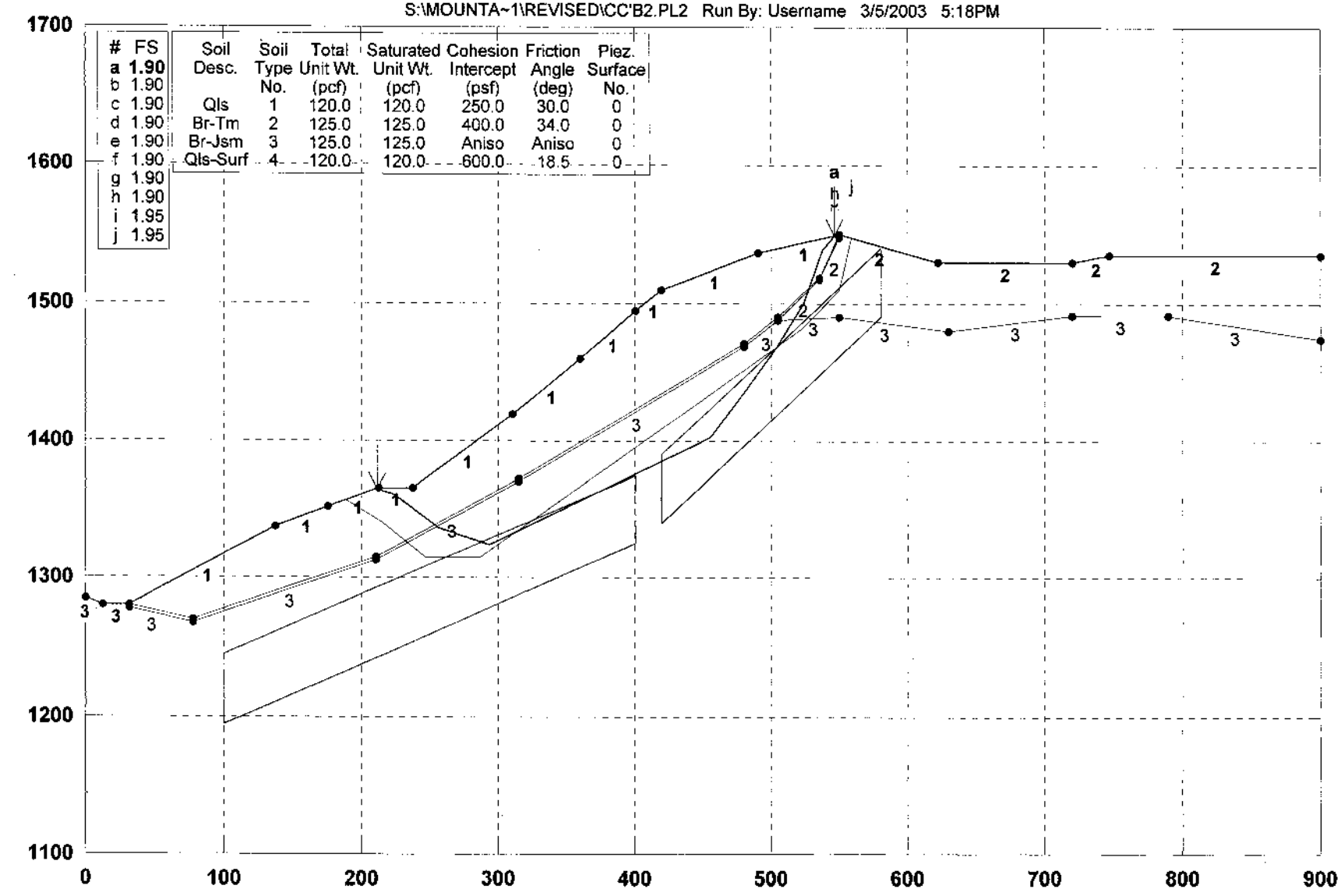
1




I
450.00
S
562.50
675.00
F
787.50
T
900.00

Mountain Gate / Section C-C', Static

S:\MOUNTA~1\REVISED\CC'B2.PL2 Run By: Username 3/5/2003 5:18PM



#	FS
a	1.90
b	1.90
c	1.90
d	1.90
e	1.90
f	1.90
g	1.90
h	1.90
i	1.95
j	1.95

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Qls	1	120.0	120.0	250.0	30.0	0
Br-Tm	2	125.0	125.0	400.0	34.0	0
Br-Jsm	3	125.0	125.0	Aniso	Aniso	0
Qls-Surf	4	120.0	120.0	600.0	18.5	0

GSTABL7 FSmin=1.90

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-11

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 3/5/2003
Time of Run: 5:18PM
Run By: Username
Input Data Filename: S:cc'b2.
Output Filename: S:cc'b2.OUT
Unit System: English

Plotted Output Filename: S:cc'b2.PLT

PROBLEM DESCRIPTION Mountain Gate / Section C-C',
Static

BOUNDARY COORDINATES

16 Top Boundaries
35 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	185.00	22.00	180.00	3
2	12.00	180.00	31.00	180.00	3
3	31.00	180.00	137.00	237.00	1
4	137.00	237.00	175.00	252.00	1
5	175.00	252.00	213.00	265.00	1
6	213.00	265.00	237.00	265.00	1
7	237.00	265.00	310.00	320.00	1
8	310.00	320.00	360.00	360.00	1
9	360.00	360.00	400.00	395.00	1
10	400.00	395.00	420.00	410.00	1
11	420.00	410.00	490.00	436.00	1
12	490.00	436.00	550.00	450.00	1
13	550.00	450.00	622.00	430.00	2
14	622.00	430.00	720.00	430.00	2
15	720.00	430.00	747.00	435.00	2
16	747.00	435.00	900.00	435.00	2
17	31.00	180.00	78.00	170.00	3
18	78.00	170.00	210.00	215.00	3
19	210.00	215.00	315.00	272.00	3
20	315.00	272.00	480.00	371.00	3
21	480.00	371.00	505.00	390.00	3
22	505.00	390.00	535.00	419.00	2
23	535.00	419.00	550.00	450.00	2
24	31.00	178.00	78.00	168.00	3
25	78.00	168.00	210.00	213.00	3
26	210.00	213.00	315.00	270.00	3
27	315.00	270.00	480.00	369.00	3
28	480.00	369.00	505.00	388.00	3
29	505.00	388.00	535.00	417.00	2
30	535.00	417.00	550.00	448.00	2
31	505.00	388.00	550.00	390.00	3
32	550.00	390.00	630.00	380.00	3
33	630.00	380.00	720.00	392.00	3
34	720.00	392.00	790.00	392.00	3
35	790.00	392.00	900.00	375.00	3

ISOTROPIC SOIL PARAMETERS

4 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	120.0	120.0	250.0	30.0	0.00	0.0	0
2	125.0	125.0	400.0	34.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0
4	120.0	120.0	600.0	18.5	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 3 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	15.0	1500.0	35.0
2	19.0	0.0	35.0
3	90.0	1500.0	35.0

Janbus Empirical Coef is being used for the case of c & phi both > 0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated.

2 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 40.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	100.00	125.00	400.00	250.00	50.00
2	420.00	265.00	580.00	415.00	50.00

1

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.39	264.66
2	224.29	260.71
3	255.96	236.27
4	294.00	223.91
5	455.26	302.55
6	479.10	334.67
7	502.56	367.07
8	524.25	400.68
9	537.39	438.46
10	547.18	449.34

*** 1.900 ***

Individual data on the 24 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	1.0	40.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	11.3	3356.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	12.7	14011.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	16.2	51240.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	3.5	7292.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	2.3	6447.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	38.0	293820.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	16.0	168393.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	5.0	54382.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	45.0	532214.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	40.0	544959.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	20.0	297707.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	35.3	527893.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	23.8	316887.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.9	10597.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	10.0	111193.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	12.6	120777.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	2.4	20791.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	11.4	84549.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	7.9	46091.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	3.1	14704.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	1.0	4245.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	9.0	22064.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	9.8	5052.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.99	264.66
2	224.29	260.71
3	255.96	236.27
4	294.00	223.91
5	455.26	302.55
6	479.10	334.67
7	502.56	367.07
8	524.25	400.68
9	537.39	438.46
10	547.18	449.34

*** 1.900 ***

1

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.99	264.66
2	224.29	260.71
3	255.96	236.27
4	294.00	223.91
5	455.26	302.55
6	479.10	334.67
7	502.56	367.07
8	524.25	400.68
9	537.39	438.46
10	547.18	449.34

*** 1.900 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.99	264.66
2	224.29	260.71
3	255.96	236.27
4	294.00	223.91
5	455.26	302.55
6	479.10	334.67
7	502.56	367.07
8	524.25	400.68
9	537.39	438.46
10	547.18	449.34

*** 1.900 ***

1

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.99	264.66
2	224.29	260.71
3	255.96	236.27
4	294.00	223.91
5	455.26	302.55
6	479.10	334.67
7	502.56	367.07
8	524.25	400.68
9	537.39	438.46
10	547.18	449.34

*** 1.900 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.99	264.66
2	224.29	260.71
3	255.96	236.27
4	294.00	223.91
5	455.26	302.55
6	479.10	334.67
7	502.56	367.07
8	524.25	400.68
9	537.39	438.46
10	547.18	449.34

*** 1.900 ***

1

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.99	264.66
2	224.29	260.71
3	255.96	236.27
4	294.00	223.91
5	455.26	302.55
6	479.10	334.67
7	502.56	367.07
8	524.25	400.68
9	537.39	438.46
10	547.18	449.34

*** 1.900 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.99	264.66
2	224.29	260.71
3	255.96	236.27
4	294.00	223.91
5	455.26	302.55
6	479.10	334.67
7	502.56	367.07
8	524.25	400.68
9	537.39	438.46
10	547.18	449.34

*** 1.900 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	189.16	256.84
2	216.03	240.05
3	246.90	214.61
4	286.90	214.43
5	522.41	381.65
6	550.64	409.99
7	558.69	447.59

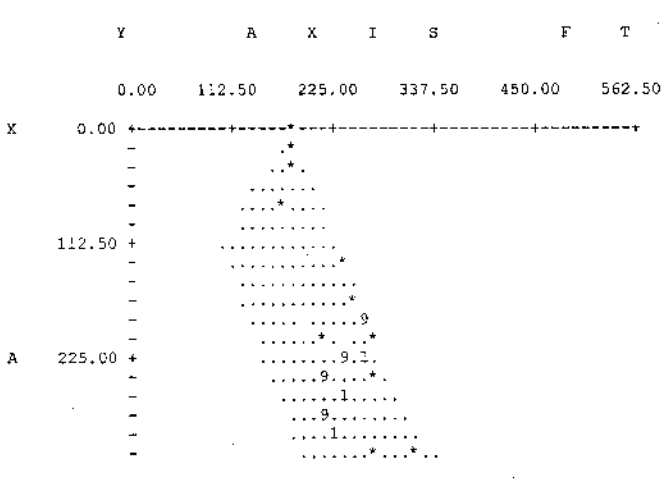
*** 1.946 ***

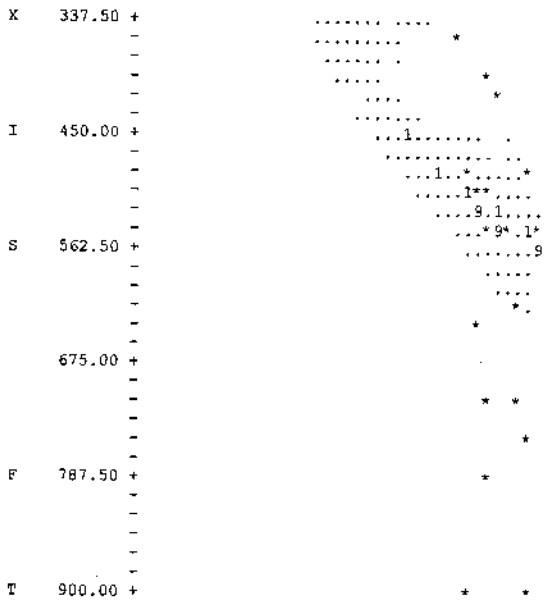
Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	189.16	256.84
2	216.03	240.05
3	246.90	214.61
4	286.90	214.43
5	522.41	381.65
6	550.64	409.99
7	558.69	447.59

*** 1.946 ***

1



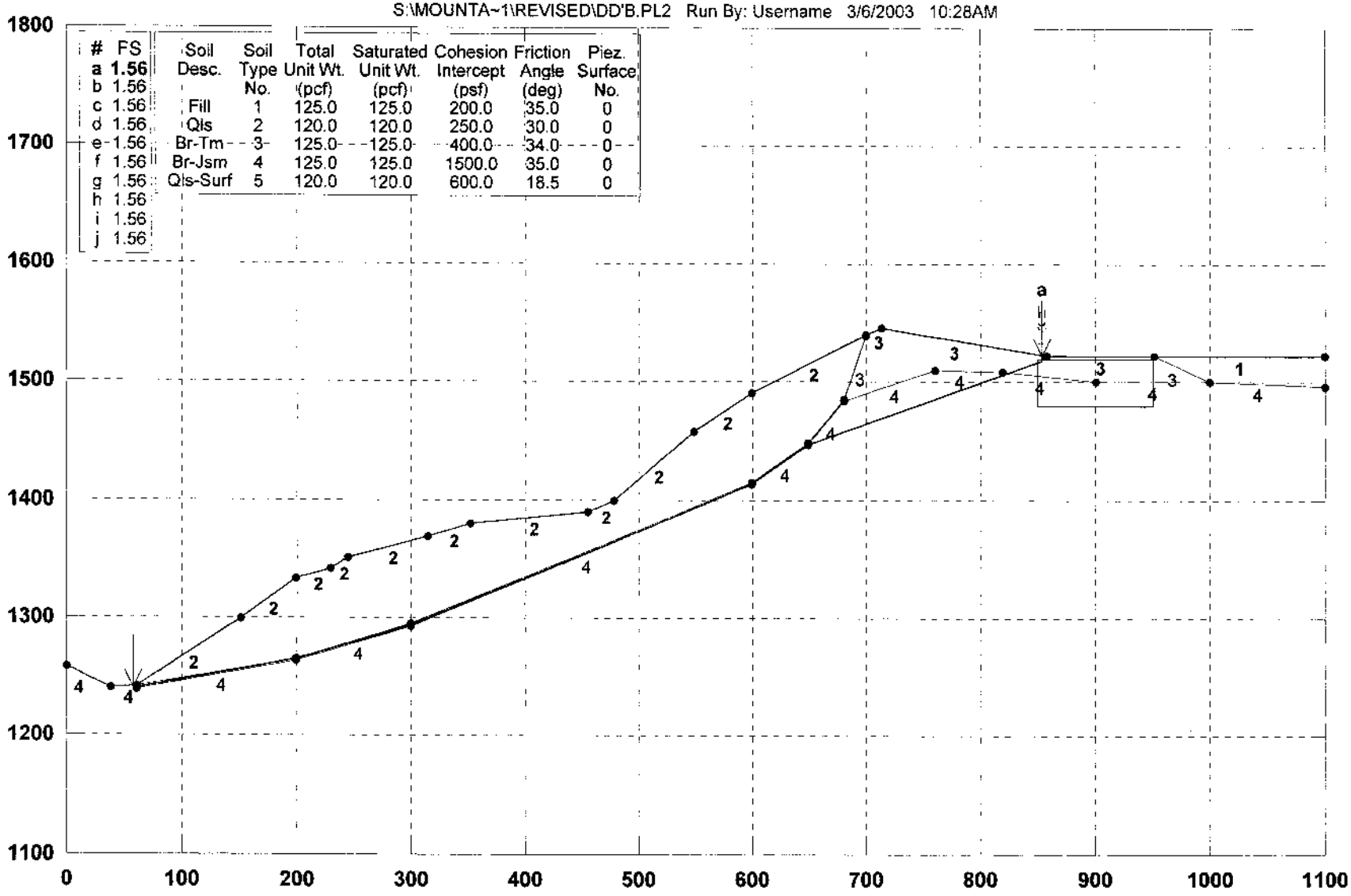

X
337.50
I
450.00
S
562.50
675.00
F
787.50
T
900.00

Mountain Gate / Section D-D', Static

S:\MOUNTA~1\REVISED\DD'B.PL2 Run By: Username 3/6/2003 10:28AM

#	FS
a	1.56
b	1.56
c	1.56
d	1.56
e	1.56
f	1.56
g	1.56
h	1.56
i	1.56
j	1.56

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Fill	1	125.0	125.0	200.0	35.0	0
Qls	2	120.0	120.0	250.0	30.0	0
Br-Tm	3	125.0	125.0	400.0	34.0	0
Br-Jsm	4	125.0	125.0	1500.0	35.0	0
Qls-Surf	5	120.0	120.0	600.0	18.5	0



GSTABL7 FSmin=1.56

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-12

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 3/14/2003
Time of Run: 3:05PM
Run By: Username
Input Data Filename: S:dd'b.
Output Filename: S:dd'b.OUT
Unit System: English

Plotted Output Filename: S:dd'b.PLT

PROBLEM DESCRIPTION Mountain Gate / Section D-D',
Static

BOUNDARY COORDINATES

17 Top Boundaries
35 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	138.00	39.00	140.00	4
2	39.00	140.00	60.00	141.00	4
3	60.00	141.00	151.00	200.00	2
4	151.00	200.00	200.00	234.00	2
5	200.00	234.00	230.00	242.00	2
6	230.00	242.00	245.00	251.00	2
7	245.00	251.00	315.00	270.00	2
8	315.00	270.00	352.00	281.00	2
9	352.00	281.00	455.00	290.00	2
10	455.00	290.00	478.00	300.00	2
11	478.00	300.00	548.00	357.00	2
12	548.00	357.00	600.00	390.00	2
13	600.00	390.00	700.00	440.00	2
14	700.00	440.00	713.00	445.00	3
15	713.00	445.00	858.00	422.00	3
16	858.00	422.00	952.00	422.00	3
17	952.00	422.00	1100.00	422.00	1
18	60.00	141.00	200.00	165.00	5
19	200.00	165.00	300.00	195.00	5
20	300.00	195.00	600.00	315.00	5
21	600.00	315.00	649.00	348.00	5
22	649.00	348.00	680.00	385.00	5
23	680.00	385.00	700.00	440.00	5
24	60.00	139.00	200.00	163.00	4
25	200.00	163.00	300.00	193.00	4
26	300.00	193.00	600.00	313.00	4
27	600.00	313.00	649.00	346.00	4
28	649.00	346.00	680.00	383.00	4
29	680.00	383.00	700.00	438.00	3
30	680.00	383.00	760.00	410.00	4
31	760.00	410.00	820.00	409.00	4
32	820.00	409.00	900.00	400.00	4
33	952.00	422.00	1000.00	400.00	3
34	900.00	400.00	1000.00	400.00	4
35	1000.00	400.00	1100.00	396.00	4

1

ISOTROPIC SOIL PARAMETERS

5 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	125.0	125.0	200.0	36.0	0.00	0.0	0
2	120.0	120.0	250.0	30.0	0.00	0.0	0
3	125.0	125.0	400.0	34.0	0.00	0.0	0
4	125.0	125.0	1500.0	35.0	0.00	0.0	0
5	120.0	120.0	600.0	18.5	0.00	0.0	0

Janbus Empirical Coef is being used for the case of c & phi both > 0

1

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated.

6 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 40.0

Box	X-Left	Y-Left	X-Right	Y-Right	Height

No.	(ft)	(ft)	(ft)	(ft)	(ft)
1	60.00	140.00	60.10	140.00	0.00
2	200.00	165.00	200.10	165.00	0.00
3	300.00	194.00	300.10	194.00	0.00
4	600.00	314.00	600.10	314.00	0.00
5	649.00	347.00	649.10	347.00	0.00
6	850.00	400.00	950.00	400.00	40.00

1

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
2	60.06	140.00
3	200.05	165.00
4	300.06	194.00
5	600.01	314.00
6	649.00	347.00
7	854.22	417.79
8	854.30	422.59

*** 1.563 ***

Individual data on the 27 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	1.7	103.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	90.9	244442.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	49.0	331941.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.1	431.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	29.9	246764.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	15.0	127154.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	55.0	478212.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.1	533.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	14.9	127245.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	37.0	302464.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	103.0	619458.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	23.0	94982.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	70.0	414211.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	52.0	436219.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	121.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	49.0	421801.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	28.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	1.2	9518.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	29.8	252384.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	20.0	182194.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	13.0	122957.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	47.0	376526.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	60.0	278610.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	6.6	16781.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	27.6	40640.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.1	24.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
2	60.06	140.00
3	200.05	165.00
4	300.06	194.00

5	600.01	314.00
6	649.00	347.00
7	854.22	417.79
8	854.30	422.59

*** 1.563 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
2	60.06	140.00
3	200.05	165.00
4	300.06	194.00
5	600.01	314.00
6	649.00	347.00
7	854.22	417.79
8	854.30	422.59

*** 1.563 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
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*** 1.563 ***

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Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
2	60.06	140.00
3	200.05	165.00
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Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
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*** 1.563 ***

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Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
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4	300.06	194.00
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*** 1.563 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
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3	200.05	165.00
4	300.06	194.00
5	600.01	314.00
6	649.00	347.00
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*** 1.563 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
2	60.06	140.00
3	200.05	165.00
4	300.06	194.00
5	600.01	314.00
6	649.00	347.00
7	854.22	417.79
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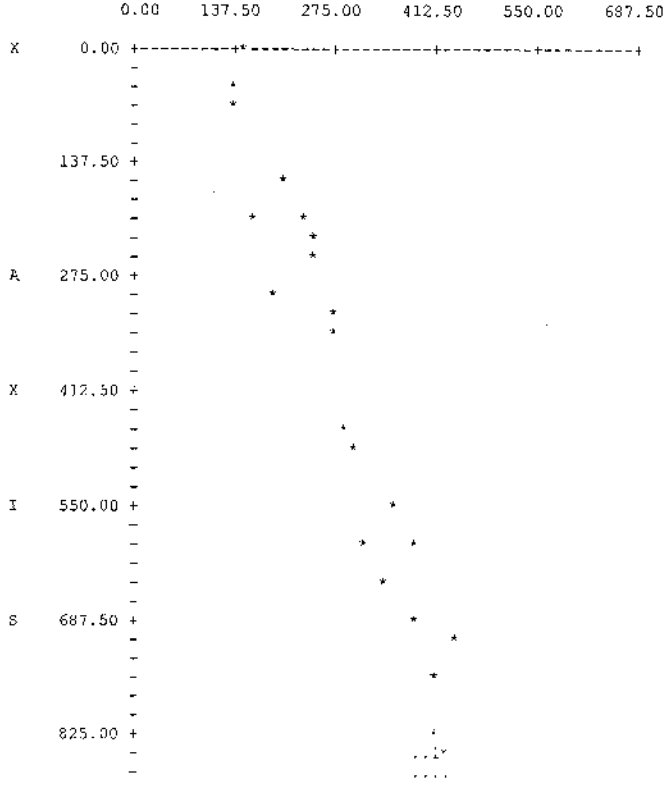
*** 1.563 ***

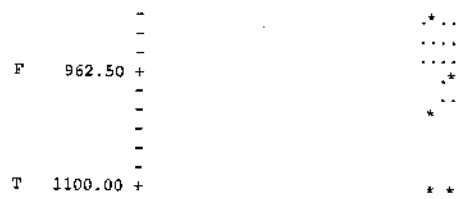
Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
2	60.06	140.00
3	200.05	165.00
4	300.06	194.00
5	600.01	314.00
6	649.00	347.00
7	854.22	417.79
8	854.30	422.59

*** 1.563 ***

1

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Mountain Gate / Section D-D', Pseudo Static

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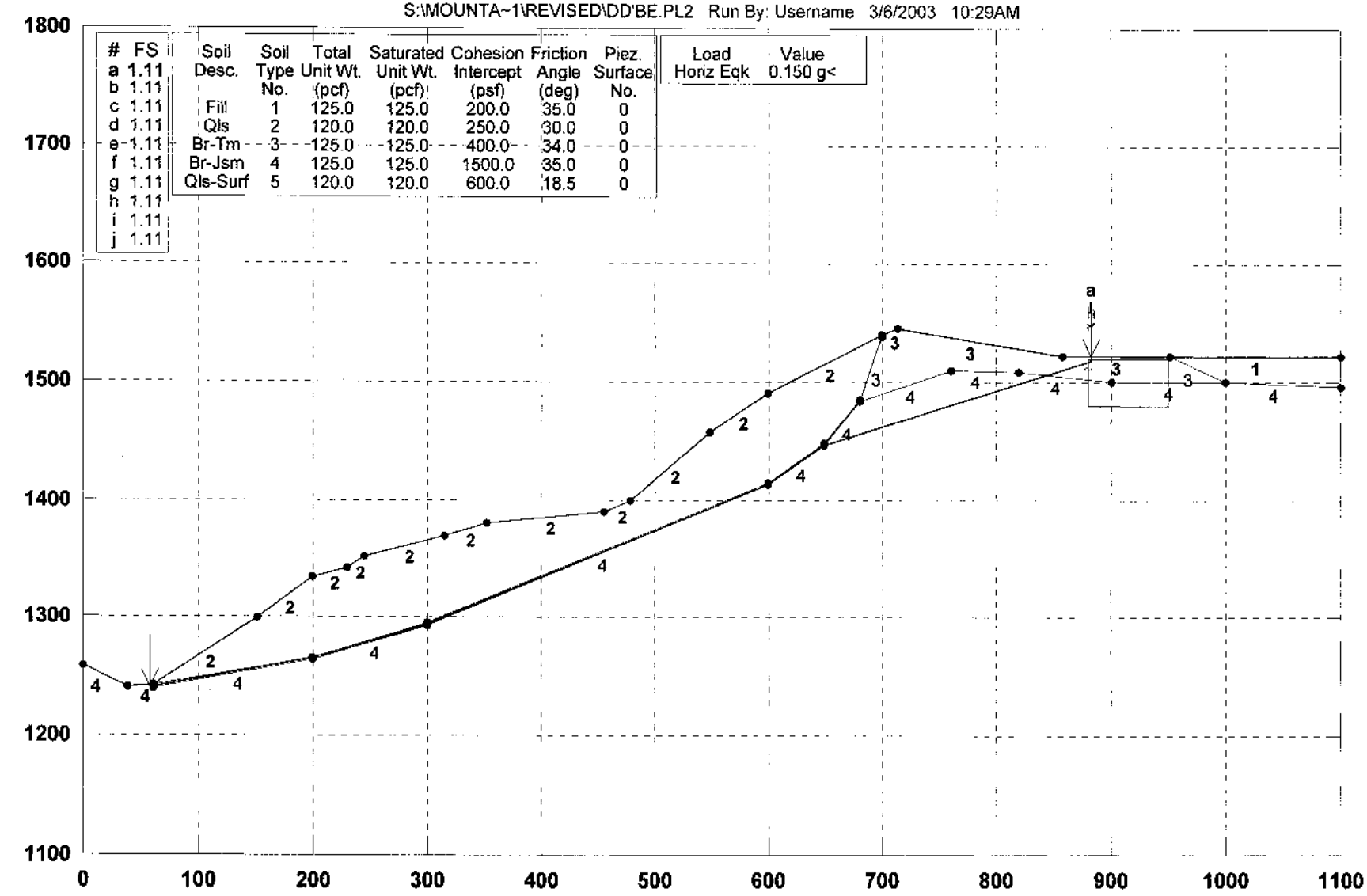

#	FS
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b	1.11
c	1.11
d	1.11
e	1.11
f	1.11
g	1.11
h	1.11
i	1.11
j	1.11

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Fill	1	125.0	125.0	200.0	35.0	0
Qls	2	120.0	120.0	250.0	30.0	0
Br-Tm	3	125.0	125.0	400.0	34.0	0
Br-Jsm	4	125.0	125.0	1500.0	35.0	0
Qls-Surf	5	120.0	120.0	600.0	18.5	0

Load	Value
Horiz Eqk	0.150 g<

GSTABL7 FSmin=1.11

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-13

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 3/10/2003
Time of Run: 4:18PM
Run By: Username
Input Data Filename: S:dd'be.
Output Filename: S:dd'be.OUT
Unit System: English

Plotted Output Filename: S:dd'be.PLT

PROBLEM DESCRIPTION Mountain Gate / Section D-D', , Pseudo Static

BOUNDARY COORDINATES

17 Top Boundaries
35 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	158.00	39.00	140.00	4
2	39.00	140.00	60.00	141.00	4
3	60.00	141.00	151.00	200.00	2
4	151.00	200.00	200.00	234.00	2
5	200.00	234.00	230.00	242.00	2
6	230.00	242.00	245.00	251.00	2
7	245.00	251.00	315.00	270.00	2
8	315.00	270.00	352.00	281.00	2
9	352.00	281.00	455.00	290.00	2
10	455.00	290.00	478.00	300.00	2
11	478.00	300.00	548.00	357.00	2
12	548.00	357.00	600.00	390.00	2
13	600.00	390.00	700.00	440.00	2
14	700.00	440.00	713.00	445.00	3
15	713.00	445.00	858.00	422.00	3
16	858.00	422.00	952.00	422.00	3
17	952.00	422.00	1100.00	422.00	1
18	60.00	141.00	200.00	165.00	5
19	200.00	165.00	300.00	195.00	5
20	300.00	195.00	600.00	315.00	5
21	600.00	315.00	649.00	348.00	5
22	649.00	348.00	680.00	385.00	5
23	680.00	385.00	700.00	440.00	5
24	60.00	139.00	200.00	163.00	4
25	200.00	163.00	300.00	193.00	4
26	300.00	193.00	600.00	313.00	4
27	600.00	313.00	649.00	346.00	4
28	649.00	346.00	680.00	383.00	4
29	680.00	383.00	700.00	438.00	3
30	680.00	383.00	760.00	410.00	4
31	760.00	410.00	820.00	409.00	4
32	820.00	409.00	900.00	400.00	4
33	952.00	422.00	1000.00	400.00	3
34	900.00	400.00	1000.00	400.00	4
35	1000.00	400.00	1100.00	396.00	4

1

ISOTROPIC SOIL PARAMETERS

5 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	125.0	125.0	200.0	35.0	0.00	0.0	0
2	120.0	120.0	250.0	30.0	0.00	0.0	0
3	125.0	125.0	400.0	34.0	0.00	0.0	0
4	125.0	125.0	1500.0	35.0	0.00	0.0	0
5	120.0	120.0	600.0	18.5	0.00	0.0	0

A Horizontal Earthquake Loading Coefficient
Of0.150 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of0.000 Has Been Assigned

Cavitation Pressure = 0.0(psf)

Janbus Empirical Coef is being used for the case of c & phi both > 0

1

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated.

6 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 40.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	60.00	140.00	60.10	140.00	0.00
2	200.00	165.00	200.10	165.00	0.00
3	300.00	194.00	300.10	194.00	0.00
4	600.00	314.00	600.10	314.00	0.00
5	649.00	347.00	649.10	347.00	0.00
6	880.00	400.00	950.00	400.00	40.00

1

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First..

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
2	60.06	140.00
3	200.05	165.00
4	300.06	194.00
5	600.01	314.00
6	649.00	347.00
7	882.95	417.79
8	883.02	422.00

*** 1.110 ***

Individual data on the 28 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	1.7	103.0	0.0	0.0	0.0	0.0	15.5	0.0	0.0
2	0.1	7.5	0.0	0.0	0.0	0.0	1.1	0.0	0.0
3	90.9	244442.4	0.0	0.0	0.0	0.0	36666.4	0.0	0.0
4	49.0	331541.5	0.0	0.0	0.0	0.0	49731.2	0.0	0.0
5	0.1	431.3	0.0	0.0	0.0	0.0	64.7	0.0	0.0
6	29.9	246764.6	0.0	0.0	0.0	0.0	37014.7	0.0	0.0
7	15.0	127154.1	0.0	0.0	0.0	0.0	19073.1	0.0	0.0
8	55.0	478212.5	0.0	0.0	0.0	0.0	71731.9	0.0	0.0
9	0.1	533.5	0.0	0.0	0.0	0.0	80.0	0.0	0.0
10	14.9	127245.8	0.0	0.0	0.0	0.0	19086.9	0.0	0.0
11	37.0	302464.2	0.0	0.0	0.0	0.0	45369.6	0.0	0.0
12	103.0	619458.6	0.0	0.0	0.0	0.0	92918.8	0.0	0.0
13	23.0	94982.6	0.0	0.0	0.0	0.0	14247.4	0.0	0.0
14	70.0	414211.9	0.0	0.0	0.0	0.0	62131.8	0.0	0.0
15	52.0	436219.8	0.0	0.0	0.0	0.0	65433.0	0.0	0.0
16	0.0	121.4	0.0	0.0	0.0	0.0	18.2	0.0	0.0
17	49.0	421801.8	0.0	0.0	0.0	0.0	63270.3	0.0	0.0
18	0.0	28.2	0.0	0.0	0.0	0.0	4.2	0.0	0.0
19	1.1	9068.7	0.0	0.0	0.0	0.0	1360.3	0.0	0.0
20	29.9	255379.2	0.0	0.0	0.0	0.0	38306.7	0.0	0.0
21	20.0	186537.2	0.0	0.0	0.0	0.0	27980.6	0.0	0.0
22	13.0	126916.0	0.0	0.0	0.0	0.0	19037.4	0.0	0.0
23	47.0	398306.4	0.0	0.0	0.0	0.0	59746.0	0.0	0.0
24	60.0	323415.5	0.0	0.0	0.0	0.0	48512.3	0.0	0.0
25	24.7	72863.1	0.0	0.0	0.0	0.0	10929.5	0.0	0.0
26	13.3	24620.1	0.0	0.0	0.0	0.0	3693.0	0.0	0.0
27	25.0	24904.3	0.0	0.0	0.0	0.0	3735.6	0.0	0.0
28	0.1	18.7	0.0	0.0	0.0	0.0	2.8	0.0	0.0

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
2	60.06	140.00
3	200.05	165.00
4	300.06	194.00
5	600.01	314.00
6	649.00	347.00
7	882.95	417.79
8	883.02	422.00

*** 1.110 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
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Point No.	X-Surf (ft)	Y-Surf (ft)
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3	200.05	165.00
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8 883.02 422.00

*** 1.110 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	58.30	140.92
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Point No.	X-Surf (ft)	Y-Surf (ft)
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Point No.	X-Surf (ft)	Y-Surf (ft)
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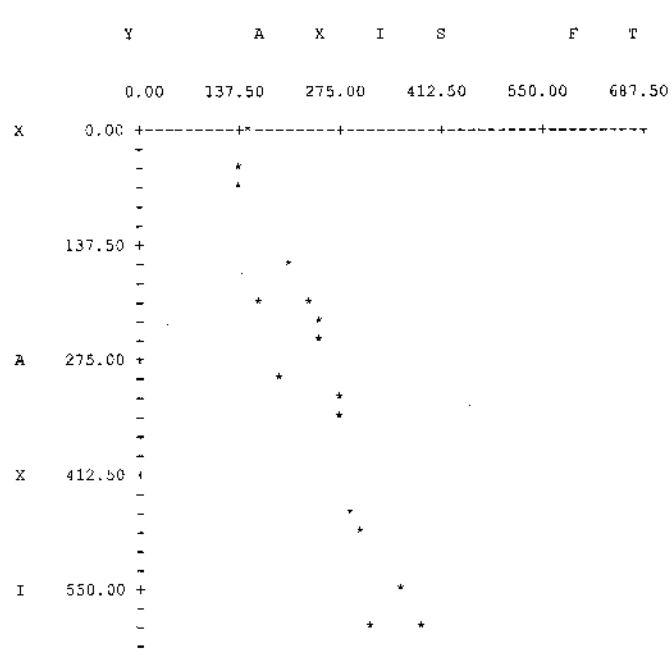
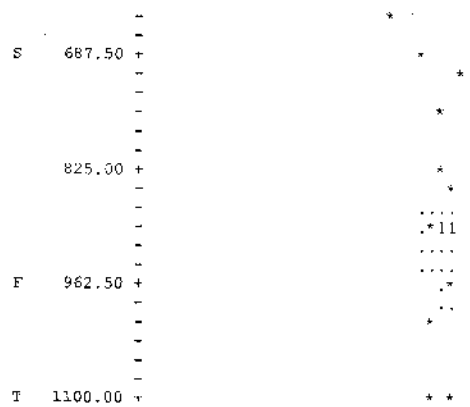
4	300.06	194.00
5	600.01	314.00
6	649.00	347.00
7	882.95	417.79
8	883.02	422.00

*** 1.110 ***

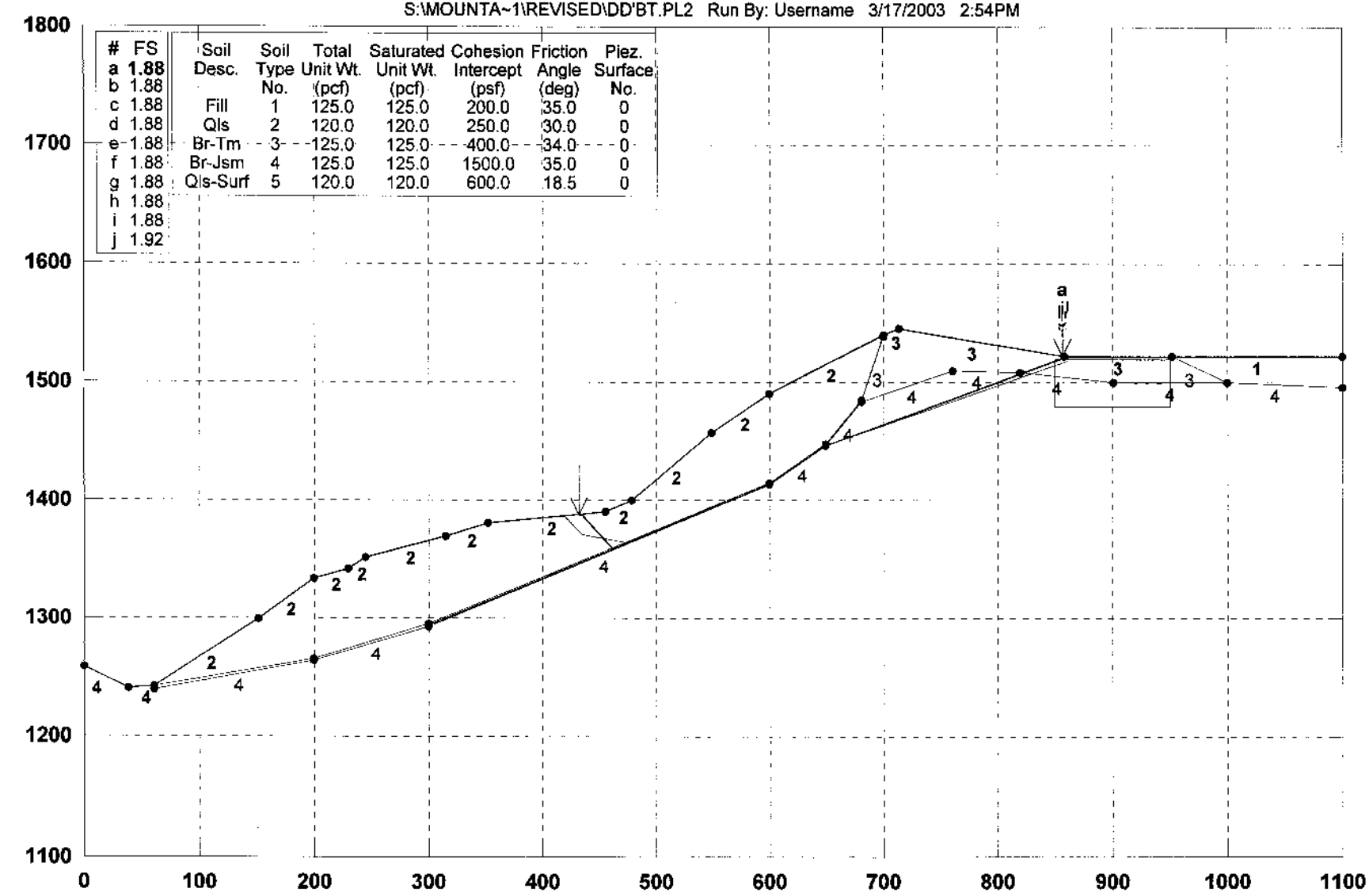
1




S
687.50
825.00
F
962.50
T
1100.00

Mountain Gate / Section D-D', Static

S:\MOUNTA~1\REVISED\DD'BT.PL2 Run By: Username 3/17/2003 2:54PM



#	FS
a	**1.88**
b	1.88
c	1.88
d	1.88
e	1.88
f	1.88
g	1.88
h	1.88
i	1.88
j	1.92

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Fill	1	125.0	125.0	200.0	35.0	0
Qls	2	120.0	120.0	250.0	30.0	0
Br-Tm	3	125.0	125.0	400.0	34.0	0
Br-Jsm	4	125.0	125.0	1500.0	35.0	0
Qls-Surf	5	120.0	120.0	600.0	18.5	0

GSTABL7 FSmin=1.88

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-14

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 3/17/2003
Time of Run: 2:54PM
Run By: Username
Input Data Filename: S:dd'bT.
Output Filename: S:dd'bT.OUT
Unit System: English

Plotted Output Filename: S:dd'bT.PLT

PROBLEM DESCRIPTION Mountain Gate / Section D-D',
Static

BOUNDARY COORDINATES

17 Top Boundaries
35 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	158.00	39.00	140.00	4
2	39.00	140.00	60.00	141.00	4
3	60.00	141.00	151.00	200.00	2
4	151.00	200.00	200.00	234.00	2
5	200.00	234.00	230.00	242.00	2
6	230.00	242.00	245.00	251.00	2
7	245.00	251.00	315.00	270.00	2
8	315.00	270.00	352.00	281.00	2
9	352.00	281.00	455.00	290.00	2
10	455.00	290.00	478.00	300.00	2
11	478.00	300.00	548.00	357.00	2
12	548.00	357.00	600.00	390.00	2
13	600.00	390.00	700.00	440.00	2
14	700.00	440.00	713.00	445.00	3
15	713.00	445.00	858.00	422.00	3
16	858.00	422.00	952.00	422.00	3
17	952.00	422.00	1100.00	422.00	1
18	60.00	141.00	230.00	165.00	5
19	200.00	165.00	300.00	195.00	5
20	300.00	195.00	600.00	315.00	5
21	600.00	315.00	649.00	348.00	5
22	649.00	348.00	680.00	385.00	5
23	680.00	385.00	700.00	440.00	5
24	60.00	139.00	200.00	163.00	4
25	200.00	163.00	300.00	193.00	4
26	300.00	193.00	600.00	313.00	4
27	600.00	313.00	649.00	346.00	4
28	649.00	346.00	680.00	383.00	4
29	680.00	383.00	700.00	438.00	3
30	680.00	383.00	760.00	410.00	4
31	760.00	410.00	820.00	409.00	4
32	820.00	409.00	900.00	400.00	4
33	952.00	422.00	1000.00	400.00	3
34	900.00	400.00	1000.00	400.00	4
35	1000.00	400.00	1100.00	396.00	4

1

ISOTROPIC SOIL PARAMETERS

5 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	125.0	125.0	200.0	35.0	0.00	0.0	0
2	120.0	120.0	250.0	30.0	0.00	0.0	0
3	125.0	125.0	400.0	34.0	0.00	0.0	0
4	125.0	125.0	1500.0	35.0	0.00	0.0	0
5	120.0	120.0	600.0	28.5	0.00	0.0	0

Janbus Empirical Coef is being used for the case of c & phi both > 0

1

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated,

4 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 40.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	300.00	194.00	599.90	314.00	0.00
2	600.00	314.00	600.10	314.00	0.00
3	649.00	347.00	649.10	347.00	0.00
4	850.00	400.00	950.00	400.00	40.00

1

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.885 ***

Individual data on the 19 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	2.8	158.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	20.7	30130.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	7.0	23641.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.7	2845.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	15.3	63484.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	78.0	414034.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	52.0	436199.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	221.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	49.0	421890.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.1	711.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	1.1	8657.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	29.8	252113.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	20.0	181305.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	13.0	122127.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	47.0	371868.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	60.0	268892.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	3.1	7560.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	30.8	42305.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	2.6	506.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.885 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
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Point No.	X-Surf (ft)	Y-Surf (ft)
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*** 1.885 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00

6	853.90	419.58
7	856.53	422.23

*** 1.885 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.885 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.885 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.885 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

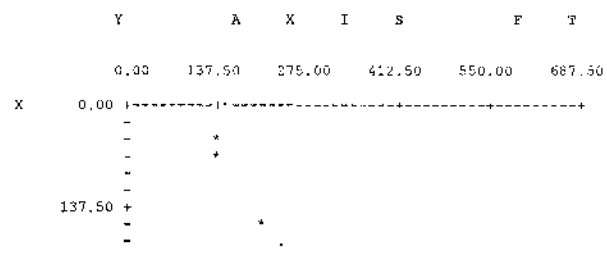
*** 1.885 ***

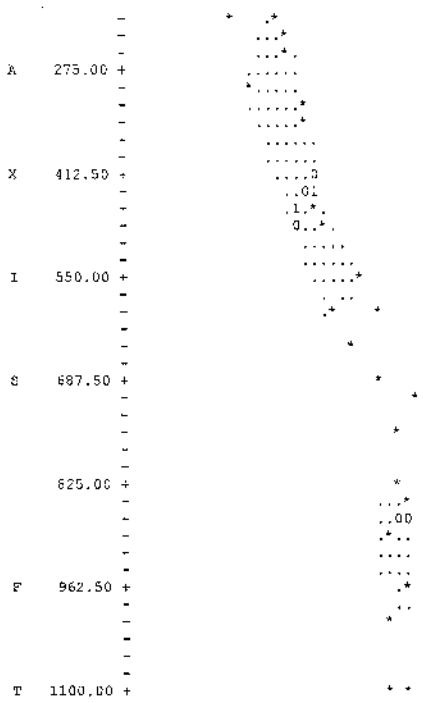
Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	418.37	286.77
2	434.06	270.80
3	473.36	263.37
4	600.07	314.00
5	649.02	347.00
6	860.20	417.96
7	860.86	422.00

*** 1.924 ***

1




A
275.00
X
412.50
I
550.00
S
687.50
825.00
F
962.50
T
1100.00

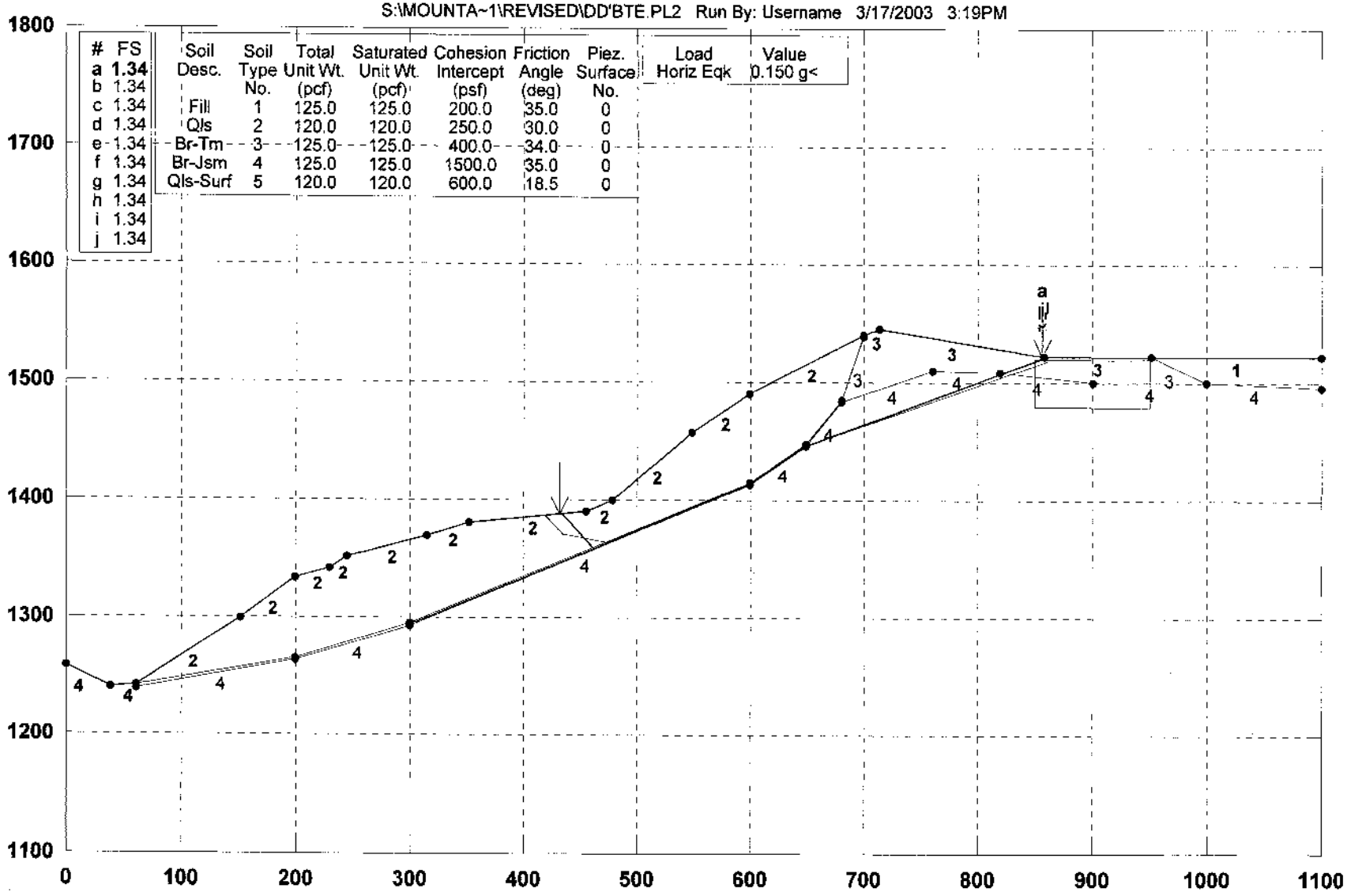
Mountain Gate / Section D-D', Pseudo Static

S:\MOUNTA~1\REVISED\DD'BTE.PL2 Run By: Username 3/17/2003 3:19PM

#	FS
a	1.34
b	1.34
c	1.34
d	1.34
e	1.34
f	1.34
g	1.34
h	1.34
i	1.34
j	1.34

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Fill	1	125.0	125.0	200.0	35.0	0
Qls	2	120.0	120.0	250.0	30.0	0
Br-Tm	3	125.0	125.0	400.0	34.0	0
Br-Jsm	4	125.0	125.0	1500.0	35.0	0
Qls-Surf	5	120.0	120.0	600.0	18.5	0

Load	Value
Horiz Eqk	0.150 g<



GSTABL7 FSmin=1.34

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-15

*** GSTABL7 ***

** GSTABL7 by Garry H. Gregory, P.E. **

** Version 1.0, January 1996; Version 1.16, May 2000 **

--Slope Stability Analysis--
Simplified Janbu, Modified Bishop
or Spencer's Method of Slices
(Based on STABL6-1986, by Purdue University)

Run Date: 3/17/2003
Time of Run: 3:19PM
Run By: Username
Input Data Filename: S:dd'bTe.
Output Filename: S:dd'bTe.OUT
Unit System: English

Plotted Output Filename: S:dd'bTe.PLT

PROBLEM DESCRIPTION Mountain Gate / Section D-D',
Pseudo Static

BOUNDARY COORDINATES

17 Top Boundaries
35 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	158.00	39.00	140.00	4
2	39.00	140.00	60.00	141.00	4
3	60.00	141.00	151.00	200.00	2
4	151.00	200.00	200.00	234.00	2
5	200.00	234.00	230.00	242.00	2
6	230.00	242.00	245.00	251.00	2
7	245.00	251.00	315.00	270.00	2
8	315.00	270.00	352.00	281.00	2
9	352.00	281.00	455.00	290.00	2
10	455.00	290.00	478.00	300.00	2
11	478.00	300.00	548.00	357.00	2
12	548.00	357.00	600.00	390.00	2
13	600.00	390.00	700.00	440.00	2
14	700.00	440.00	713.00	445.00	3
15	713.00	445.00	858.00	422.00	3
16	858.00	422.00	952.00	422.00	3
17	952.00	422.00	1100.00	422.00	1
18	60.00	141.00	200.00	165.00	5
19	200.00	165.00	300.00	195.00	5
20	300.00	195.00	600.00	315.00	5
21	600.00	315.00	649.00	348.00	5
22	649.00	348.00	680.00	385.00	5
23	680.00	385.00	700.00	440.00	5
24	60.00	139.00	200.00	165.00	4
25	200.00	165.00	300.00	195.00	4
26	300.00	195.00	600.00	315.00	4
27	600.00	315.00	649.00	348.00	4
28	649.00	348.00	680.00	385.00	4
29	680.00	385.00	700.00	438.00	3
30	680.00	385.00	760.00	410.00	4
31	760.00	410.00	820.00	409.00	4
32	820.00	409.00	900.00	400.00	4
33	952.00	422.00	1000.00	400.00	3
34	900.00	400.00	1000.00	400.00	4
35	1000.00	400.00	1100.00	396.00	4

ISOTROPIC SOIL PARAMETERS

5 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	125.0	125.0	200.0	35.0	0.00	0.0	0
2	120.0	120.0	250.0	30.0	0.00	0.0	0
3	125.0	125.0	400.0	34.0	0.00	0.0	0
4	125.0	125.0	1500.0	35.0	0.00	0.0	0
5	120.0	120.0	600.0	18.5	0.00	0.0	0

A Horizontal Earthquake Loading Coefficient
Of0.150 Has Been Assigned

A Vertical Earthquake Loading Coefficient
Of0.000 Has Been Assigned

Cavitation Pressure = 0.0(psf)

Janbus Empirical Coef is being used for the case of c & phi both > 0

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

3000 Trial Surfaces Have Been Generated.

4 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 40.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)

1	300.00	194.00	599.90	314.00	0.00
2	600.00	314.00	600.10	314.00	0.00
3	649.00	347.00	649.10	347.00	0.00
4	850.00	400.00	950.00	400.00	40.00

1

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

* * Safety Factors Are Calculated By The Simplified Janbu Method * *

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.336 ***

Individual data on the 19 slices

Slice No.	Width (ft)	Weight (lbs)	Water Force Top (lbs)	Water Force Bot (lbs)	Tie Force Norm (lbs)	Tie Force Tan (lbs)	Earthquake Force Hor (lbs)	Earthquake Force Ver (lbs)	Surcharge Load (lbs)
1	2.8	158.0	0.0	0.0	0.0	0.0	23.7	0.0	0.0
2	20.7	30130.7	0.0	0.0	0.0	0.0	4519.6	0.0	0.0
3	7.0	23641.8	0.0	0.0	0.0	0.0	3546.3	0.0	0.0
4	0.7	2845.9	0.0	0.0	0.0	0.0	426.9	0.0	0.0
5	15.3	63484.4	0.0	0.0	0.0	0.0	5522.7	0.0	0.0
6	70.0	414034.5	0.0	0.0	0.0	0.0	62105.2	0.0	0.0
7	52.3	436199.6	0.0	0.0	0.0	0.0	65429.9	0.0	0.0
8	0.4	221.6	0.0	0.0	0.0	0.0	33.2	0.0	0.0
9	49.0	421892.0	0.0	0.0	0.0	0.0	63283.5	0.0	0.0
10	0.1	711.0	0.0	0.0	0.0	0.0	106.6	0.0	0.0
11	1.1	8657.4	0.0	0.0	0.0	0.0	1298.6	0.0	0.0
12	29.8	252113.7	0.0	0.0	0.0	0.0	37817.1	0.0	0.0
13	20.0	181305.6	0.0	0.0	0.0	0.0	27195.8	0.0	0.0
14	13.0	122127.4	0.0	0.0	0.0	0.0	18319.1	0.0	0.0
15	47.0	371868.9	0.0	0.0	0.0	0.0	55780.3	0.0	0.0
16	60.0	268892.2	0.0	0.0	0.0	0.0	40333.8	0.0	0.0
17	3.1	7560.6	0.0	0.0	0.0	0.0	1134.1	0.0	0.0
18	30.8	42305.6	0.0	0.0	0.0	0.0	6345.8	0.0	0.0
19	2.6	506.0	0.0	0.0	0.0	0.0	75.9	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.336 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.336 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1.336 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1,336 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1,336 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1,336 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	431.44	287.94
2	434.27	287.26
3	462.67	259.09
4	600.02	314.00
5	649.09	347.00
6	853.90	419.58
7	856.53	422.23

*** 1,336 ***

1

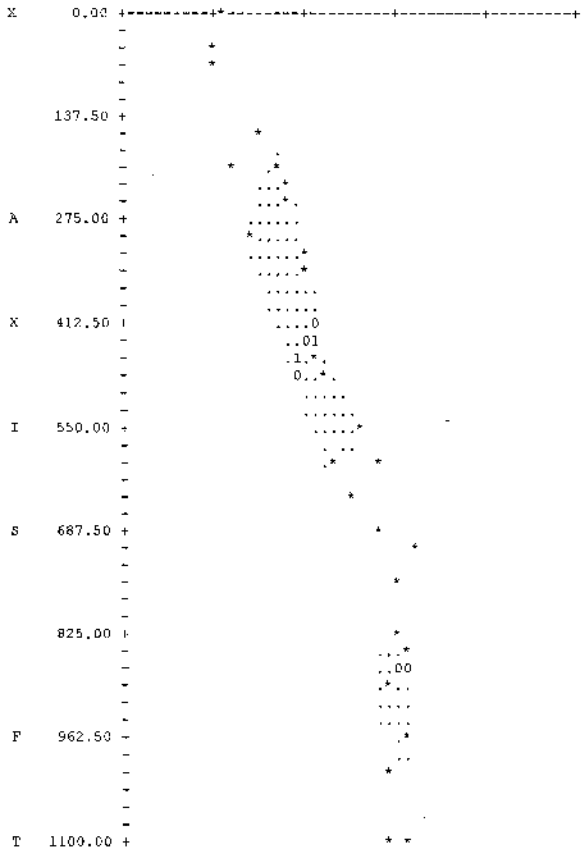
Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	418.07	286.77
2	434.06	279.80
3	473.36	263.37
4	600.07	314.00
5	649.02	347.00
6	860.20	417.96
7	860.86	422.00

*** 1,340 ***

1

Y	A	X	I	S	F	T
0.00	137.50	275.00	412.50	550.00	687.50	

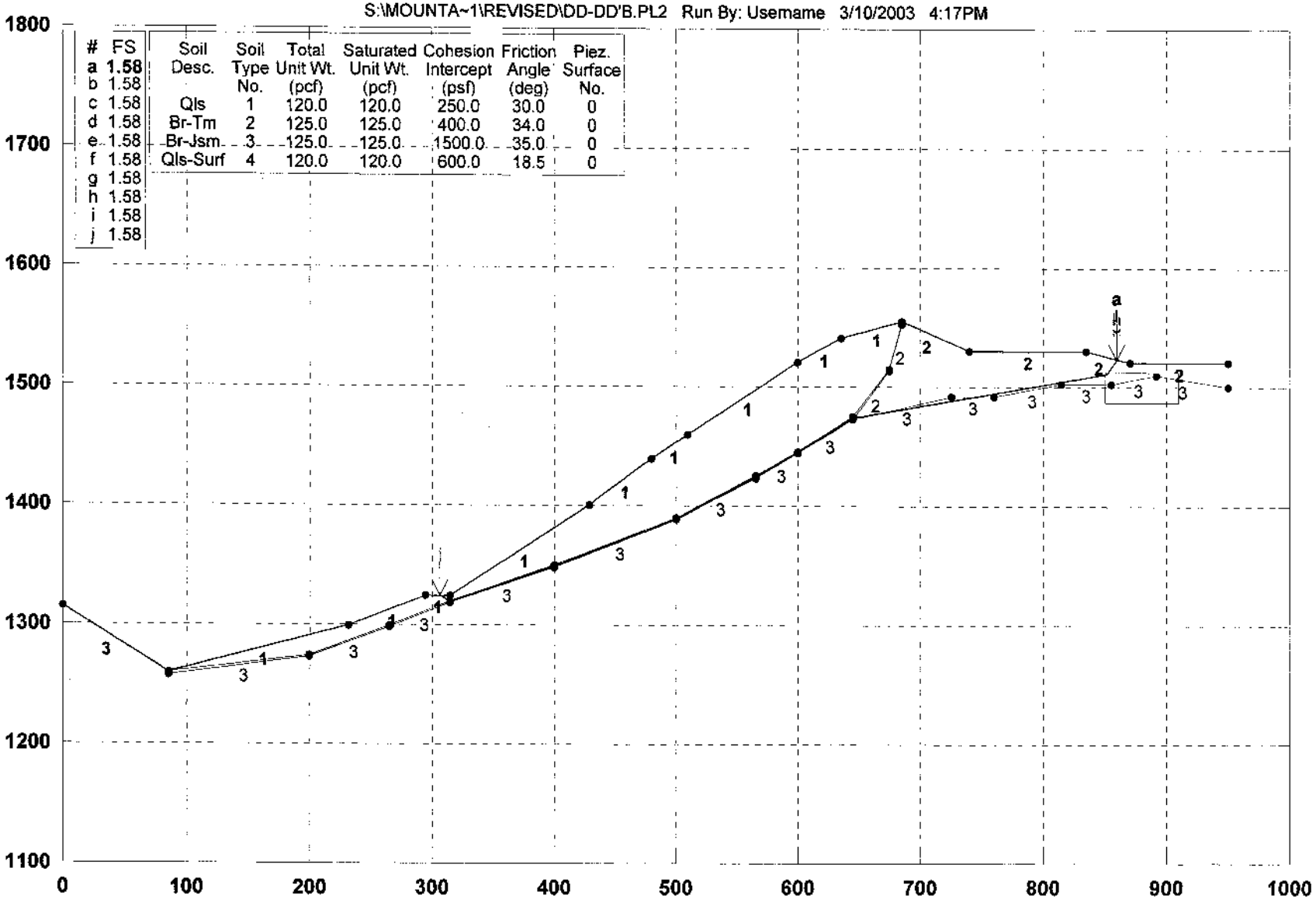

X
0.00
137.50
A
275.00
X
412.50
I
550.00
S
687.50
825.00
F
962.50
T
1100.00

Mountain Gate / Section DD-DD' , Static

S:\MOUNTA~1\REVISED\DD-DD'B.PL2 Run By: Username 3/10/2003 4:17PM

#	FS
a	1.58
b	1.58
c	1.58
d	1.58
e	1.58
f	1.58
g	1.58
h	1.58
i	1.58
j	1.58

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Qls	1	120.0	120.0	250.0	30.0	0
Br-Tm	2	125.0	125.0	400.0	34.0	0
Br-Jsm	3	125.0	125.0	1500.0	35.0	0
Qls-Surf	4	120.0	120.0	600.0	18.5	0



GSTABL7 FSmin=1.58

Safety Factors Are Calculated By The Simplified Janbu Method for the case of c & phi both > 0

GSTABL7

Figure E-16