4	602.62	316.01
5	637.97	351.37
6	655.62	376.33

*** 2.173 ***

Individual data on the 14 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	12.8	16640.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	16.9	59607.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	32.0	190320.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	118.0	875576.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	35.0	283826.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	35.0	289342.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	91.0	737068.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	7.0	59554.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	71.0	437433.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.1	471.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	13.5	74151.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	10.0	48819.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	25.4	87195.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	17.6	20994.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.29	140.19
2	183.10	127.94
3	232.01	117.58
4	602.62	316.01

5	637.97	351.37
6	655.62	376.33

*** 2.173 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.29	140.19
2	183.10	127.94
3	232.01	117.58
4	602.62	316.01
5	637.97	351.37
6	655.62	376.33

*** 2.173 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	212.90	166.88
2	239.52	153.61
3	288.26	142.49
4	598.76	319.33
5	631.87	356.80
6	639.78	371.01

*** 2.246 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	212.90	166.88
2	239.52	153.61

3	288.26	142.49
4	598.76	319.33
5	631.87	356.80
6	639.78	371.01

*** 2.246 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	212.90	166.88
2	239.52	153.61
3	288.26	142.49
4	598.76	319.33
5	631.87	356.80
6	639.78	371.01

*** 2.246 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	212.90	166.88
2	239.52	153.61
3	288.26	142.49
4	598.76	319.33
5	631.87	356.80
6	639.78	371.01

*** 2.246 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.41	156.27

2	200.48	151.39
3	250.37	148.11
4	607.60	300.08
5	642.79	335.60
6	662.46	378.62

*** 2.271 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.41	156.27
2	200.48	151.39
3	250.37	148.11
4	607.60	300.08
5	642.79	335.60
6	662.46	378.62

*** 2.271 ***

Failure Surface Specified By 6 Coordinate Points

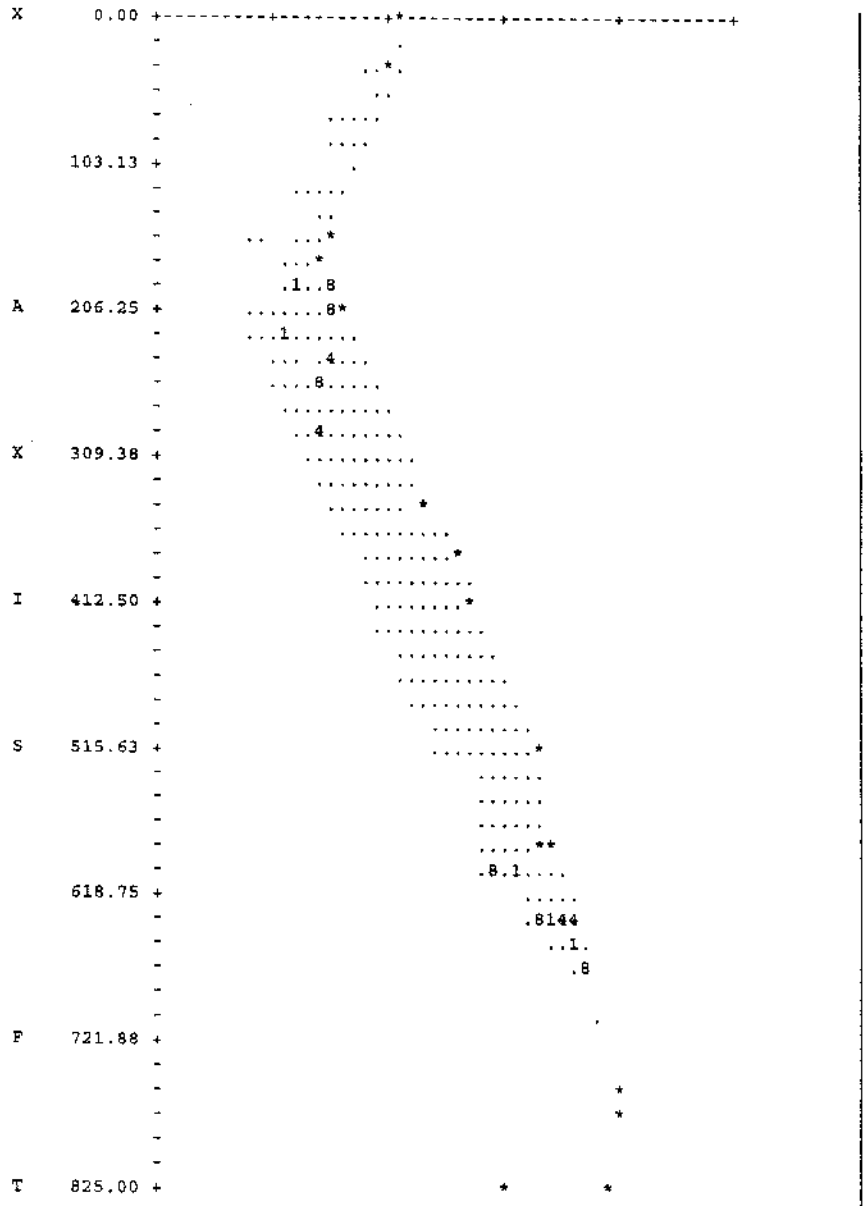
Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.41	156.27
2	200.48	151.39
3	250.37	148.11
4	607.60	300.08
5	642.79	335.60
6	662.46	378.62

*** 2.271 ***

1

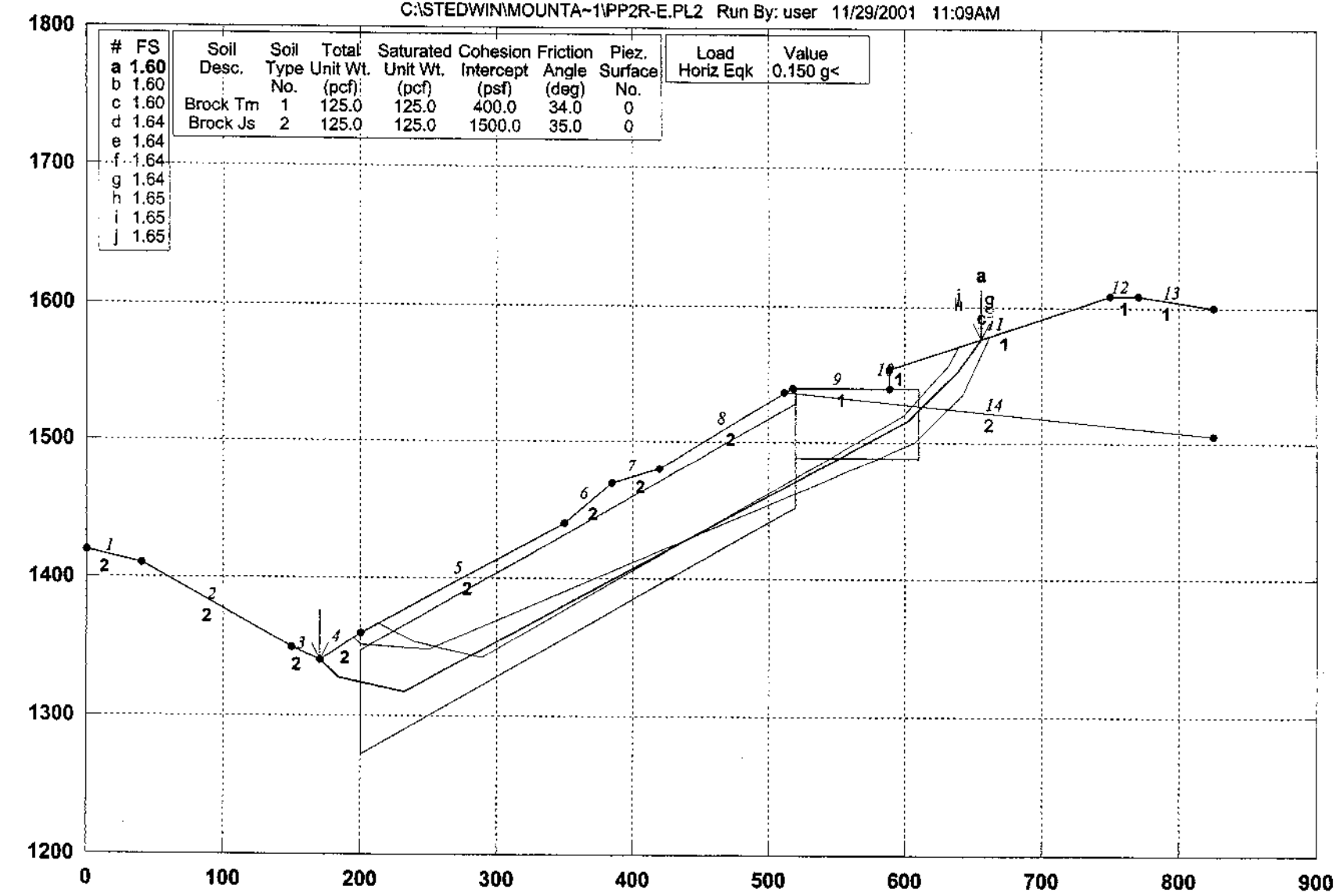
Y A X I S F T

0.00 103.13 206.25 309.38 412.50 515.63


X
0.00
103.13
A
206.25
X
309.38
I
412.50
S
515.63
618.75
F
721.88
T
825.00

Mountain Gate, 03-0381-001, X-Sec:P-P' Pseudo Static

C:\STEDWIN\MOUNTA~1\PP2R-E.PL2 Run By: user 11/29/2001 11:09AM



#	FS
a	1.60
b	1.60
c	1.60
d	1.64
e	1.64
f	1.64
g	1.64
h	1.65
i	1.65
j	1.65

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Brock Tm	1	125.0	125.0	400.0	34.0	0
Brock Js	2	125.0	125.0	1500.0	35.0	0

Load	Value
Horiz Eqk	0.150 g<

GSTABL7 FSmin=1.60

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

STED

Figure E-66

*** 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: 11/29/2001
Time of Run: 11:09AM
Run By: user
Input Data Filename: C:pp2r-e.
Output Filename: C:pp2r-e.OUT
Unit System: English

Plotted Output Filename: C:pp2r-e.PLT

PROBLEM DESCRIPTION Mountain Gate, 03-0381-001, X-Sec:P-P'
Pseudo Static

BOUNDARY COORDINATES

13 Top Boundaries
14 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	40.00	210.00	2
2	40.00	210.00	150.00	150.00	2
3	150.00	150.00	170.00	140.00	2
4	170.00	140.00	200.00	160.00	2
5	200.00	160.00	350.00	240.00	2
6	350.00	240.00	385.00	270.00	2
7	385.00	270.00	420.00	280.00	2
8	420.00	280.00	518.00	339.00	2
9	518.00	339.00	589.00	339.00	1
10	589.00	339.00	589.10	354.00	1
11	589.10	354.00	750.00	408.00	1
12	750.00	408.00	770.00	408.00	1
13	770.00	408.00	825.00	400.00	1
14	511.00	336.00	825.00	305.00	2

1

ISOTROPIC SOIL PARAMETERS

2 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	400.0	34.0	0.00	0.0	0
2	125.0	125.0	1500.0	35.0	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.

2000 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 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	200.00	110.00	520.00	290.00	75.00
2	520.10	314.00	610.00	314.00	50.00

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 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.29	140.19
2	183.10	127.94
3	232.01	117.58
4	602.62	316.01
5	637.97	351.37
6	655.62	376.33

*** 1.600 ***

Individual data on the 14 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	12.8	16640.0	0.0	0.0	0.0	0.0	2496.0	0.0	0.0
2	16.9	59607.2	0.0	0.0	0.0	0.0	8941.1	0.0	0.0
3	32.0	190320.8	0.0	0.0	0.0	0.0	28548.1	0.0	0.0
4	118.0	875576.4	0.0	0.0	0.0	0.0	*******	0.0	0.0
5	35.0	283826.9	0.0	0.0	0.0	0.0	42574.0	0.0	0.0
6	35.0	289342.1	0.0	0.0	0.0	0.0	43401.3	0.0	0.0
7	91.0	737068.9	0.0	0.0	0.0	0.0	*******	0.0	0.0
8	7.0	59554.4	0.0	0.0	0.0	0.0	8933.2	0.0	0.0
9	71.0	437433.1	0.0	0.0	0.0	0.0	65615.0	0.0	0.0
10	0.1	471.8	0.0	0.0	0.0	0.0	70.8	0.0	0.0
11	13.5	74151.5	0.0	0.0	0.0	0.0	11122.7	0.0	0.0
12	10.0	48819.0	0.0	0.0	0.0	0.0	7322.8	0.0	0.0
13	25.4	87195.9	0.0	0.0	0.0	0.0	13079.4	0.0	0.0
14	17.6	20994.2	0.0	0.0	0.0	0.0	3149.1	0.0	0.0

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.29	140.19
2	183.10	127.94
3	232.01	117.58
4	602.62	316.01
5	637.97	351.37
6	655.62	376.33

*** 1.600 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.29	140.19
2	183.10	127.94
3	232.01	117.58
4	602.62	316.01
5	637.97	351.37
6	655.62	376.33

*** 1.600 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.41	156.27
2	200.48	151.39
3	250.37	148.11
4	607.60	300.08
5	642.79	335.60
6	662.46	378.62

*** 1.636 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.41	156.27
2	200.48	151.39
3	250.37	148.11
4	607.60	300.08
5	642.79	335.60
6	662.46	378.62

*** 1.636 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.41	156.27
2	200.48	151.39
3	250.37	148.11
4	607.60	300.08
5	642.79	335.60
6	662.46	378.62

*** 1.636 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.41	156.27
2	200.48	151.39
3	250.37	148.11
4	607.60	300.08
5	642.79	335.60
6	662.46	378.62

*** 1.636 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	212.90	166.88
2	239.52	153.61
3	288.26	142.49
4	598.76	319.33
5	631.87	356.80
6	639.78	371.01

*** 1.648 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	212.90	166.88
2	239.52	153.61
3	288.26	142.49
4	598.76	319.33
5	631.87	356.80
6	639.78	371.01

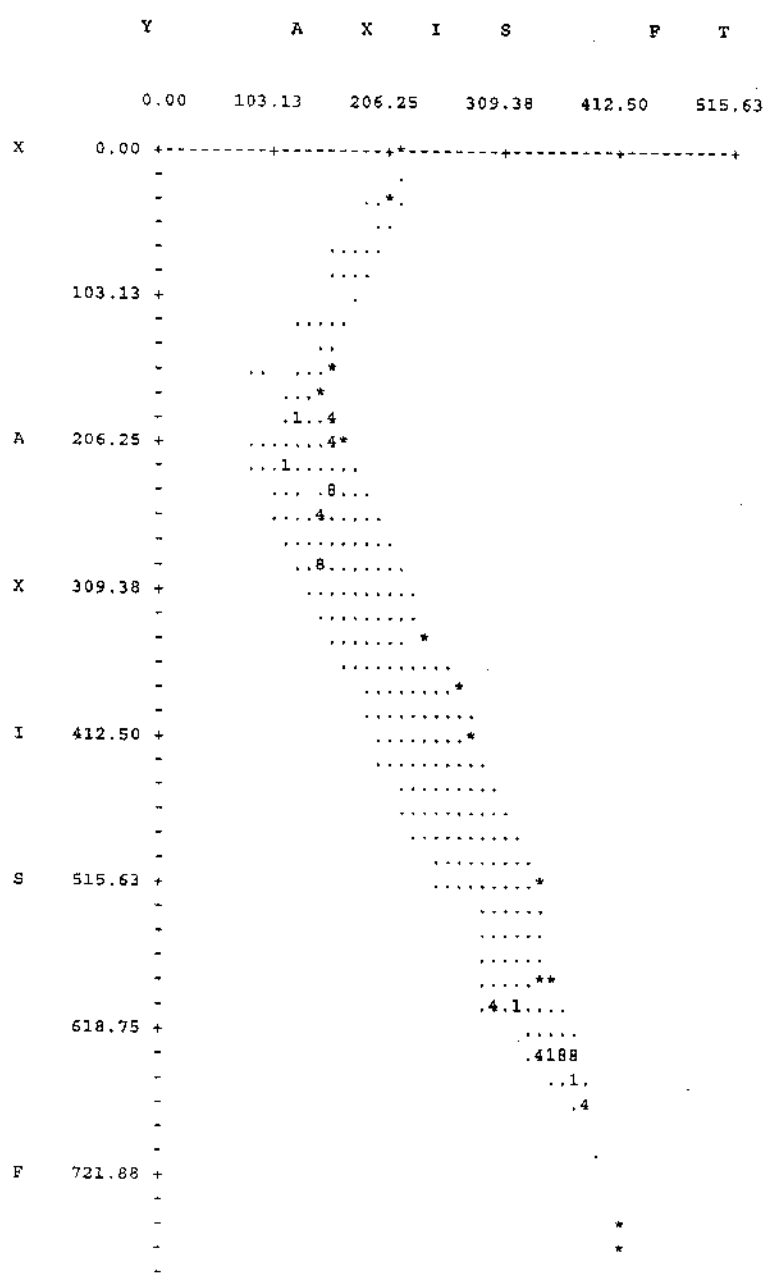
*** 1.648 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	212.90	166.88
2	239.52	153.61
3	288.26	142.49
4	598.76	319.33
5	631.87	356.80
6	639.78	371.01

*** 1.648 ***

1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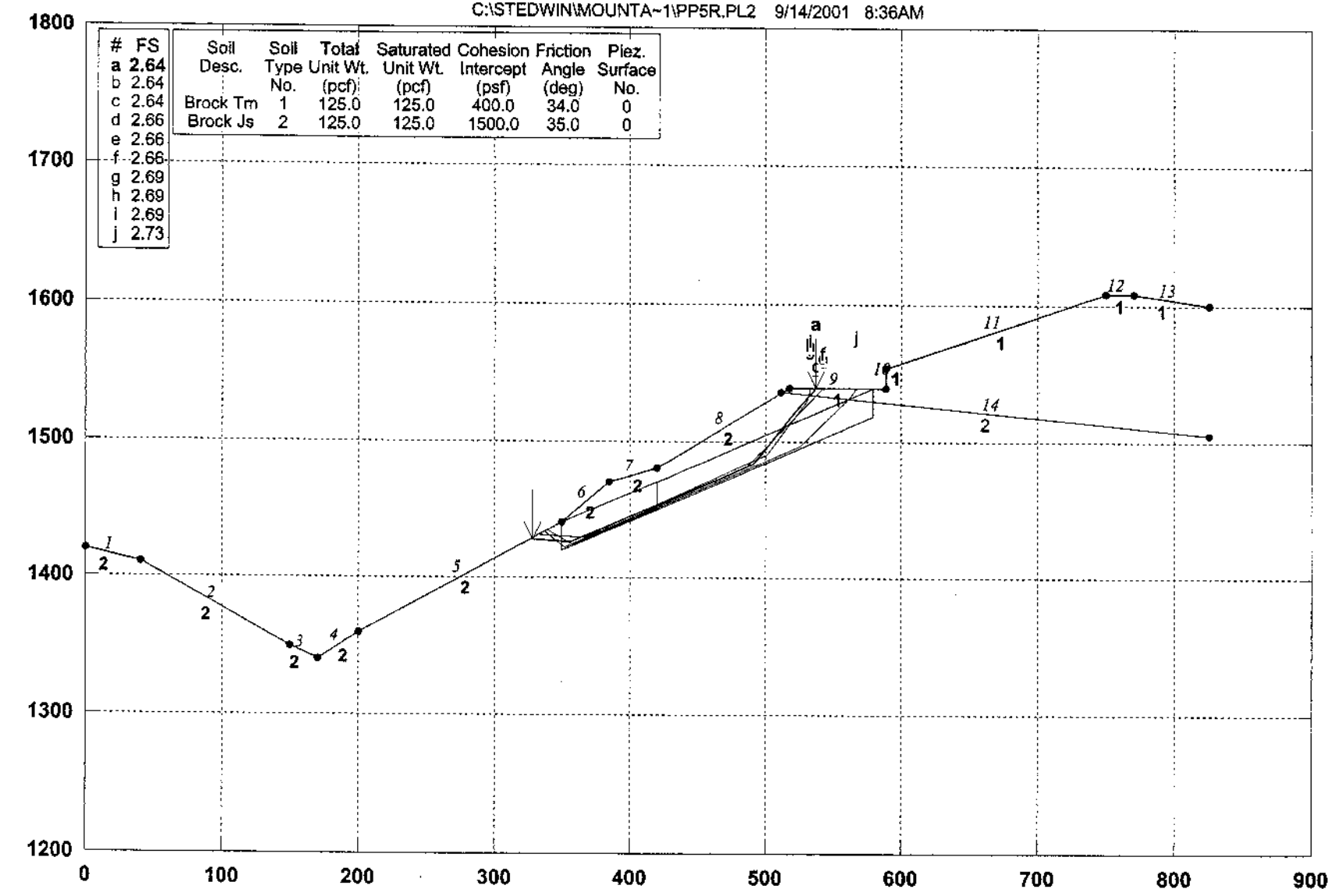
X 0.00
103.13
A 206.25
X 309.38
I 412.50
S 515.63
618.75
F 721.88


T 825.00

Mountain Gate, 03-0381-001, X-Sec:P-P'

C:\STEDWIN\MOUNTA~1\PP5R.PL2 9/14/2001 8:36AM



#	FS
a	2.64
b	2.64
c	2.64
d	2.66
e	2.66
f	2.66
g	2.69
h	2.69
i	2.69
j	2.73

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Brock Tm	1	125.0	125.0	400.0	34.0	0
Brock Js	2	125.0	125.0	1500.0	35.0	0

GSTABL7 FSmin=2.64

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

STED

Figure E-67

*** 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: 9/14/2001
Time of Run: 8:36AM
Run By:
Input Data Filename: C:pp5r.
Output Filename: C:pp5r.OUT
Unit System: English

Plotted Output Filename: C:pp5r.PLT

PROBLEM DESCRIPTION Mountain Gate, 03-0381-001, X-Sec:P-P'

BOUNDARY COORDINATES

13 Top Boundaries
14 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	40.00	210.00	2
2	40.00	210.00	150.00	150.00	2
3	150.00	150.00	170.00	140.00	2
4	170.00	140.00	200.00	160.00	2
5	200.00	160.00	350.00	240.00	2
6	350.00	240.00	385.00	270.00	2
7	385.00	270.00	420.00	280.00	2
8	420.00	280.00	518.00	339.00	2
9	518.00	339.00	589.00	339.00	1
10	589.00	339.00	589.10	354.00	1
11	589.10	354.00	750.00	408.00	1
12	750.00	408.00	770.00	408.00	1
13	770.00	408.00	825.00	400.00	1
14	511.00	336.00	825.00	305.00	2

1

ISOTROPIC SOIL PARAMETERS

2 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	400.0	34.0	0.00	0.0	0
2	125.0	125.0	1500.0	35.0	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.

2000 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 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	350.00	230.00	420.00	260.00	20.00
2	420.10	260.00	580.00	329.00	20.00

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 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	327.60	228.05
2	355.79	225.35
3	490.71	283.84
4	522.60	322.35

5	537.20	339.00

*** 2.638 ***

Individual data on the 10 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	22.4	19732.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	5.8	12195.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	29.2	94200.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	35.0	128627.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	70.7	289678.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	20.3	82650.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	7.0	21282.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	4.6	11163.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	10.1	13751.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	4.5	1449.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	327.60	228.05
2	355.79	225.35
3	490.71	283.84
4	522.60	322.35
5	537.20	339.00

*** 2.638 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	327.60	228.05
2	355.79	225.35
3	490.71	283.84
4	522.60	322.35
5	537.20	339.00

*** 2.638 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	336.97	233.05
2	351.35	221.32
3	484.31	280.04
4	519.63	315.43
5	542.77	339.00

*** 2.663 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	336.97	233.05
2	351.35	221.32
3	484.31	280.04
4	519.63	315.43
5	542.77	339.00

*** 2.663 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	336.97	233.05
2	351.35	221.32
3	484.31	280.04
4	519.63	315.43
5	542.77	339.00

*** 2.663 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	332.21	230.51
2	366.25	229.31
3	500.86	290.35
4	531.57	329.80
5	533.38	339.00

*** 2.694 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	332.21	230.51
2	366.25	229.31
3	500.86	290.35
4	531.57	329.80
5	533.38	339.00

*** 2.694 ***

1

Failure Surface Specified By 5 Coordinate Points

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

No.	(ft)	(ft)
1	332.21	230.51
2	366.25	229.31
3	500.86	290.35
4	531.57	329.80
5	533.38	339.00

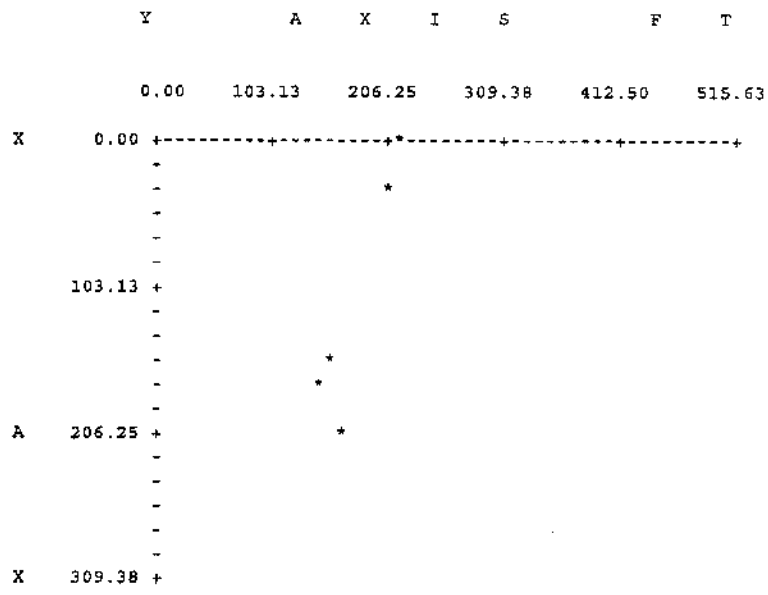
*** 2.694 ***

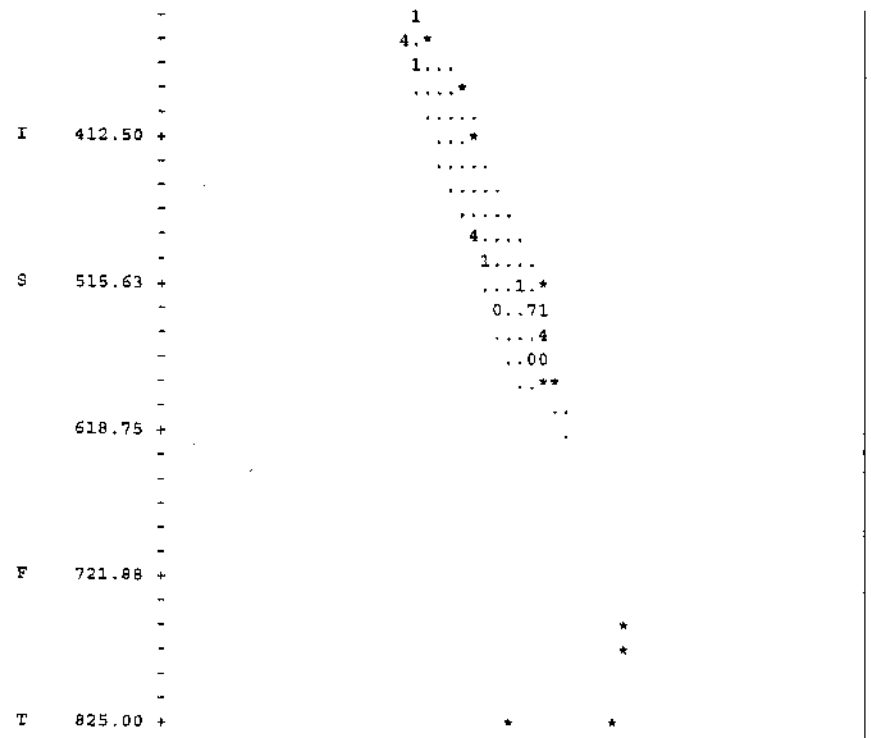
Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	339.61	234.46
2	357.40	224.19
3	526.23	296.62
4	561.57	331.99
5	567.56	339.00

*** 2.731 ***

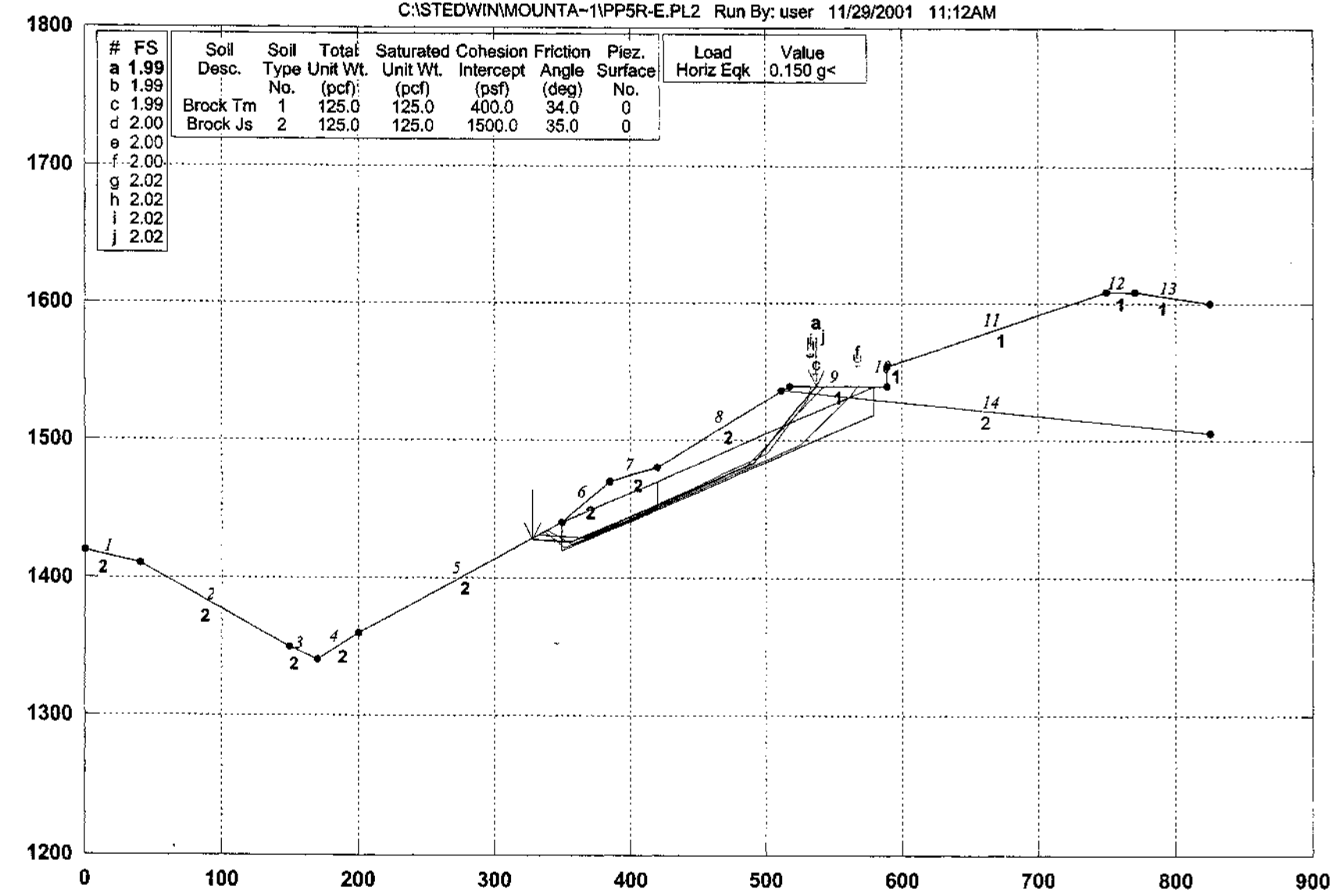
1




I 412.50
S 515.63
618.75
F 721.88
T 825.00

Mountain Gate, 03-0381-001, X-Sec:P-P' Pseudo Static

C:\STEDWIN\MOUNTA~1\PP5R-E.PL2 Run By: user 11/29/2001 11:12AM



#	FS
a	1.99
b	1.99
c	1.99
d	2.00
e	2.00
f	2.00
g	2.02
h	2.02
i	2.02
j	2.02

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Brock Tm	1	125.0	125.0	400.0	34.0	0
Brock Js	2	125.0	125.0	1500.0	35.0	0

Load	Value
Horiz Eqk	0.150 g<

GSTABL7 FSmin=1.99

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

STED

Figure E-68

*** 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: 11/29/2001
Time of Run: 11:12AM
Run By: user
Input Data Filename: C:pp5r-e.
Output Filename: C:pp5r-e.OUT
Unit System: English

Plotted Output Filename: C:pp5r-e.PLT

PROBLEM DESCRIPTION Mountain Gate, 03-0381-001, X-Sec:P-P'
Pseudo Static

BOUNDARY COORDINATES

13 Top Boundaries
14 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	40.00	210.00	2
2	40.00	210.00	150.00	150.00	2
3	150.00	150.00	170.00	140.00	2
4	170.00	140.00	200.00	160.00	2
5	200.00	160.00	350.00	240.00	2
6	350.00	240.00	385.00	270.00	2
7	385.00	270.00	420.00	280.00	2
8	420.00	280.00	518.00	339.00	2
9	518.00	339.00	589.00	339.00	1
10	589.00	339.00	589.10	354.00	1
11	589.10	354.00	750.00	408.00	1
12	750.00	408.00	770.00	408.00	1
13	770.00	408.00	825.00	400.00	1
14	511.00	336.00	825.00	305.00	2

1

ISOTROPIC SOIL PARAMETERS

2 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	400.0	34.0	0.00	0.0	0
2	125.0	125.0	1500.0	35.0	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.

2000 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 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	350.00	230.00	420.00	260.00	20.00
2	420.10	260.00	580.00	329.00	20.00

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 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	327.60	228.05
2	355.79	225.35
3	490.71	283.84
4	522.60	322.35
5	537.20	339.00

*** 1.985 ***

Individual data on the 10 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	22.4	19732.5	0.0	0.0	0.0	0.0	2959.9	0.0	0.0
2	5.8	12195.4	0.0	0.0	0.0	0.0	1829.3	0.0	0.0
3	29.2	94200.7	0.0	0.0	0.0	0.0	14130.1	0.0	0.0
4	35.0	128627.0	0.0	0.0	0.0	0.0	19294.1	0.0	0.0
5	70.7	289678.2	0.0	0.0	0.0	0.0	43451.7	0.0	0.0
6	20.3	82650.1	0.0	0.0	0.0	0.0	12397.5	0.0	0.0
7	7.0	21282.4	0.0	0.0	0.0	0.0	3192.4	0.0	0.0
8	4.6	11163.9	0.0	0.0	0.0	0.0	1674.6	0.0	0.0
9	10.1	13751.0	0.0	0.0	0.0	0.0	2062.7	0.0	0.0
10	4.5	1449.6	0.0	0.0	0.0	0.0	217.4	0.0	0.0

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	327.60	228.05
2	355.79	225.35
3	490.71	283.84

4	522.60	322.35
5	537.20	339.00

*** 1.985 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	327.60	228.05
2	355.79	225.35
3	490.71	283.84
4	522.60	322.35
5	537.20	339.00

*** 1.985 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	339.61	234.46
2	357.40	224.19
3	526.23	296.62
4	561.57	331.99
5	567.56	339.00

*** 2.001 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	339.61	234.46
2	357.40	224.19
3	526.23	296.62
4	561.57	331.99

5	567.56	339.00

*** 2.001 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	339.61	234.46
2	357.40	224.19
3	526.23	296.62
4	561.57	331.99
5	567.56	339.00

*** 2.001 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	332.21	230.51
2	366.25	229.31
3	500.86	290.35
4	531.57	329.80
5	533.38	339.00

*** 2.016 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	332.21	230.51
2	366.25	229.31
3	500.86	290.35
4	531.57	329.80
5	533.38	339.00

*** 2.016 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	332.21	230.51
2	366.25	229.31
3	500.86	290.35
4	531.57	329.80
5	533.38	339.00

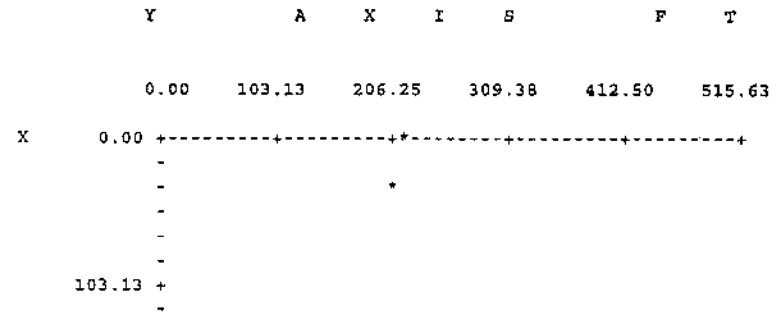
*** 2.016 ***

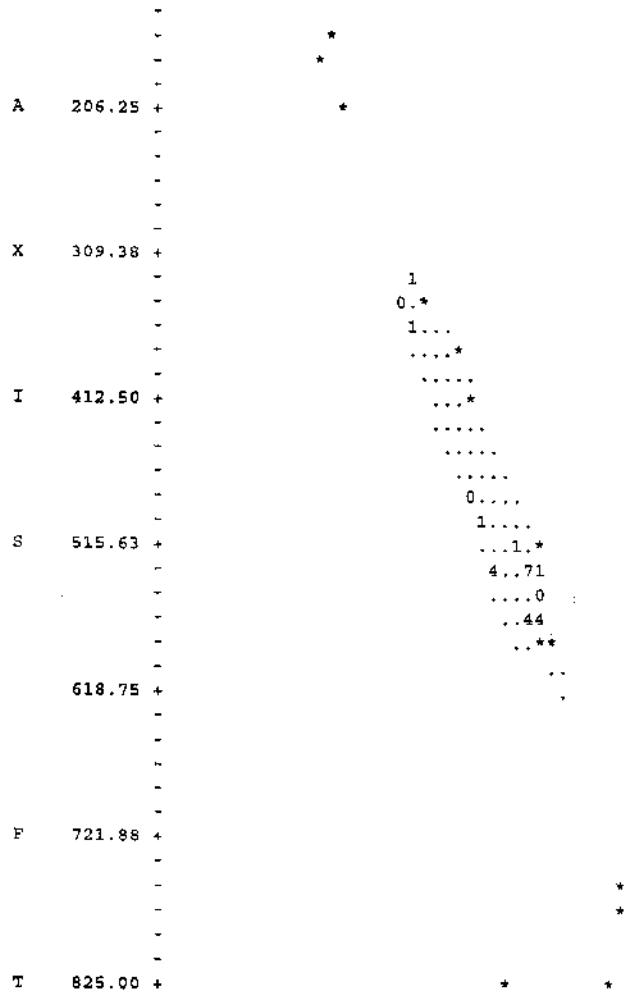
Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	336.97	233.05
2	351.35	221.32
3	484.31	280.04
4	519.63	315.43
5	542.77	339.00

*** 2.021 ***

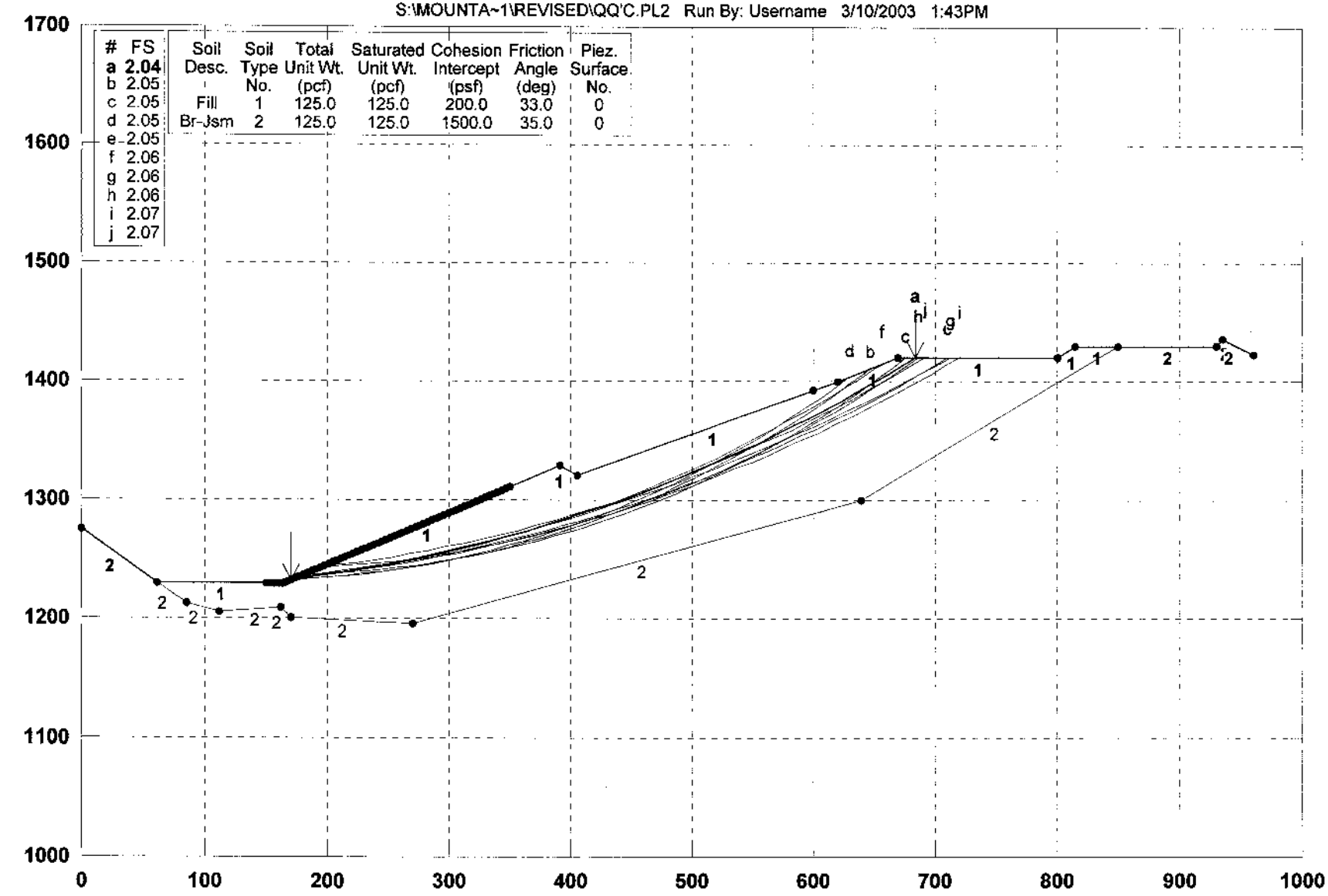
1




A 206.25
X 309.38
I 412.50
S 515.63
618.75
F 721.88
T 825.00

Mountain Gate / Section: Q-Q' , Static

S:\MOUNTA~1\REVISED\QQ'C.PL2 Run By: Username 3/10/2003 1:43PM



#	FS
a	2.04
b	2.05
c	2.05
d	2.05
e	2.05
f	2.06
g	2.06
h	2.06
i	2.07
j	2.07

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	33.0	0
Br-Jsm	2	125.0	125.0	1500.0	35.0	0

GSTABL7 FSmin=2.04

Safety Factors Are Calculated By The Modified Bishop Method

GSTABL7

Figure E-69

*** 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: 1:43PM
Run By: Username
Input Data Filename: S:qg'c.
Output Filename: S:qg'c.OUT
Unit System: English

Plotted Output Filename: S:qg'c.PLT

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

BOUNDARY COORDINATES

12 Top Boundaries
19 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	275.00	61.00	229.00	2
2	61.00	229.00	164.00	229.00	1
3	164.00	229.00	391.00	329.00	1
4	391.00	329.00	405.00	320.00	1
5	405.00	320.00	620.00	400.00	1
6	620.00	400.00	670.00	420.00	1
7	670.00	420.00	800.00	420.00	1
8	800.00	420.00	815.00	430.00	1
9	815.00	430.00	850.00	430.00	1
10	850.00	430.00	930.00	430.00	2
11	930.00	430.00	935.00	435.00	2
12	935.00	435.00	960.00	422.00	2
13	61.00	229.00	85.00	212.00	2
14	85.00	212.00	111.00	205.00	2
15	111.00	205.00	162.00	209.00	2
16	162.00	209.00	170.00	200.00	2
17	170.00	200.00	270.00	195.00	2
18	270.00	195.00	640.00	300.00	2
19	640.00	300.00	850.00	430.00	2

1

ISOTROPIC SOIL PARAMETERS

2 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	125.0	125.0	1500.0	35.0	0.00	0.0	0

1

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

3600 Trial Surfaces Have Been Generated.

60 Surfaces Initiate From Each Of 60 Points Equally Spaced Along The Ground Surface Between X = 150.00(ft)
and X = 350.00(ft)

Each Surface Terminates Between X = 600.00(ft)
and X = 930.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00(ft)

15.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 38 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.34	231.79
2	185.19	233.90
3	200.02	236.16
4	214.81	238.64
5	229.58	241.27
6	244.32	244.07
7	259.02	247.05
8	273.68	250.20
9	288.31	253.52

10	302.90	257.01
11	317.45	260.67
12	331.95	264.50
13	346.40	268.51
14	360.81	272.68
15	375.17	277.02
16	389.48	281.53
17	403.73	286.21
18	417.92	291.05
19	432.06	296.06
20	446.14	301.24
21	460.16	306.58
22	474.11	312.09
23	488.00	317.76
24	501.82	323.59
25	515.57	329.58
26	529.25	335.74
27	542.85	342.05
28	556.38	348.53
29	569.84	355.16
30	583.21	361.95
31	596.51	368.90
32	609.72	376.00
33	622.85	383.26
34	635.89	390.67
35	648.84	398.23
36	661.70	405.95
37	674.48	413.82
38	684.26	420.00

Circle Center At X = -1.7 ; Y = 1497.2 and Radius, 1277.1

*** 2.035 ***

Individual data on the 41 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	14.9	4116.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	14.8	12154.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	14.8	19818.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	14.8	27135.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	14.7	34014.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	14.7	40542.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	14.7	46688.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	14.6	52451.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	14.6	57832.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	14.5	62829.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	14.5	67443.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	14.5	71674.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	14.4	75524.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	14.4	78993.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	14.3	82082.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	1.5	8929.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	12.7	64895.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	1.3	5402.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	12.9	54211.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	14.1	59875.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	14.1	59896.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	14.0	59577.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	14.0	58922.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	13.9	57936.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	13.8	56625.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	13.8	54994.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	13.7	53047.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	13.6	50793.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	13.5	48235.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	13.5	45382.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	13.4	42240.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	13.3	38817.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	13.2	35118.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	10.3	24730.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	2.8	6437.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	13.0	27356.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	13.0	23466.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	12.9	19322.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	8.3	10200.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	4.5	4232.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	9.8	3781.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.34	231.79
2	185.32	232.63
3	200.28	233.74
4	215.21	235.11
5	230.12	236.76
6	245.00	238.68
7	259.84	240.87
8	274.64	243.32
9	289.39	246.05
10	304.08	249.04
11	318.73	252.29
12	333.31	255.81
13	347.82	259.60
14	362.27	263.64
15	376.64	267.95
16	390.92	272.52
17	405.13	277.34
18	419.24	282.42
19	433.26	287.76
20	447.18	293.35
21	461.00	299.19
22	474.70	305.27
23	488.30	311.61
24	501.78	318.19
25	515.14	325.02
26	528.37	332.08
27	541.47	339.39
28	554.44	346.93
29	567.27	354.70
30	579.95	362.70
31	592.49	370.94
32	604.88	379.39

33	617.11	388.08
34	629.18	396.98
35	641.09	406.10
36	647.02	410.81

Circle Center At X = 131.7 ; Y = 1058.8 and Radius, 827.9

*** 2.048 ***

1

Failure Surface Specified By 37 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	180.51	236.27
2	195.50	236.91
3	210.47	237.82
4	225.42	239.00
5	240.35	240.44
6	255.25	242.15
7	270.12	244.13
8	284.95	246.37
9	299.74	248.88
10	314.48	251.66
11	329.17	254.70
12	343.80	258.00
13	358.38	261.56
14	372.88	265.39
15	387.31	269.47
16	401.67	273.81
17	415.95	278.41
18	430.14	283.27
19	444.24	288.38
20	458.25	293.74
21	472.16	299.35
22	485.97	305.21
23	499.67	311.31
24	513.26	317.66
25	526.74	324.26
26	540.09	331.09
27	553.32	338.16
28	566.42	345.47
29	579.38	353.01
30	592.21	360.79
31	604.90	368.79
32	617.44	377.02
33	629.83	385.47
34	642.07	394.14
35	654.15	403.03
36	666.07	412.14
37	675.99	420.00

Circle Center At X = 152.4 ; Y = 1072.2 and Radius, 836.4

*** 2.051 ***

Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.34	231.79
2	185.31	232.73
3	200.26	233.94
4	215.19	235.42
5	230.08	237.18
6	244.95	239.21
7	259.77	241.52
8	274.54	244.09
9	289.27	246.94
10	303.94	250.06
11	318.56	253.45
12	333.11	257.10
13	347.58	261.02
14	361.99	265.21
15	376.31	269.66
16	390.55	274.37
17	404.71	279.34
18	418.76	284.57
19	432.72	290.06
20	446.58	295.81
21	460.33	301.81
22	473.96	308.05
23	487.48	314.55
24	500.88	321.30
25	514.15	328.29
26	527.29	335.52
27	540.30	343.00
28	553.16	350.71
29	565.89	358.66
30	578.46	366.84
31	590.88	375.24
32	603.15	383.88
33	615.25	392.74
34	627.19	401.82
35	629.91	403.96

Circle Center At X = 126.9 ; Y = 1047.3 and Radius, 816.7

*** 2.052 ***

1

Failure Surface Specified By 40 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	173.73	233.29
2	188.62	235.09
3	203.49	237.06

4	218.34	239.20
5	233.16	241.51
6	247.95	244.00
7	262.71	246.65
8	277.45	249.48
9	292.14	252.47
10	306.81	255.63
11	321.43	258.96
12	336.02	262.46
13	350.56	266.13
14	365.06	269.96
15	379.52	273.97
16	393.93	278.13
17	408.29	282.47
18	422.60	286.96
19	436.86	291.63
20	451.06	296.45
21	465.21	301.44
22	479.29	306.60
23	493.32	311.91
24	507.28	317.39
25	521.19	323.02
26	535.02	328.82
27	548.79	334.77
28	562.49	340.89
29	576.11	347.16
30	589.67	353.58
31	603.14	360.17
32	616.55	366.90
33	629.87	373.80
34	643.11	380.84
35	656.27	388.04
36	669.35	395.38
37	682.34	402.88
38	695.25	410.53
39	708.06	416.32
40	710.75	420.00

Circle Center At X = 25.0 ; Y = 1526.8 and Radius, 1302.0

*** 2.053 ***

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	177.12	234.78
2	192.01	236.59
3	206.87	238.62
4	221.70	240.86
5	236.50	243.30
6	251.27	245.96
7	265.99	248.83
8	280.67	251.90
9	295.31	255.18
10	309.90	258.67
11	324.43	262.37
12	338.92	266.27
13	353.34	270.38
14	367.71	274.69
15	382.01	279.21
16	396.25	283.93
17	410.42	288.85
18	424.52	293.97
19	438.55	299.29
20	452.49	304.81
21	466.36	310.52
22	480.15	316.43
23	493.85	322.54
24	507.46	328.84
25	520.98	335.34
26	534.41	342.02
27	547.74	348.90
28	560.97	355.96
29	574.11	363.21
30	587.13	370.65
31	600.05	378.27
32	612.86	386.07
33	625.56	394.05
34	638.15	402.22
35	650.61	410.56
36	656.43	414.57

Circle Center At X = 56.8 ; Y = 1284.2 and Radius, 1056.3

*** 2.057 ***

1

Failure Surface Specified By 40 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.34	231.79
2	185.16	234.09
3	199.96	236.53
4	214.74	239.12
5	229.49	241.84
6	244.21	244.71
7	258.91	247.72
8	273.57	250.86
9	288.21	254.15
10	302.81	257.58
11	317.38	261.15
12	331.92	264.86
13	346.41	268.72
14	360.87	272.69
15	375.30	276.81
16	389.68	281.07
17	404.02	285.47
18	418.32	290.01
19	432.57	294.68
20	446.78	299.49
21	460.94	304.44
22	475.05	309.52

23	489.22	314.74
24	503.13	320.09
25	517.09	325.57
26	531.00	331.19
27	544.85	336.94
28	558.65	342.83
29	572.39	348.84
30	586.07	354.99
31	599.70	361.27
32	613.26	367.68
33	626.76	374.22
34	640.19	380.88
35	653.57	387.68
36	666.87	394.60
37	680.11	401.65
38	693.28	408.83
39	706.39	416.13
40	713.17	420.00

Circle Center At X = -62.1 ; Y = 1779.1 and Radius, 1564.7

*** 2.058 ***

Failure Surface Specified By 37 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.07	242.25
2	209.03	243.27
3	223.98	244.53
4	238.90	246.03
5	253.80	247.78
6	268.67	249.76
7	283.50	251.99
8	298.30	254.45
9	313.06	257.16
10	327.76	260.10
11	342.42	263.28
12	357.03	266.69
13	371.58	270.34
14	386.07	274.23
15	400.49	278.35
16	414.84	282.70
17	429.13	287.28
18	443.33	292.10
19	457.46	297.14
20	471.51	302.41
21	485.46	307.90
22	499.33	313.62
23	513.10	319.57
24	526.78	325.73
25	540.35	332.12
26	553.82	338.72
27	567.18	345.54
28	580.42	352.58
29	593.55	359.83
30	606.57	367.29
31	619.46	374.96
32	632.22	382.84
33	644.86	390.92
34	657.36	399.20
35	669.73	407.69
36	681.96	416.37
37	686.90	420.00

Circle Center At X = 138.4 ; Y = 1168.9 and Radius, 928.3

*** 2.063 ***

Failure Surface Specified By 40 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	173.73	233.29
2	188.63	234.98
3	203.52	236.85
4	218.38	238.89
5	233.21	241.10
6	248.02	243.47
7	262.81	246.02
8	277.56	248.73
9	292.28	251.62
10	306.97	254.67
11	321.62	257.88
12	336.23	261.27
13	350.80	264.82
14	365.34	268.54
15	379.82	272.42
16	394.27	276.47
17	408.66	280.68
18	423.01	285.06
19	437.31	289.60
20	451.55	294.31
21	465.74	299.17
22	479.87	304.20
23	493.94	309.39
24	507.96	314.74
25	521.91	320.25
26	535.80	325.92
27	549.62	331.74
28	563.37	337.73
29	577.06	343.87
30	590.67	350.16
31	604.22	356.62
32	617.68	363.22
33	631.07	369.98
34	644.39	376.89
35	657.62	383.96
36	670.77	391.17
37	683.84	398.53
38	696.82	406.04
39	709.72	413.70
40	720.05	420.00

Circle Center At X = 32.6 ; Y = 1539.0 and Radius, 1313.3

*** 2.066 ***

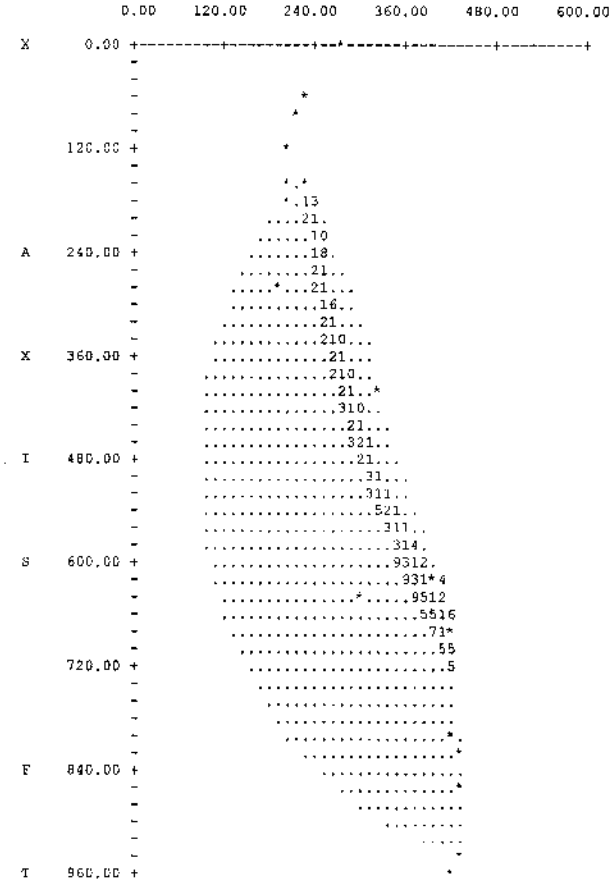
Failure Surface Specified By 37 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.07	242.25
2	208.93	244.25
3	223.77	246.44
4	238.59	248.80
5	253.37	251.34
6	268.12	254.06
7	282.84	256.96
8	297.52	260.04
9	312.16	263.30
10	326.76	266.73
11	341.32	270.34
12	355.84	274.12
13	370.30	278.08
14	384.72	282.22
15	399.09	286.53
16	413.41	291.01
17	427.67	295.66
18	441.87	300.49
19	456.01	305.49
20	470.09	310.66
21	484.11	316.00
22	498.06	321.51
23	511.95	327.18
24	525.76	333.03
25	539.50	339.04
26	553.17	345.22
27	566.77	351.56
28	580.28	358.06
29	593.72	364.73
30	607.07	371.56
31	620.34	378.56
32	633.53	385.71
33	646.62	393.02
34	659.63	400.49
35	672.55	408.11
36	685.37	415.90
37	691.96	420.00

Circle Center At X = 35.8 ; Y = 1471.9 and Radius, 1239.8

*** 2.069 ***

Y A X Y S F T



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

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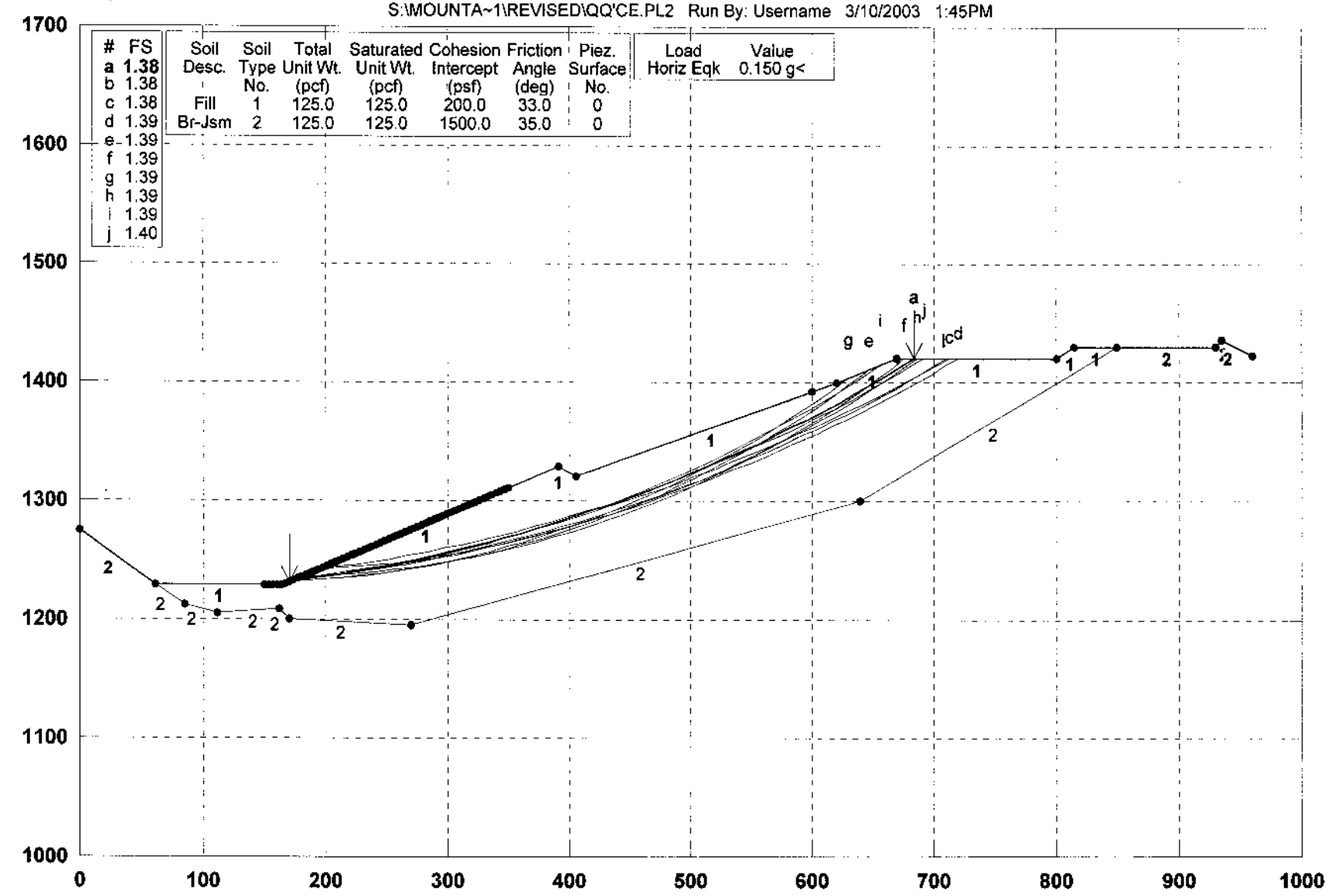


GSTABL7 FSmin=1.38

Safety Factors Are Calculated By The Modified Bishop Method

GSTABL7

Figure E-70

*** 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 Data: 3/10/2003
Time of Run: 1:45PM
Run By: Username
Input Data Filename: S:qq'ce.
Output Filename: S:qq'ce.OUT
Unit System: English

Plotted Output Filename: S:qq'ce.PLT

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

BOUNDARY COORDINATES

12 Top Boundaries
19 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	275.00	61.00	229.00	2
2	61.00	229.00	164.00	229.00	1
3	164.00	229.00	391.00	329.00	1
4	391.00	329.00	405.00	320.00	1
5	405.00	320.00	620.00	400.00	1
6	620.00	400.00	670.00	420.00	1
7	670.00	420.00	800.00	420.00	1
8	800.00	420.00	815.00	430.00	1
9	815.00	430.00	850.00	430.00	1
10	850.00	430.00	930.00	430.00	2
11	930.00	430.00	935.00	435.00	2
12	935.00	435.00	960.00	422.00	2
13	61.00	229.00	85.00	212.00	2
14	85.00	212.00	111.00	205.00	2
15	111.00	205.00	162.00	209.00	2
16	162.00	209.00	170.00	200.00	2
17	170.00	200.00	270.00	195.00	2
18	270.00	195.00	640.00	300.00	2
19	640.00	300.00	850.00	430.00	2

1

ISOTROPIC SOIL PARAMETERS

2 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	33.0	0.00	0.0	0
2	125.0	125.0	1500.0	35.0	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)

1

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

3600 Trial Surfaces Have Been Generated.

60 Surfaces Initiate From Each Of 60 Points Equally Spaced
Along The Ground Surface Between X = 150.00(ft)
and X = 350.00(ft)

Each Surface Terminates Between X = 600.00(ft)
and X = 930.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)

15.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 38 Coordinate Points

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

1	170.34	231.79
2	185.19	233.90
3	200.02	236.18
4	214.81	238.64
5	229.58	241.27
6	244.32	244.07
7	259.02	247.05
8	273.68	250.20
9	288.31	253.52
10	302.90	257.01
11	317.45	260.67
12	331.95	264.50
13	346.40	268.51
14	360.81	272.68
15	375.17	277.02
16	389.48	281.53
17	403.73	286.21
18	417.92	291.05
19	432.06	296.06
20	446.14	301.24
21	460.16	306.59
22	474.11	312.09
23	488.00	317.76
24	501.82	323.59
25	515.57	329.58
26	529.25	335.74
27	542.85	342.05
28	556.38	348.53
29	569.84	355.16
30	583.21	361.95
31	596.51	368.90
32	609.72	376.00
33	622.85	383.26
34	635.89	390.67
35	648.84	398.23
36	661.70	405.95
37	674.48	413.82
38	684.26	420.00

Circle Center At X = -1.7 ; Y = 1497.2 and Radius, 1277.1

*** 1.377 ***

Individual data on the 41 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	14.9	4116.0	0.0	0.0	0.0	0.0	617.4	0.0	0.0
2	14.8	12154.7	0.0	0.0	0.0	0.0	1823.2	0.0	0.0
3	14.8	19818.8	0.0	0.0	0.0	0.0	2972.8	0.0	0.0
4	14.8	27105.9	0.0	0.0	0.0	0.0	4065.9	0.0	0.0
5	14.7	34014.2	0.0	0.0	0.0	0.0	5102.1	0.0	0.0
6	14.7	40542.1	0.0	0.0	0.0	0.0	6081.3	0.0	0.0
7	14.7	46688.3	0.0	0.0	0.0	0.0	7003.2	0.0	0.0
8	14.6	52451.8	0.0	0.0	0.0	0.0	7867.8	0.0	0.0
9	14.6	57832.3	0.0	0.0	0.0	0.0	8674.8	0.0	0.0
10	14.5	62829.4	0.0	0.0	0.0	0.0	9424.4	0.0	0.0
11	14.5	67443.3	0.0	0.0	0.0	0.0	10116.5	0.0	0.0
12	14.5	71674.6	0.0	0.0	0.0	0.0	10751.2	0.0	0.0
13	14.4	75524.1	0.0	0.0	0.0	0.0	11328.6	0.0	0.0
14	14.4	78993.0	0.0	0.0	0.0	0.0	11848.9	0.0	0.0
15	14.3	82082.8	0.0	0.0	0.0	0.0	12312.4	0.0	0.0
16	1.5	8929.7	0.0	0.0	0.0	0.0	1339.5	0.0	0.0
17	12.7	64895.9	0.0	0.0	0.0	0.0	9734.4	0.0	0.0
18	1.3	5402.2	0.0	0.0	0.0	0.0	810.3	0.0	0.0
19	12.9	54211.3	0.0	0.0	0.0	0.0	8131.7	0.0	0.0
20	14.1	59875.7	0.0	0.0	0.0	0.0	8381.4	0.0	0.0
21	14.1	59896.3	0.0	0.0	0.0	0.0	8984.4	0.0	0.0
22	14.0	59577.0	0.0	0.0	0.0	0.0	8936.5	0.0	0.0
23	14.0	58922.3	0.0	0.0	0.0	0.0	8838.3	0.0	0.0
24	13.9	57936.8	0.0	0.0	0.0	0.0	8690.5	0.0	0.0
25	13.8	56625.7	0.0	0.0	0.0	0.0	8493.8	0.0	0.0
26	13.8	54994.2	0.0	0.0	0.0	0.0	8249.1	0.0	0.0
27	13.7	53047.9	0.0	0.0	0.0	0.0	7957.2	0.0	0.0
28	13.6	50793.2	0.0	0.0	0.0	0.0	7619.0	0.0	0.0
29	13.5	48235.8	0.0	0.0	0.0	0.0	7235.4	0.0	0.0
30	13.5	45382.8	0.0	0.0	0.0	0.0	6807.4	0.0	0.0
31	13.4	42240.8	0.0	0.0	0.0	0.0	6336.1	0.0	0.0
32	13.3	38817.0	0.0	0.0	0.0	0.0	5822.5	0.0	0.0
33	13.2	35118.6	0.0	0.0	0.0	0.0	5267.8	0.0	0.0
34	10.3	24730.7	0.0	0.0	0.0	0.0	3709.6	0.0	0.0
35	2.8	6437.2	0.0	0.0	0.0	0.0	965.6	0.0	0.0
36	13.0	27356.2	0.0	0.0	0.0	0.0	4103.4	0.0	0.0
37	13.0	23466.4	0.0	0.0	0.0	0.0	3520.0	0.0	0.0
38	12.9	19322.6	0.0	0.0	0.0	0.0	2898.4	0.0	0.0
39	8.3	10200.2	0.0	0.0	0.0	0.0	1530.0	0.0	0.0
40	4.5	4232.0	0.0	0.0	0.0	0.0	634.8	0.0	0.0
41	9.8	3781.4	0.0	0.0	0.0	0.0	567.2	0.0	0.0

Failure Surface Specified By 43 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	173.73	233.29
2	188.62	235.09
3	203.49	237.06
4	218.34	239.20
5	233.16	241.51
6	247.95	244.00
7	262.71	246.65
8	277.45	249.48
9	292.14	252.47
10	306.81	255.63
11	321.43	258.96
12	336.02	262.46
13	350.56	266.13
14	365.06	269.96
15	379.52	273.97
16	393.93	278.13
17	408.29	282.47
18	422.60	286.96
19	436.86	291.63
20	451.06	296.45
21	465.21	301.44
22	479.29	306.60

23	493.32	311.91
24	507.28	317.39
25	521.19	323.02
26	535.02	328.82
27	548.79	334.77
28	562.49	340.89
29	576.11	347.16
30	589.67	353.58
31	603.14	360.17
32	616.55	366.90
33	629.87	373.80
34	643.11	380.84
35	656.27	388.04
36	669.35	395.38
37	682.34	402.88
38	695.25	410.53
39	708.06	418.32
40	710.75	420.00

Circle Center At X = 25.0 ; Y = 1526.8 and Radius, 1302.0

*** 1.380 ***

1

Failure Surface Specified By 40 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.34	231.79
2	185.16	234.09
3	199.96	236.53
4	214.74	239.12
5	229.49	241.84
6	244.21	244.71
7	258.91	247.72
8	273.57	250.86
9	288.21	254.15
10	302.81	257.58
11	317.38	261.15
12	331.92	264.86
13	346.41	268.70
14	360.87	272.69
15	375.30	276.81
16	389.68	281.07
17	404.02	285.47
18	418.32	290.01
19	432.57	294.68
20	446.78	299.48
21	460.94	304.44
22	475.05	309.52
23	489.12	314.74
24	503.13	320.09
25	517.09	325.57
26	531.00	331.19
27	544.85	336.94
28	558.65	342.83
29	572.39	348.84
30	586.07	354.99
31	599.70	361.27
32	613.26	367.68
33	626.76	374.22
34	640.19	380.88
35	653.57	387.68
36	666.87	394.60
37	680.11	401.65
38	693.28	408.83
39	706.39	416.13
40	713.17	420.00

Circle Center At X = -62.1 ; Y = 1779.1 and Radius, 1564.7

*** 1.383 ***

Failure Surface Specified By 40 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	173.73	233.29
2	188.63	234.98
3	203.52	236.85
4	218.38	238.89
5	233.21	241.10
6	248.02	243.47
7	262.81	246.02
8	277.56	248.73
9	292.28	251.62
10	306.97	254.67
11	321.62	257.88
12	336.23	261.27
13	350.80	264.82
14	365.34	268.54
15	379.82	272.42
16	394.27	276.47
17	408.66	280.68
18	423.01	285.06
19	437.31	289.60
20	451.55	294.31
21	465.74	299.17
22	479.87	304.20
23	493.94	309.39
24	507.96	314.74
25	521.91	320.25
26	535.80	325.92
27	549.62	331.74
28	563.37	337.73
29	577.06	343.87
30	590.67	350.16
31	604.22	356.62
32	617.68	363.22
33	631.07	369.98
34	644.39	376.89
35	657.62	383.96
36	670.77	391.17
37	683.84	398.53

38	696.82	406.04
39	709.72	413.70
40	720.05	420.00

Circle Center At X = 32.6 ; Y = 1539.0 and Radius, 1313.3

*** 1.386 ***

1

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.34	231.79
2	195.32	232.63
3	200.28	233.74
4	215.21	235.11
5	230.12	236.76
6	245.00	238.68
7	259.84	240.87
8	274.64	243.32
9	289.39	246.05
10	304.08	249.04
11	318.73	252.29
12	333.31	255.81
13	347.82	259.60
14	362.27	263.64
15	376.64	267.95
16	390.92	272.52
17	405.13	277.34
18	419.24	282.42
19	433.26	287.76
20	447.18	293.35
21	461.00	299.19
22	474.70	305.27
23	488.30	311.61
24	501.78	318.19
25	515.14	325.02
26	528.37	332.08
27	541.47	339.39
28	554.44	346.93
29	567.27	354.70
30	579.95	362.70
31	592.49	370.94
32	604.88	379.39
33	617.11	388.08
34	629.18	396.98
35	641.09	406.10
36	647.02	410.81

Circle Center At X = 131.7 ; Y = 1058.8 and Radius, 827.9

*** 1.386 ***

Failure Surface Specified By 37 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	180.51	236.27
2	195.50	236.91
3	210.47	237.82
4	225.42	239.00
5	240.35	240.44
6	255.25	242.15
7	270.12	244.13
8	284.95	246.37
9	299.74	248.88
10	314.48	251.66
11	329.17	254.70
12	343.80	258.00
13	358.38	261.56
14	372.88	265.39
15	387.31	269.47
16	401.67	273.81
17	415.95	278.41
18	430.14	283.27
19	444.24	288.38
20	458.25	293.74
21	472.16	299.35
22	485.97	305.21
23	499.67	311.31
24	513.26	317.66
25	526.74	324.26
26	540.09	331.09
27	553.32	338.16
28	566.42	345.47
29	579.38	353.01
30	592.21	360.79
31	604.90	368.79
32	617.44	377.02
33	629.83	385.47
34	642.07	394.14
35	654.15	403.03
36	666.07	412.14
37	675.99	420.00

Circle Center At X = 152.4 ; Y = 1072.2 and Radius, 836.4

*** 1.387 ***

1

Failure Surface Specified By 35 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	170.34	231.79
2	185.31	232.73
3	200.26	233.94

4	215.19	235.42
5	230.08	237.18
6	244.95	239.21
7	259.77	241.52
8	274.54	244.09
9	289.27	246.94
10	303.94	250.06
11	318.56	253.45
12	333.11	257.10
13	347.58	261.02
14	361.99	265.21
15	376.31	269.66
16	390.55	274.37
17	404.71	279.34
18	418.76	284.57
19	432.72	290.06
20	446.58	295.81
21	460.33	301.81
22	473.96	308.05
23	487.48	314.55
24	500.88	321.30
25	514.15	328.29
26	527.29	335.52
27	540.30	343.00
28	553.16	350.71
29	565.89	358.66
30	578.46	366.84
31	590.88	375.24
32	603.15	383.88
33	615.25	392.74
34	627.19	401.82
35	629.91	403.96

Circle Center At X = 126.9 ; Y = 1047.3 and Radius, 816.7

*** 1.389 ***

Failure Surface Specified By 37 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.07	242.25
2	209.03	243.27
3	223.98	244.53
4	238.90	246.03
5	253.80	247.78
6	268.67	249.76
7	283.50	251.99
8	298.30	254.45
9	313.06	257.16
10	327.76	260.10
11	342.42	263.28
12	357.03	266.69
13	371.58	270.34
14	386.07	274.23
15	400.49	278.35
16	414.84	282.70
17	429.13	287.28
18	443.33	292.10
19	457.46	297.14
20	471.51	302.41
21	485.46	307.90
22	499.33	313.62
23	513.10	319.57
24	526.78	325.73
25	540.35	332.12
26	553.82	338.72
27	567.18	345.54
28	580.42	352.58
29	593.55	359.83
30	606.57	367.29
31	619.46	374.96
32	632.22	382.84
33	644.86	390.92
34	657.36	399.20
35	669.73	407.69
36	681.96	416.37
37	686.90	420.00

Circle Center At X = 138.4 ; Y = 1168.9 and Radius, 928.5

*** 1.391 ***

1

Failure Surface Specified By 36 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	177.12	234.78
2	192.01	236.59
3	206.87	238.62
4	221.70	240.86
5	236.50	243.30
6	251.27	245.96
7	265.99	248.83
8	280.67	251.90
9	295.31	255.18
10	309.90	258.67
11	324.43	262.37
12	338.92	266.27
13	353.34	270.38
14	367.71	274.69
15	382.01	279.21
16	396.25	283.93
17	410.42	288.85
18	424.52	293.97
19	438.55	299.29
20	452.49	304.81
21	466.36	310.52
22	480.15	316.43
23	493.85	322.54
24	507.46	328.84
25	520.98	335.34
26	534.41	342.02

27	547.74	348.90
28	560.97	355.96
29	574.11	363.21
30	587.13	370.65
31	600.05	378.27
32	612.86	386.07
33	625.56	394.05
34	638.15	402.22
35	650.61	410.56
36	656.43	414.57

Circle Center At X = 56.8 ; Y = 1284.2 and Radius, 1056.3

*** 1.391 ***

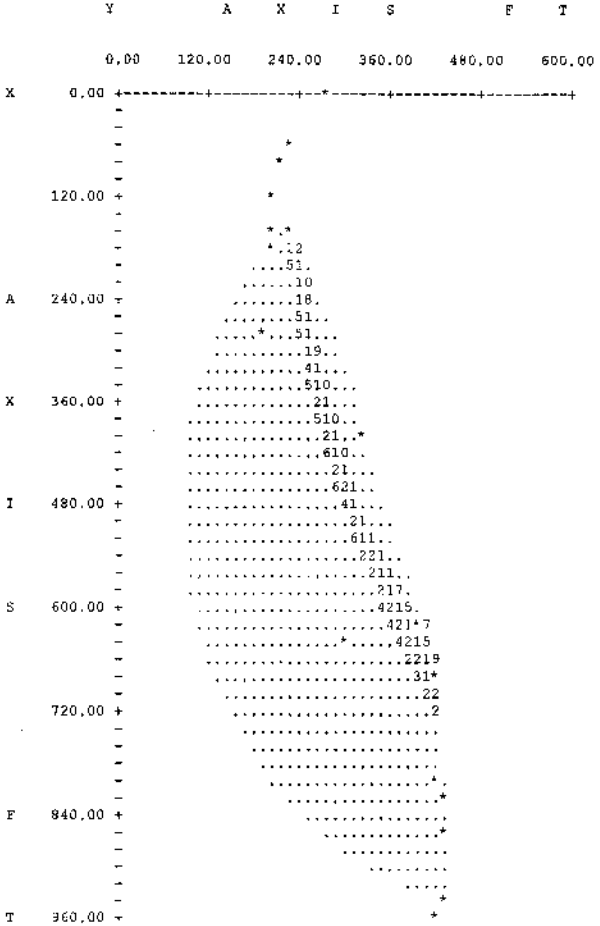
Failure Surface Specified By 37 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.07	242.25
2	208.93	244.25
3	223.77	246.44
4	238.59	248.80
5	253.37	251.34
6	268.12	254.06
7	282.84	256.96
8	297.52	260.04
9	312.16	263.30
10	326.76	266.73
11	341.32	270.34
12	355.84	274.12
13	370.30	278.08
14	384.72	282.22
15	399.09	286.53
16	413.41	291.01
17	427.67	295.66
18	441.87	300.49
19	456.01	305.49
20	470.09	310.66
21	484.11	316.00
22	498.06	321.51
23	511.95	327.18
24	525.76	333.03
25	539.50	339.04
26	553.17	345.22
27	566.77	351.56
28	580.29	358.06
29	593.72	364.73
30	607.07	371.56
31	620.34	378.56
32	633.53	385.71
33	646.62	393.02
34	659.63	400.49
35	672.55	408.11
36	685.37	415.90
37	691.96	420.00

Circle Center At X = 35.8 ; Y = 1471.9 and Radius, 1239.8

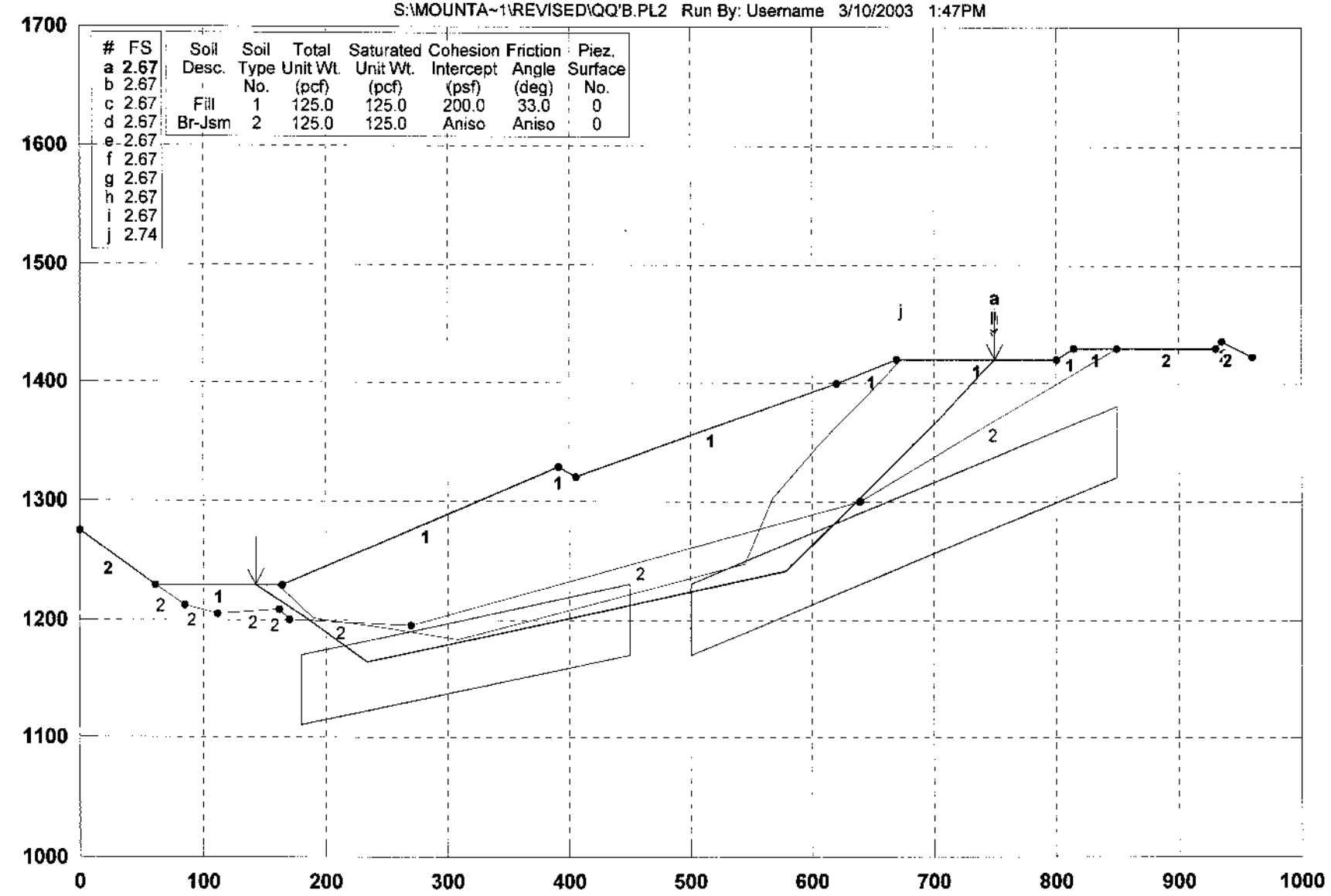
*** 1.396 ***

1



Mountain Gate / Section: Q-Q' , Static

S:\MOUNTA~1\REVISED\QQ'B.PL2 Run By: Username 3/10/2003 1:47PM



#	FS
a	2.67
b	2.67
c	2.67
d	2.67
e	2.67
f	2.67
g	2.67
h	2.67
i	2.67
j	2.74

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	33.0	0
Br-Jsm	2	125.0	125.0	Aniso	Aniso	0

GSTABL7 FSmin=2.67

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

GSTABL7

Figure E-71

*** 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: 1:47PM
Run By: Username
Input Data Filename: S:qq'b.
Output Filename: S:qq'b.OUT
Unit System: English

Plotted Output Filename: S:qq'b.PLT

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

BOUNDARY COORDINATES

12 Top Boundaries
19 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	275.00	61.00	229.00	2
2	61.00	229.00	164.00	229.00	1
3	164.00	229.00	391.00	329.00	1
4	391.00	329.00	405.00	326.00	1
5	405.00	326.00	620.00	405.00	1
6	620.00	400.00	670.00	420.00	1
7	670.00	420.00	800.00	420.00	1
8	800.00	420.00	815.00	430.00	1
9	815.00	430.00	850.00	430.00	1
10	850.00	430.00	930.00	430.00	2
11	930.00	430.00	935.00	435.00	2
12	935.00	435.00	960.00	422.00	2
13	61.00	229.00	85.00	212.00	2
14	85.00	212.00	111.00	205.00	2
15	111.00	205.00	162.00	209.00	2
16	162.00	209.00	170.00	200.00	2
17	170.00	200.00	270.00	195.00	2
18	270.00	195.00	640.00	300.00	2
19	640.00	300.00	850.00	430.00	2

1

ISOTROPIC SOIL PARAMETERS

2 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	33.0	0.00	0.0	0
2	125.0	125.0	1500.0	35.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 2 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	11.0	1500.0	35.0
2	15.0	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 60.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	180.00	140.00	450.00	200.00	60.00
2	500.00	200.00	850.00	350.00	60.00

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 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	142.98	229.00
2	185.72	200.01
3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

*** 2.671 ***

Individual data on the 16 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	21.0	18723.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	21.7	71701.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	1.2	5787.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	47.3	399856.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	35.8	443340.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	121.0	1760343.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	14.0	216358.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	173.2	2831832.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	41.7	673569.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.5	7518.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	14.5	203831.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	26.9	331741.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	8.1	88169.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	33.9	287201.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	40.2	141225.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	5.3	1936.4	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	142.98	229.00
2	185.72	200.01
3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

*** 2.671 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	142.98	229.00
2	185.72	200.01
3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

*** 2.671 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	142.98	229.00
2	185.72	200.01
3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

*** 2.671 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	142.98	229.00
2	185.72	200.01

3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

*** 2.671 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	142.98	229.00
2	185.72	200.01
3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

*** 2.671 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	142.98	229.00
2	185.72	200.01
3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

*** 2.671 ***

Failure Surface Specified By 9 Coordinate Points

Point	X-Surf	Y-Surf

No.	(ft)	(ft)
1	142.98	229.00
2	185.72	200.01
3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

*** 2.671 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	142.98	229.00
2	185.72	200.01
3	234.23	164.70
4	578.34	240.69
5	620.51	283.36
6	661.94	326.76
7	703.94	369.61
8	744.13	414.16
9	749.44	420.00

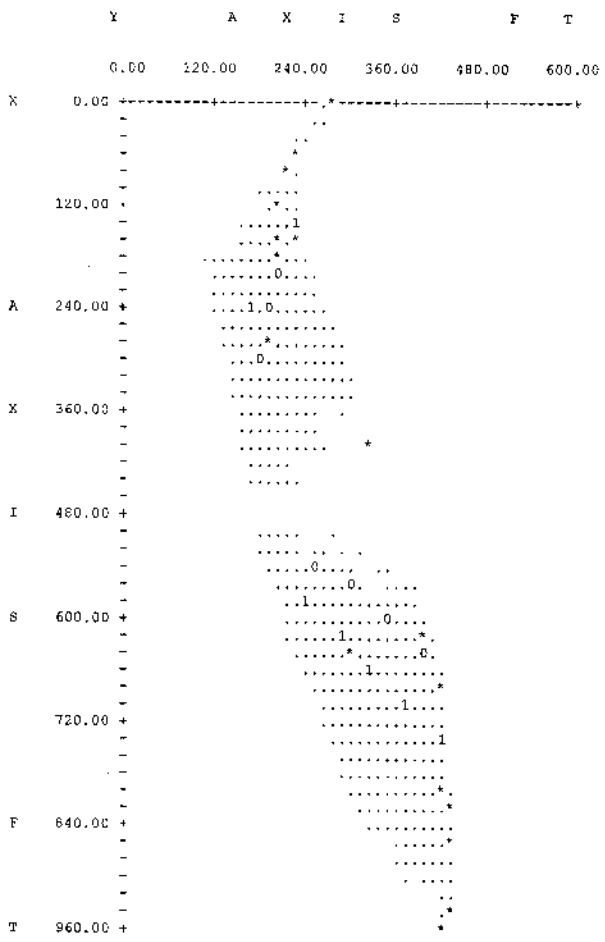
*** 2.671 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	160.46	229.00
2	190.38	201.50
3	249.58	193.72
4	308.72	183.63
5	545.31	246.93
6	567.92	302.28
7	606.28	348.42
8	647.53	391.98
9	673.35	420.00

*** 2.737 ***

1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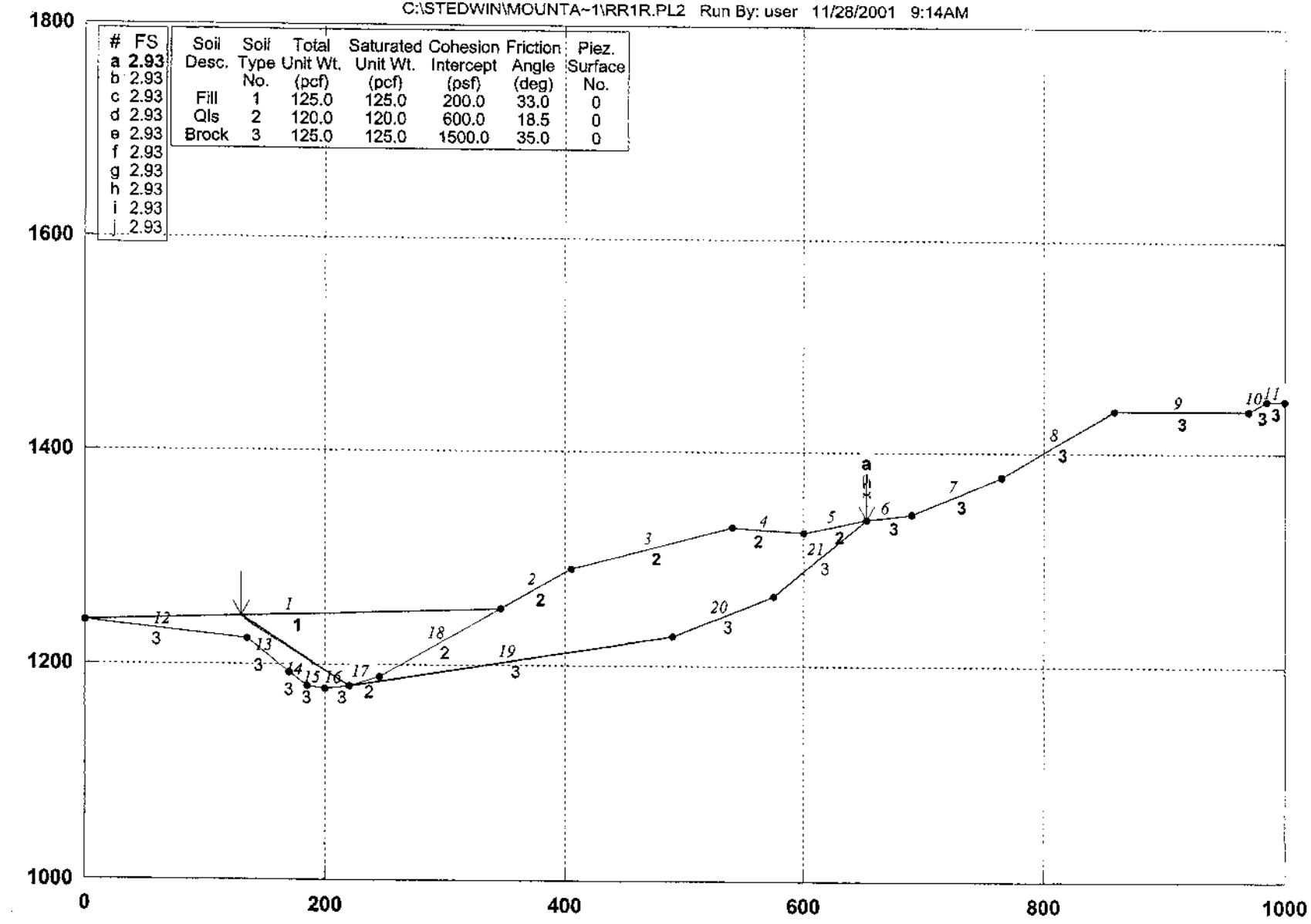
0.00 120.00 240.00 360.00 480.00 600.00
X 0.00
120.00
A 240.00
X 360.00
I 480.00
S 600.00
720.00
F 640.00
T 960.00

Mountain Gate, 03-0381-001, X-Sec:R-R' Check Qls

C:\STEDWIN\MOUNTA~1\RR1R.PL2 Run By: user 11/28/2001 9:14AM



#	FS
a	2.93
b	2.93
c	2.93
d	2.93
e	2.93
f	2.93
g	2.93
h	2.93
i	2.93
j	2.93

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	33.0	0
Qls	2	120.0	120.0	600.0	18.5	0
Brock	3	125.0	125.0	1500.0	35.0	0

GSTABL7 FSmin=2.93

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

STED

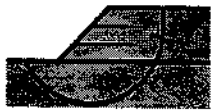


Figure E-72

*** 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:	11/28/2001
Time of Run:	9:14AM
Run By:	user
Input Data Filename:	C:rr1r.
Output Filename:	C:rr1r.OUT
Unit System:	English
Plotted Output Filename:	C:rr1r.PLT

PROBLEM DESCRIPTION Mountain Gate, 03-0381-001, X-Sec:R-R'
Check Qls

BOUNDARY COORDINATES

11 Top Boundaries
21 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	240.00	346.00	252.00	1
2	346.00	252.00	405.00	290.00	2
3	405.00	290.00	540.00	330.00	2
4	540.00	330.00	600.00	325.00	2
5	600.00	325.00	652.00	337.00	2
6	652.00	337.00	690.00	342.00	3
7	690.00	342.00	765.00	378.00	3
8	765.00	378.00	859.00	440.00	3
9	859.00	440.00	970.00	440.00	3
10	970.00	440.00	985.00	450.00	3
11	985.00	450.00	1000.00	450.00	3
12	0.00	240.00	135.00	224.00	3
13	135.00	224.00	170.00	192.00	3
14	170.00	192.00	185.00	180.00	3
15	185.00	180.00	200.00	178.00	3
16	200.00	178.00	220.00	180.00	3
17	220.00	180.00	245.00	189.00	2

18	245.00	189.00	346.00	252.00	2
19	220.00	180.00	490.00	228.00	3
20	490.00	228.00	575.00	265.00	3
21	575.00	265.00	652.00	337.00	3

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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	600.0	18.5	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	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.

2000 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 100.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	220.00	180.00	220.00	180.00	0.00
2	490.00	228.00	490.00	228.00	0.00
3	575.00	265.00	575.00	265.00	0.00
4	652.00	337.00	652.00	337.00	0.00

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 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	130.19	244.52
2	138.88	238.47
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

Individual data on the 10 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	8.7	3443.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	81.1	375071.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	25.0	205469.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	101.0	703758.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	59.0	448557.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	85.0	837911.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	50.0	502261.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	35.0	298869.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	25.0	148060.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	52.0	114264.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	130.19	244.52
2	138.88	238.47

3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	130.19	244.52
2	138.88	238.47
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	130.19	244.52
2	138.88	238.47
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

1

Failure Surface Specified By 6 Coordinate Points

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

1	130.19	244.52
2	138.88	238.47
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.47	244.46
2	138.04	237.30
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.47	244.46
2	138.04	237.30
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

Failure Surface Specified By 6 Coordinate Points

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

1	128.47	244.46
2	138.04	237.30
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.47	244.46
2	138.04	237.30
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

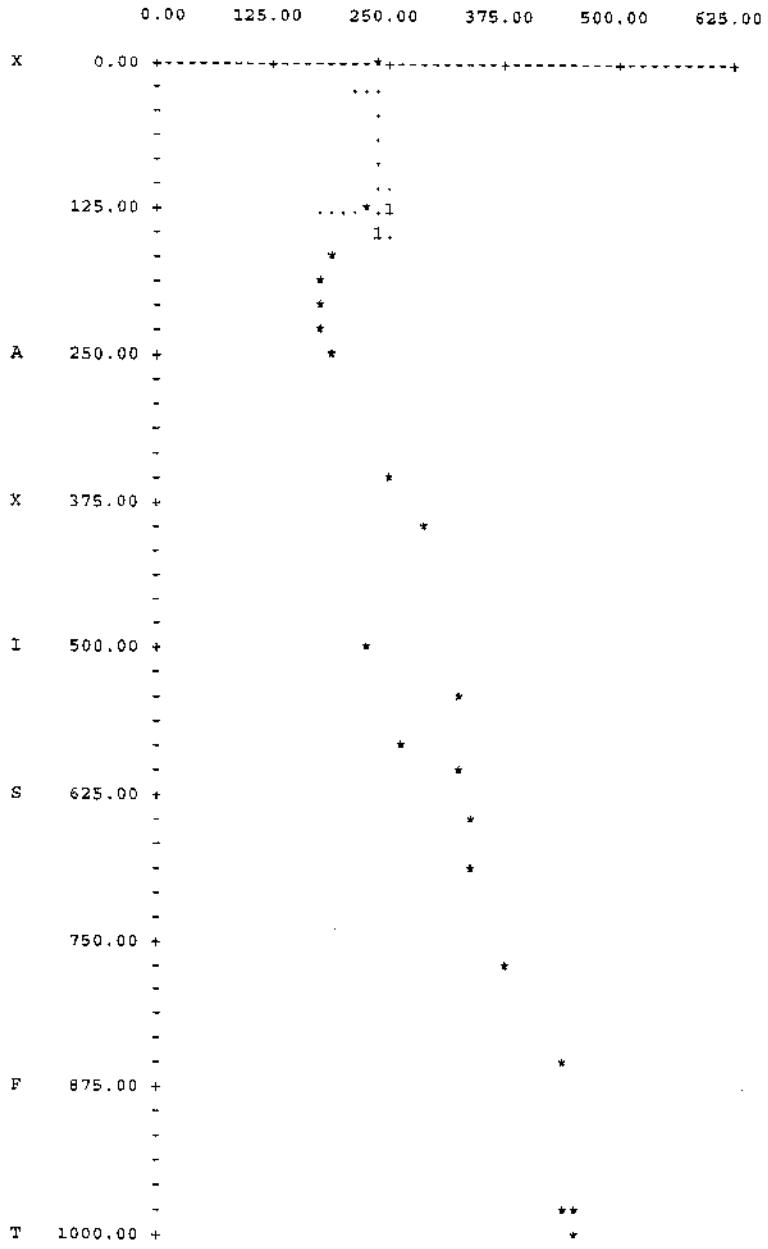
Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.47	244.46
2	138.04	237.30
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 2.933 ***

1

Y A X I S F T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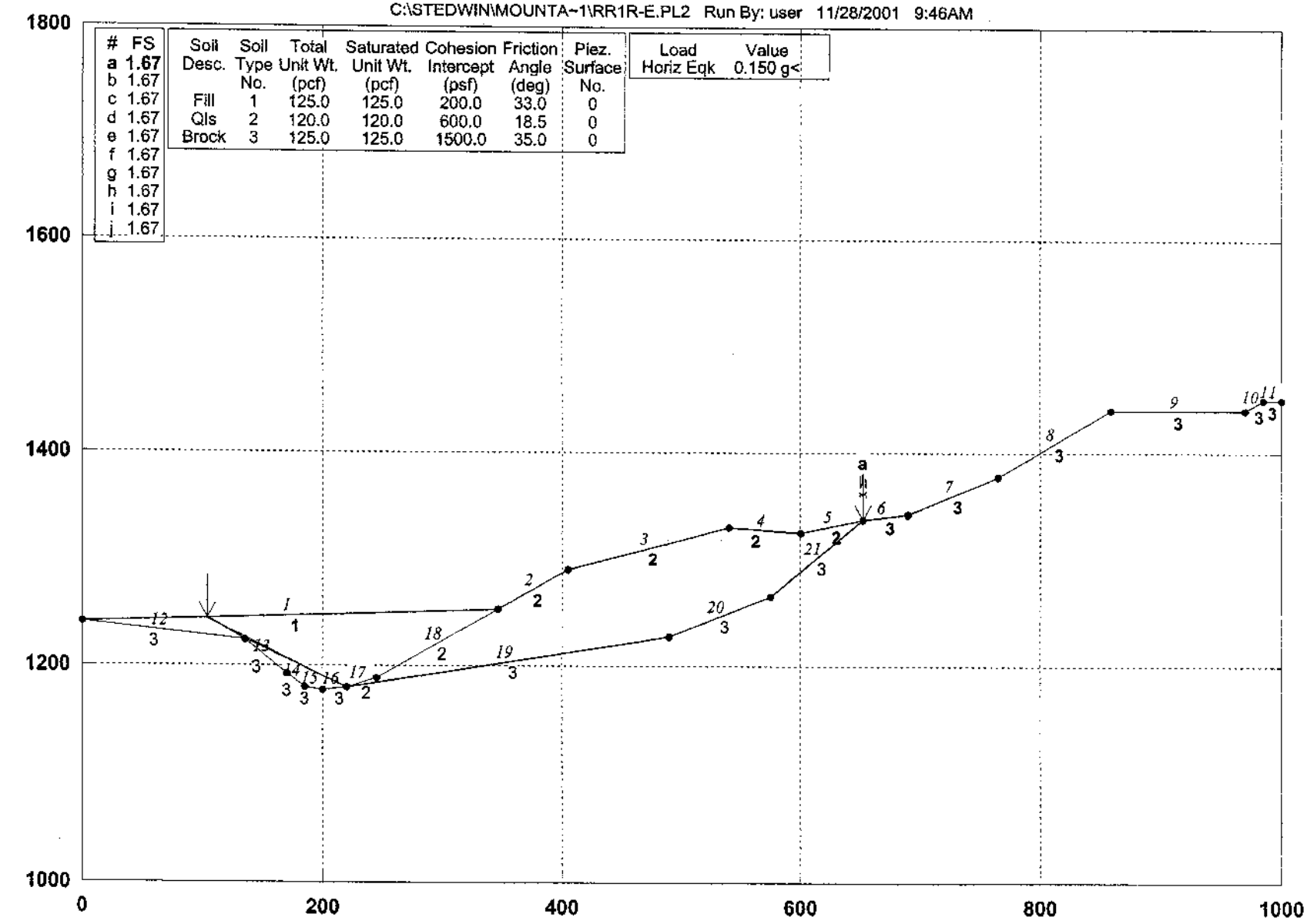
250.00
375.00
500.00
625.00
X 0.00
125.00
A 250.00
X 375.00
I 500.00
S 625.00
750.00
F 875.00
T 1000.00

Mountain Gate, 03-0381-001, X-Sec:R-R' Pseudo static, Check Qls

C:\STEDWIN\MOUNTA~1\RR1R-E.PL2 Run By: user 11/28/2001 9:46AM



GSTABL7 FSmin=1.67

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

STED

Figure E-73

*** 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: 11/28/2001
Time of Run: 9:46AM
Run By: user
Input Data Filename: C:rr1r-e.
Output Filename: C:rr1r-e.OUT
Unit System: English

Plotted Output Filename: C:rr1r-e.PLT

PROBLEM DESCRIPTION Mountain Gate, 03-0381-001, X-Sec:R-R'
Pseudo static, Check Qls

BOUNDARY COORDINATES

11 Top Boundaries
21 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	240.00	346.00	252.00	1
2	346.00	252.00	405.00	290.00	2
3	405.00	290.00	540.00	330.00	2
4	540.00	330.00	600.00	325.00	2
5	600.00	325.00	652.00	337.00	2
6	652.00	337.00	690.00	342.00	3
7	690.00	342.00	765.00	378.00	3
8	765.00	378.00	859.00	440.00	3
9	859.00	440.00	970.00	440.00	3
10	970.00	440.00	985.00	450.00	3
11	985.00	450.00	1000.00	450.00	3
12	0.00	240.00	135.00	224.00	3
13	135.00	224.00	170.00	192.00	3
14	170.00	192.00	185.00	180.00	3
15	185.00	180.00	200.00	178.00	3
16	200.00	178.00	220.00	180.00	3
17	220.00	180.00	245.00	189.00	2

18	245.00	189.00	346.00	252.00	2
19	220.00	180.00	490.00	228.00	3
20	490.00	228.00	575.00	265.00	3
21	575.00	265.00	652.00	337.00	3

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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	600.0	18.5	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	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.

2000 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 100.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	220.00	180.00	220.00	180.00	0.00
2	490.00	228.00	490.00	228.00	0.00
3	575.00	265.00	575.00	265.00	0.00
4	652.00	337.00	652.00	337.00	0.00

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 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	103.46	243.59
2	131.66	226.86
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

Individual data on the 10 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	28.2	31206.3	0.0	0.0	0.0	0.0	4680.9	0.0	0.0
2	88.3	471171.3	0.0	0.0	0.0	0.0	70675.7	0.0	0.0
3	25.0	205469.5	0.0	0.0	0.0	0.0	30820.4	0.0	0.0
4	101.0	703758.1	0.0	0.0	0.0	0.0	*******	0.0	0.0
5	59.0	448557.4	0.0	0.0	0.0	0.0	67283.6	0.0	0.0
6	85.0	837911.1	0.0	0.0	0.0	0.0	*******	0.0	0.0
7	50.0	502261.4	0.0	0.0	0.0	0.0	75339.2	0.0	0.0
8	35.0	298869.1	0.0	0.0	0.0	0.0	44830.4	0.0	0.0
9	25.0	148060.0	0.0	0.0	0.0	0.0	22209.0	0.0	0.0
10	52.0	114264.9	0.0	0.0	0.0	0.0	17139.7	0.0	0.0

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	103.46	243.59
2	131.66	226.86
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	103.46	243.59
2	131.66	226.86
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	103.46	243.59
2	131.66	226.86
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	103.46	243.59
2	131.66	226.86
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	101.60	243.52
2	132.10	227.69
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	101.60	243.52
2	132.10	227.69
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	101.60	243.52
2	132.10	227.69
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	101.60	243.52
2	132.10	227.69
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

*** 1.670 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	101.60	243.52
2	132.10	227.69
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	652.00	337.00

```
      ***     1.670    ***

1

          Y           A     X     I     S           F     T

              0.00     125.00     250.00     375.00     500.00     625.00
X       0.00 +---------+--------*+---------+---------+---------+
             -                ...
             -                  .
             -                  .
             -                  .
             -                  1.
     125.00  +             ....*..
             -                  ..
             -              *
             -             *
             -             *
             -             *
A    250.00  +              *
             -
             -
             -
             -
             -                   *
X    375.00  +
             -                      *
             -
             -
             -
             -
I    500.00  +                 *
             -
             -                         *
             -
             -                    *
             -                         *
S    625.00  +
             -                          *
             -
             -                          *
             -
             -
     750.00  +
             -                             *
             -
             -
             -
             -                                  *
F    875.00  +
             -
             -
```



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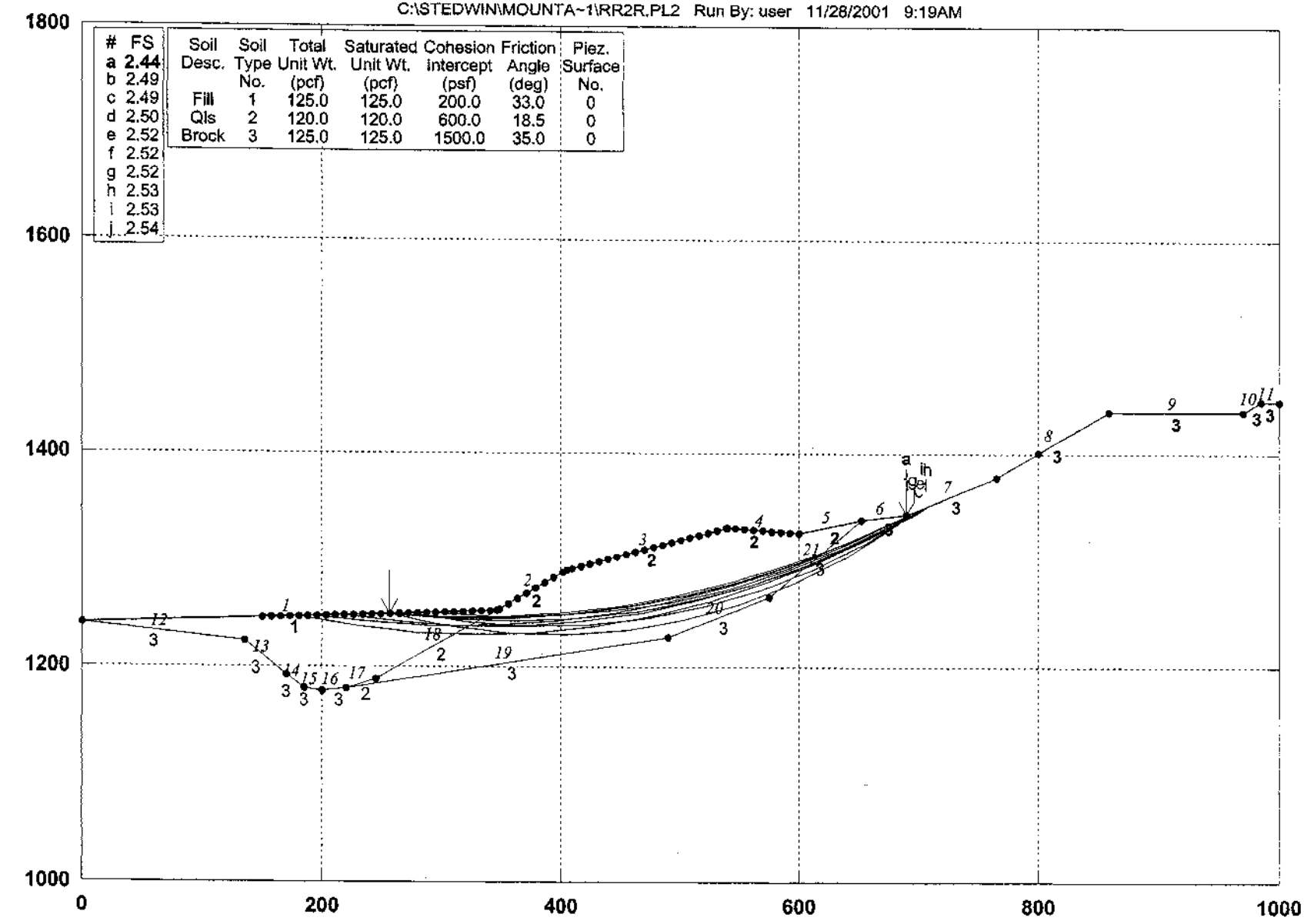
             -
             -
             -                                  **
T   1000.00  +                                   *
```

Mountain Gate, 03-0381-001, X-Sec:R-R' Check Qls

C:\STEDWIN\MOUNTA~1\RR2R.PL2 Run By: user 11/28/2001 9:19AM



#	FS
a	2.44
b	2.49
c	2.49
d	2.50
e	2.52
f	2.52
g	2.52
h	2.53
i	2.53
j	2.54

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	33.0	0
Qls	2	120.0	120.0	600.0	18.5	0
Brock	3	125.0	125.0	1500.0	35.0	0

GSTABL7 FSmin=2.44

Safety Factors Are Calculated By The Modified Bishop Method

STED

Figure E-74

*** 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: 11/28/2001
Time of Run: 9:19AM
Run By: user
Input Data Filename: C:rr2r.
Output Filename: C:rr2r.OUT
Unit System: English

Plotted Output Filename: C:rr2r.PLT

PROBLEM DESCRIPTION Mountain Gate, 03-0381-001, X-Sec:R-R'
Check Qls

BOUNDARY COORDINATES

11 Top Boundaries
21 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	240.00	346.00	252.00	1
2	346.00	252.00	405.00	290.00	2
3	405.00	290.00	540.00	330.00	2
4	540.00	330.00	600.00	325.00	2
5	600.00	325.00	652.00	337.00	2
6	652.00	337.00	690.00	342.00	3
7	690.00	342.00	765.00	378.00	3
8	765.00	378.00	859.00	440.00	3
9	859.00	440.00	970.00	440.00	3
10	970.00	440.00	985.00	450.00	3
11	985.00	450.00	1000.00	450.00	3
12	0.00	240.00	135.00	224.00	3
13	135.00	224.00	170.00	192.00	3
14	170.00	192.00	185.00	180.00	3
15	185.00	180.00	200.00	178.00	3
16	200.00	178.00	220.00	180.00	3
17	220.00	180.00	245.00	189.00	2
18	245.00	189.00	346.00	252.00	2
19	220.00	180.00	490.00	228.00	3
20	490.00	228.00	575.00	265.00	3
21	575.00	265.00	652.00	337.00	3

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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	600.0	18.5	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0

1

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

3600 Trial Surfaces Have Been Generated.

60 Surfaces Initiate From Each Of 60 Points Equally Spaced
Along The Ground Surface Between X = 150.00(ft)
and X = 600.00(ft)

Each Surface Terminates Between X = 690.00(ft)
and X = 800.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)

50.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	256.78	248.91
2	306.66	245.49
3	356.66	245.57
4	406.54	249.14
5	456.04	256.19
6	504.92	266.67
7	552.96	280.55
8	599.91	297.75
9	645.54	318.18
10	689.64	341.75
11	690.14	342.06

Circle Center At X = 330.5 ; Y = 960.4 and Radius, 715.3

*** 2.441 ***

Individual data on the 18 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	49.9	16039.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	29.0	20370.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	10.4	7962.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	10.7	12633.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	48.3	157389.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	1.5	7582.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	49.5	268052.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	48.9	298817.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	35.1	223354.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	13.0	78984.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	46.9	213059.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.1	293.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

13	19.3	58204.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	26.2	64357.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	6.5	13120.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	37.6	36622.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.4	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	272.03	249.43
2	321.31	240.95
3	371.18	237.32
4	421.16	238.58
5	470.78	244.73
6	519.56	255.69
7	567.04	271.38
8	612.75	291.63
9	656.27	316.26
10	697.17	345.02
11	698.27	345.97

Circle Center At X = 383.3 ; Y = 747.9 and Radius, 510.7

*** 2.486 ***

1

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	294.92	250.23
2	344.80	246.80
3	394.79	247.39
4	444.58	251.99
5	493.84	260.59
6	542.24	273.11
7	589.48	289.49
8	635.26	309.61
9	679.26	333.35
10	700.04	346.82

Circle Center At X = 362.7 ; Y = 863.8 and Radius, 617.3

*** 2.495 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	264.41	249.17
2	314.12	243.84
3	364.10	242.51
4	414.03	245.17
5	463.59	251.82
6	512.46	262.41
7	560.32	276.87
8	606.87	295.11
9	651.82	317.02
10	694.87	342.44
11	703.32	348.39

Circle Center At X = 355.8 ; Y = 867.4 and Radius, 624.9

*** 2.501 ***

1

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	218.64	247.58
2	268.16	240.65
3	318.06	237.47
4	368.06	238.05
5	417.87	242.39
6	467.21	250.47
7	515.81	262.24
8	563.38	277.64
9	609.65	296.57
10	654.37	318.93
11	697.28	344.60
12	701.27	347.41

Circle Center At X = 335.4 ; Y = 899.9 and Radius, 662.6

*** 2.520 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	195.76	246.79
2	245.40	240.78
3	295.33	238.10
4	345.32	238.77
5	395.16	242.77
6	444.63	250.09
7	493.49	260.70
8	541.53	274.56
9	588.54	291.59
10	634.31	311.72
11	678.63	334.87
12	691.43	342.69

Circle Center At X = 310.4 ; Y = 983.0 and Radius, 745.0

*** 2.523 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	256.78	248.91
2	305.40	237.23
3	354.99	230.84
4	404.98	229.80
5	454.79	234.12
6	503.85	243.76
7	551.60	258.61
8	597.48	278.49
9	640.96	303.17
10	681.54	332.37
11	694.90	344.35

Circle Center At X = 389.7 ; Y = 695.2 and Radius, 465.7

*** 2.524 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	264.41	249.17
2	314.10	243.60
3	364.07	242.06
4	414.01	244.55
5	463.59	251.06
6	512.47	261.55
7	560.36	275.94
8	606.93	294.14
9	651.87	316.04
10	694.91	341.49
11	707.59	350.44

Circle Center At X = 358.2 ; Y = 861.7 and Radius, 619.7

*** 2.525 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	249.15	248.64
2	299.07	245.69
3	349.06	245.98
4	398.94	249.53
5	448.48	256.30
6	497.47	266.28
7	545.71	279.43
8	593.00	295.68
9	639.13	314.96
10	683.91	337.21
11	702.47	347.98

Circle Center At X = 319.5 ; Y = 1014.5 and Radius, 769.1

*** 2.534 ***

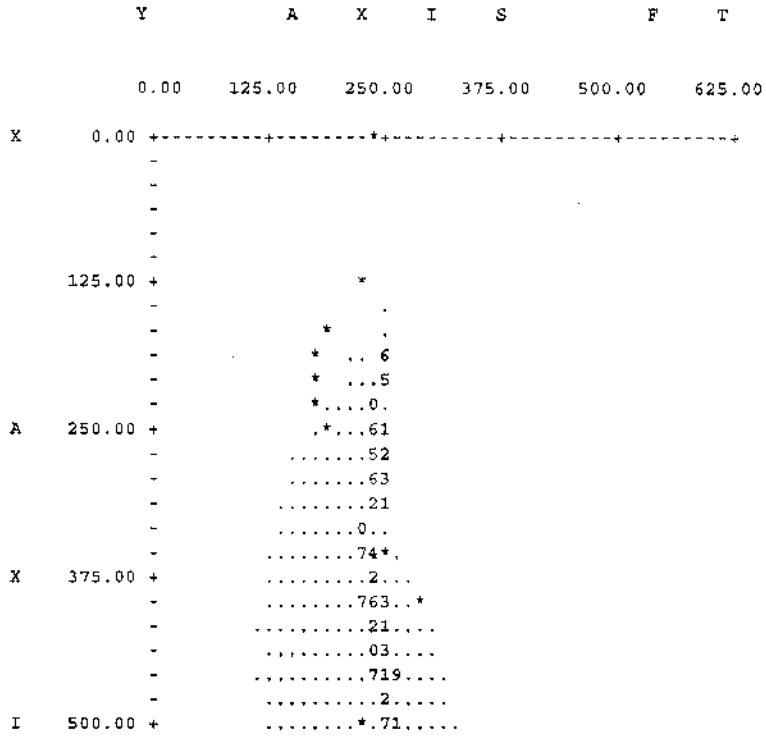
Failure Surface Specified By 12 Coordinate Points

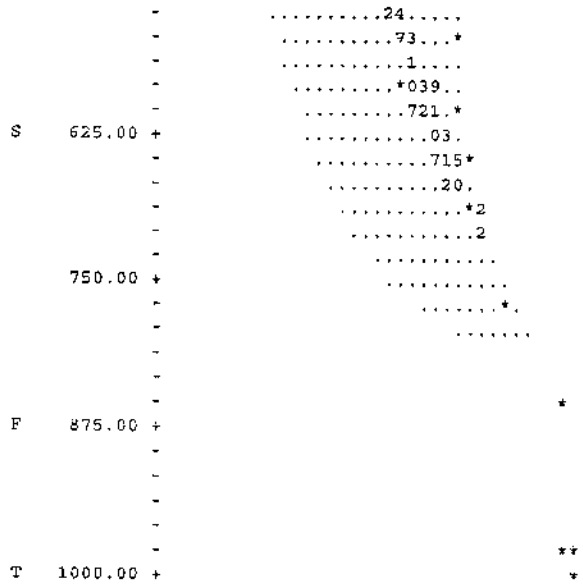
Point No.	X-Surf (ft)	Y-Surf (ft)
1	180.51	246.26
2	229.63	236.91
3	279.32	231.37
4	329.29	229.68
5	379.24	231.84
6	428.88	237.85
7	477.91	247.67
8	526.03	261.23
9	572.97	278.47
10	618.43	299.27
11	662.16	323.52
12	690.58	342.28

Circle Center At X = 326.1 ; Y = 875.4 and Radius, 645.8

*** 2.539 ***

1




S
625.00
750.00
F
875.00
T
1000.00

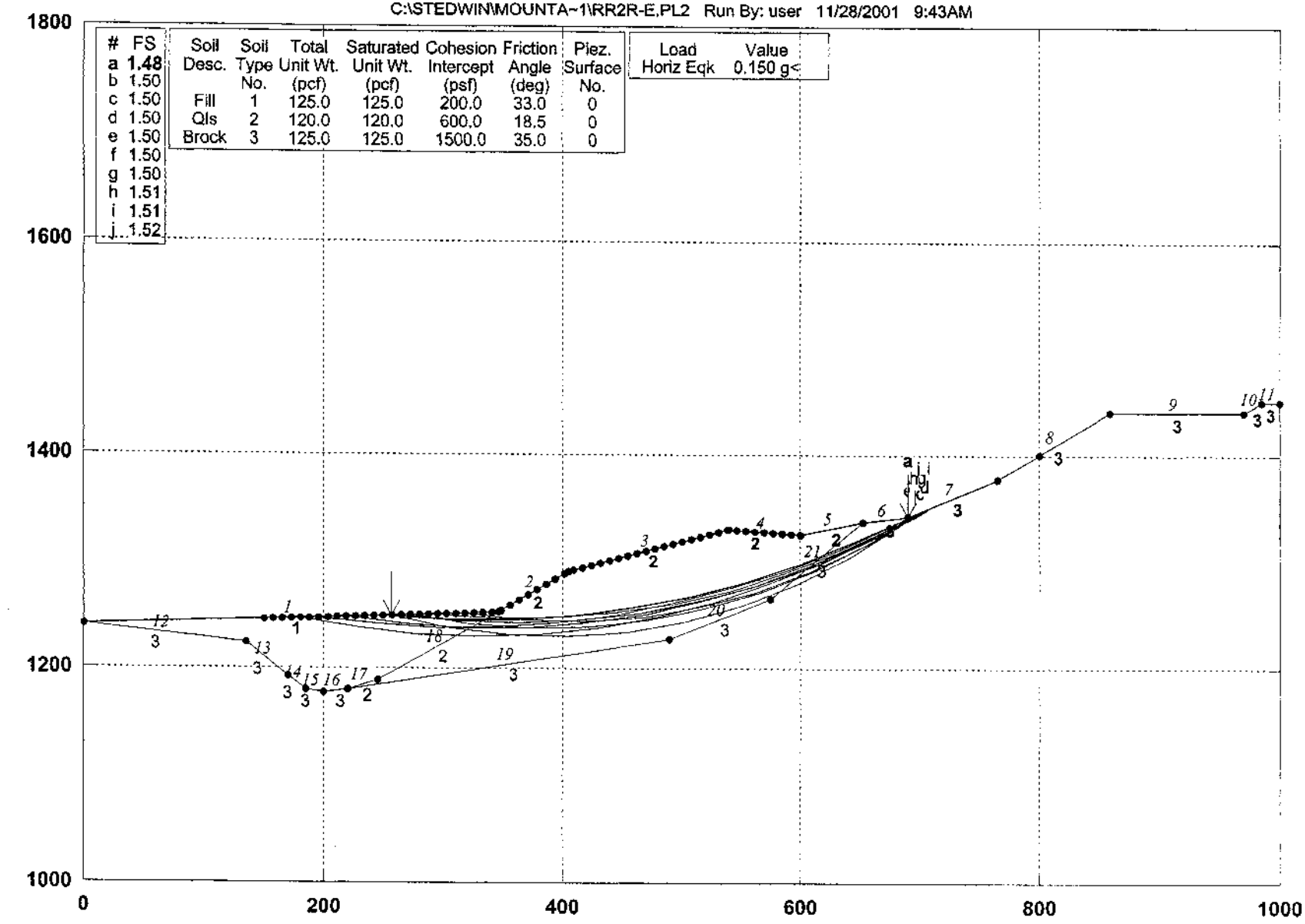
Mountain Gate, 03-0381-001, X-Sec:R-R' Pseudo static, Check Qls

C:\STEDWIN\MOUNTA~1\RR2R-E.PL2 Run By: user 11/28/2001 9:43AM

#	FS
a	1.48
b	1.50
c	1.50
d	1.50
e	1.50
f	1.50
g	1.50
h	1.51
i	1.51
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.
Fill	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	600.0	18.5	0
Brock	3	125.0	125.0	1500.0	35.0	0

Load	Value
Horiz Eqk	0.150 g<



GSTABL7 FSmin=1.48

Safety Factors Are Calculated By The Modified Bishop Method

STED

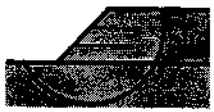


Figure E-75

Figure E-94

*** 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:	11/28/2001
Time of Run:	9:43AM
Run By:	user
Input Data Filename:	C:rr2r-e.
Output Filename:	C:rr2r-e.OUT
Unit System:	English
Plotted Output Filename:	C:rr2r-e.PLT

PROBLEM DESCRIPTION Mountain Gate, 03-0381-001, X-Sec:R-R'
Pseudo static, Check Qls

BOUNDARY COORDINATES

11 Top Boundaries
21 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	240.00	346.00	252.00	1
2	346.00	252.00	405.00	290.00	2
3	405.00	290.00	540.00	330.00	2
4	540.00	330.00	600.00	325.00	2
5	600.00	325.00	652.00	337.00	2
6	652.00	337.00	690.00	342.00	3
7	690.00	342.00	765.00	378.00	3
8	765.00	378.00	859.00	440.00	3
9	859.00	440.00	970.00	440.00	3
10	970.00	440.00	985.00	450.00	3
11	985.00	450.00	1000.00	450.00	3
12	0.00	240.00	135.00	224.00	3
13	135.00	224.00	170.00	192.00	3
14	170.00	192.00	185.00	180.00	3
15	185.00	180.00	200.00	178.00	3
16	200.00	178.00	220.00	180.00	3
17	220.00	180.00	245.00	189.00	2

18	245.00	189.00	346.00	252.00	2
19	220.00	180.00	490.00	228.00	3
20	490.00	228.00	575.00	265.00	3
21	575.00	265.00	652.00	337.00	3

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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	600.0	18.5	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	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)

1

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

3600 Trial Surfaces Have Been Generated.

60 Surfaces Initiate From Each Of 60 Points Equally Spaced
Along The Ground Surface Between X = 150.00(ft)
and X = 600.00(ft)

Each Surface Terminates Between X = 690.00(ft)
and X = 800.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)

50.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	256.78	248.91
2	306.66	245.49
3	356.66	245.57
4	406.54	249.14
5	456.04	256.19
6	504.92	266.67
7	552.96	280.55
8	599.91	297.75
9	645.54	318.18
10	689.64	341.75
11	690.14	342.06

Circle Center At X = 330.5 ; Y = 960.4 and Radius, 715.3

*** 1.479 ***

Individual data on the 18 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	49.9	16039.6	0.0	0.0	0.0	0.0	2405.9	0.0	0.0
2	29.0	20370.6	0.0	0.0	0.0	0.0	3055.6	0.0	0.0
3	10.4	7962.0	0.0	0.0	0.0	0.0	1194.3	0.0	0.0
4	10.7	12633.6	0.0	0.0	0.0	0.0	1895.0	0.0	0.0
5	48.3	157389.7	0.0	0.0	0.0	0.0	23608.5	0.0	0.0
6	1.5	7582.1	0.0	0.0	0.0	0.0	1137.3	0.0	0.0
7	49.5	268052.6	0.0	0.0	0.0	0.0	40207.9	0.0	0.0

8	48.9	298817.9	0.0	0.0	0.0	0.0	44822.7	0.0	0.0
9	35.1	223354.5	0.0	0.0	0.0	0.0	33503.2	0.0	0.0
10	13.0	78984.7	0.0	0.0	0.0	0.0	11847.7	0.0	0.0
11	46.9	213059.3	0.0	0.0	0.0	0.0	31958.9	0.0	0.0
12	0.1	293.1	0.0	0.0	0.0	0.0	44.0	0.0	0.0
13	19.3	58204.7	0.0	0.0	0.0	0.0	8730.7	0.0	0.0
14	26.2	64357.6	0.0	0.0	0.0	0.0	9653.6	0.0	0.0
15	6.5	13120.8	0.0	0.0	0.0	0.0	1968.1	0.0	0.0
16	37.6	36622.1	0.0	0.0	0.0	0.0	5493.3	0.0	0.0
17	0.4	5.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
18	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	272.03	249.43
2	321.31	240.95
3	371.18	237.32
4	421.16	238.58
5	470.78	244.73
6	519.56	255.69
7	567.04	271.38
8	612.75	291.63
9	656.27	316.26
10	697.17	345.02
11	698.27	345.97

Circle Center At X = 383.3 ; Y = 747.9 and Radius, 510.7

*** 1.498 ***

1

Failure Surface Specified By 10 Coordinate Points

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

1	294.92	250.23
2	344.80	246.80
3	394.79	247.39
4	444.58	251.99
5	493.84	260.59
6	542.24	273.11
7	589.48	289.49
8	635.26	309.61
9	679.26	333.35
10	700.04	346.82

Circle Center At X = 362.7 ; Y = 863.8 and Radius, 617.3

*** 1.500 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	264.41	249.17
2	314.12	243.84
3	364.10	242.51
4	414.03	245.17
5	463.59	251.82
6	512.46	262.41
7	560.32	276.87
8	606.87	295.11
9	651.82	317.02
10	694.87	342.44
11	703.32	348.39

Circle Center At X = 355.8 ; Y = 867.4 and Radius, 624.9

*** 1.502 ***

1

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	180.51	246.26
2	229.63	236.91
3	279.32	231.37
4	329.29	229.68
5	379.24	231.84

6	428.88	237.85
7	477.91	247.67
8	526.03	261.23
9	572.97	278.47
10	618.43	299.27
11	662.16	323.52
12	690.58	342.28

Circle Center At X = 326.1 ; Y = 875.4 and Radius, 645.8

*** 1.505 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	195.76	246.79
2	245.40	240.78
3	295.33	238.10
4	345.32	238.77
5	395.16	242.77
6	444.63	250.09
7	493.49	260.70
8	541.53	274.56
9	588.54	291.59
10	634.31	311.72
11	678.63	334.87
12	691.43	342.69

Circle Center At X = 310.4 ; Y = 983.0 and Radius, 745.0

*** 1.505 ***

1

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	218.64	247.58
2	268.16	240.65
3	318.06	237.47
4	368.06	238.05
5	417.87	242.39
6	467.21	250.47
7	515.81	262.24

8	563.38	277.64
9	609.65	296.57
10	654.37	318.93
11	697.28	344.60
12	701.27	347.41

Circle Center At X = 335.4 ; Y = 899.9 and Radius, 662.6

*** 1.505 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	256.78	248.91
2	305.40	237.23
3	354.99	230.84
4	404.98	229.80
5	454.79	234.12
6	503.85	243.76
7	551.60	258.61
8	597.48	278.49
9	640.96	303.17
10	681.54	332.37
11	694.90	344.35

Circle Center At X = 389.7 ; Y = 695.2 and Radius, 465.7

*** 1.511 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	264.41	249.17
2	314.10	243.60
3	364.07	242.06
4	414.01	244.55
5	463.59	251.06
6	512.47	261.55
7	560.36	275.94
8	606.93	294.14
9	651.87	316.04
10	694.91	341.49

11	707.59	350.44

Circle Center At X = 358.2 ; Y = 861.7 and Radius, 619.7

*** 1.512 ***

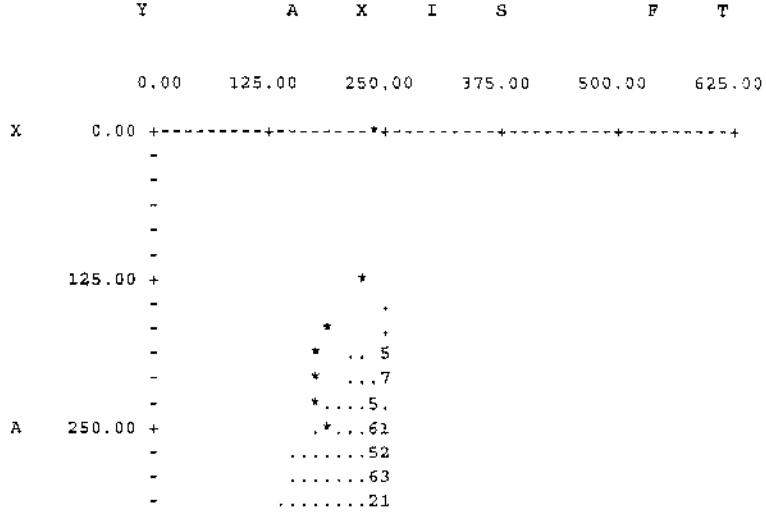
Failure Surface Specified By 10 Coordinate Points

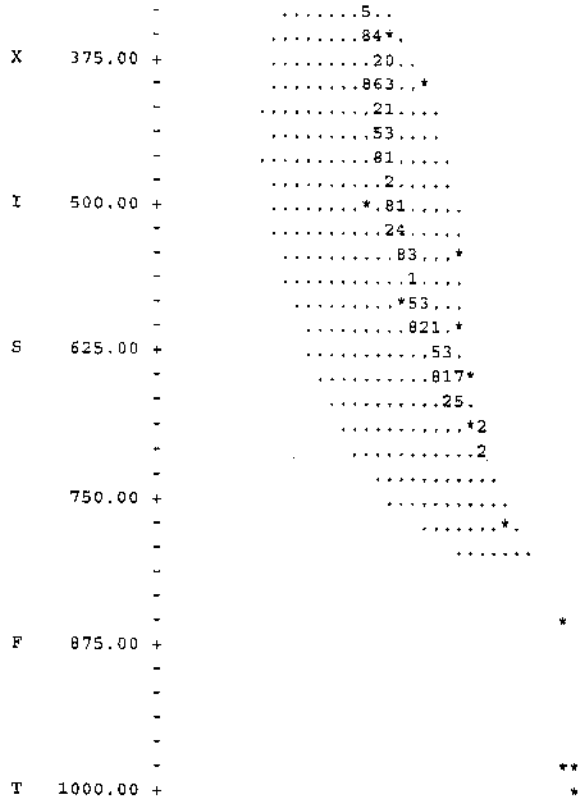
Point No.	X-Surf (ft)	Y-Surf (ft)
1	317.80	251.02
2	367.41	244.78
3	417.39	243.73
4	467.22	247.90
5	516.34	257.23
6	564.22	271.63
7	610.35	290.93
8	654.21	314.93
9	695.34	343.37
10	698.48	346.07

Circle Center At X = 402.4 ; Y = 721.9 and Radius, 478.4

*** 1.522 ***

1



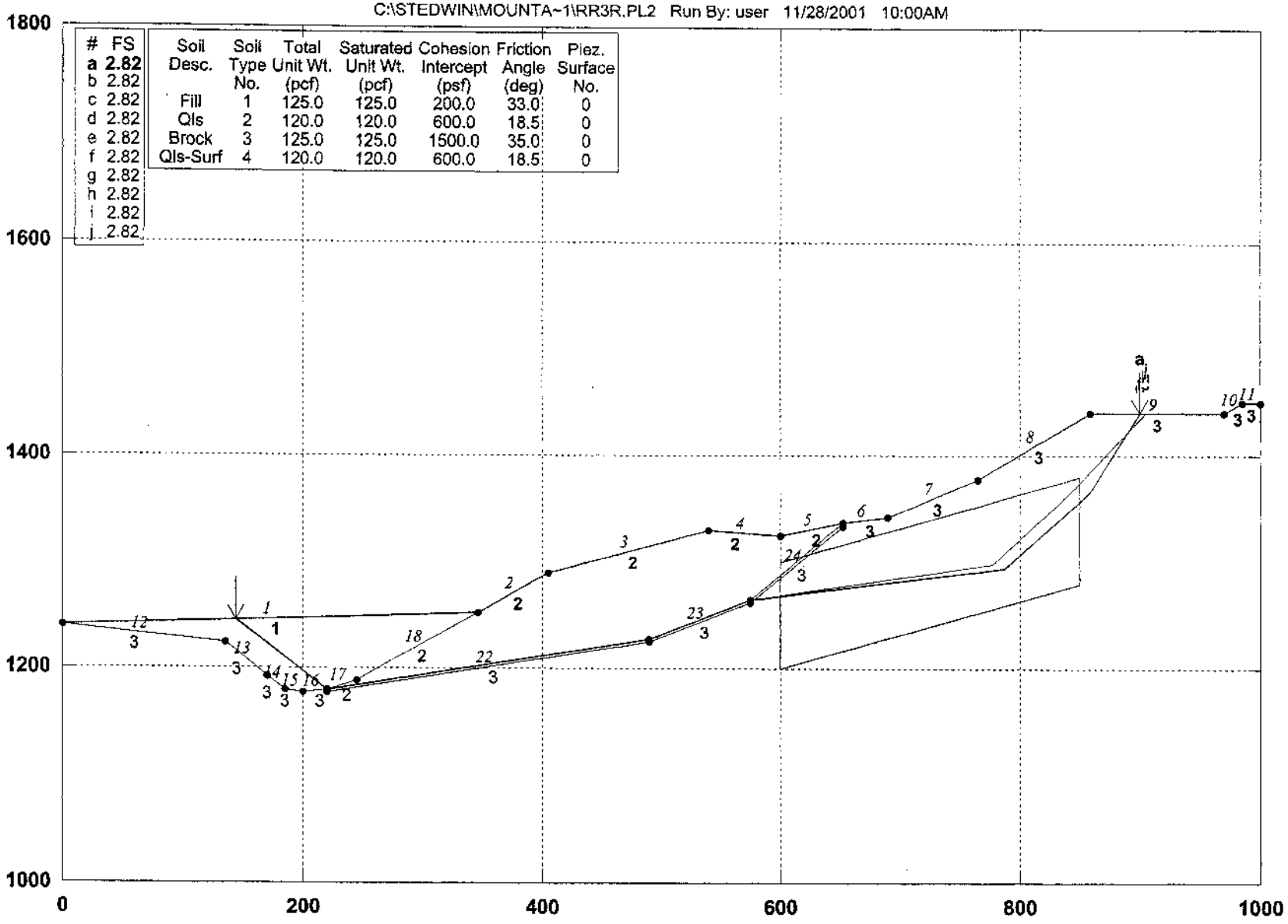

X 375.00
I 500.00
S 625.00
750.00
F 875.00
T 1000.00

Mountain Gate, 03-0381-001, X-Sec:R-R' Check Qls

C:\STEDWIN\MOUNTA~1\RR3R.PL2 Run By: user 11/28/2001 10:00AM

#	FS
a	2.82
b	2.82
c	2.82
d	2.82
e	2.82
f	2.82
g	2.82
h	2.82
i	2.82
j	2.82

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	33.0	0
Qls	2	120.0	120.0	600.0	18.5	0
Brock	3	125.0	125.0	1500.0	35.0	0
Qls-Surf	4	120.0	120.0	600.0	18.5	0



GSTABL7 FSmin=2.82

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

STED

Figure E-76

*** 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: 11/28/2001
Time of Run: 10:00AM
Run By: user
Input Data Filename: C:rr3r.
Output Filename: C:rr3r.OUT
Unit System: English

Plotted Output Filename: C:rr3r.PLT

PROBLEM DESCRIPTION Mountain Gate, 03-0381-001, X-Sec:R-R'
Check Qls

BOUNDARY COORDINATES

11 Top Boundaries
24 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	240.00	346.00	252.00	1
2	346.00	252.00	405.00	290.00	2
3	405.00	290.00	540.00	330.00	2
4	540.00	330.00	600.00	325.00	2
5	600.00	325.00	652.00	337.00	2
6	652.00	337.00	690.00	342.00	3
7	690.00	342.00	765.00	378.00	3
8	765.00	378.00	859.00	440.00	3
9	859.00	440.00	970.00	440.00	3
10	970.00	440.00	985.00	450.00	3
11	985.00	450.00	1000.00	450.00	3
12	0.00	240.00	135.00	224.00	3
13	135.00	224.00	170.00	192.00	3
14	170.00	192.00	185.00	180.00	3
15	185.00	180.00	200.00	178.00	3
16	200.00	178.00	220.00	180.00	3
17	220.00	180.00	245.00	189.00	2

18	245.00	189.00	346.00	252.00	2
19	220.00	180.00	490.00	228.00	4
20	490.00	228.00	575.00	265.00	4
21	575.00	265.00	652.00	337.00	4
22	220.00	177.00	490.00	225.00	3
23	490.00	225.00	575.00	263.00	3
24	575.00	263.00	652.00	334.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	600.0	18.5	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.

2000 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 100.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	220.00	180.00	220.00	180.00	0.00
2	490.00	228.00	490.00	228.00	0.00
3	575.00	265.00	575.00	265.00	0.00
4	600.00	250.00	850.00	330.00	100.00

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 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	143.76	244.99
2	143.93	244.91
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	787.79	295.00
7	858.36	365.85
8	900.00	440.00

*** 2.822 ***

Individual data on the 17 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	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	76.1	321906.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	25.0	205469.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	101.0	703758.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	59.0	448557.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	85.0	837911.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	50.0	502261.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	35.0	298869.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	2.6	18987.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	22.4	159834.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	52.0	376812.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	38.0	289588.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

13	75.0	689069.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	22.8	262435.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	70.6	757505.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.6	5903.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	41.0	187068.5	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	143.76	244.99
2	143.93	244.91
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	787.79	295.00
7	858.36	365.85
8	900.00	440.00

*** 2.822 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	143.76	244.99
2	143.93	244.91
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	787.79	295.00
7	858.36	365.85
8	900.00	440.00

*** 2.822 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	143.76	244.99
2	143.93	244.91
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	787.79	295.00
7	858.36	365.85
8	900.00	440.00

*** 2.822 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	143.76	244.99
2	143.93	244.91
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	787.79	295.00
7	858.36	365.85
8	900.00	440.00

*** 2.822 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	143.76	244.99
2	143.93	244.91
3	220.00	180.00
4	490.00	228.00
5	575.00	265.00
6	787.79	295.00
7	858.36	365.85
8	900.00	440.00

*** 2.822 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	144.69	245.02
2	220.00	180.00
3	490.00	228.00
4	575.00	265.00
5	777.05	298.20
6	846.27	370.37
7	905.48	440.00

*** 2.823 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	144.69	245.02
2	220.00	180.00
3	490.00	228.00
4	575.00	265.00
5	777.05	298.20
6	846.27	370.37
7	905.48	440.00

*** 2.823 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	144.69	245.02
2	220.00	180.00
3	490.00	228.00
4	575.00	265.00

5	777.05	298.20
6	846.27	370.37
7	905.48	440.00

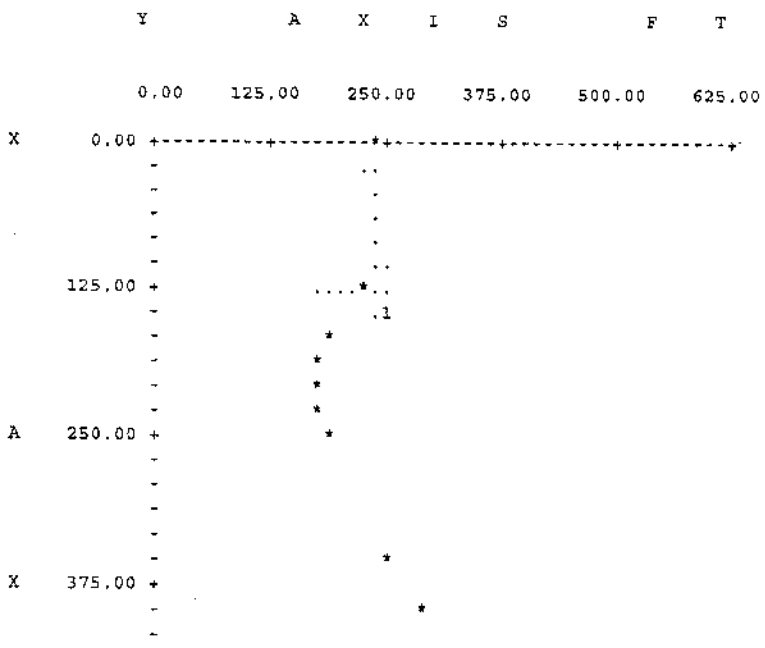
*** 2.823 ***

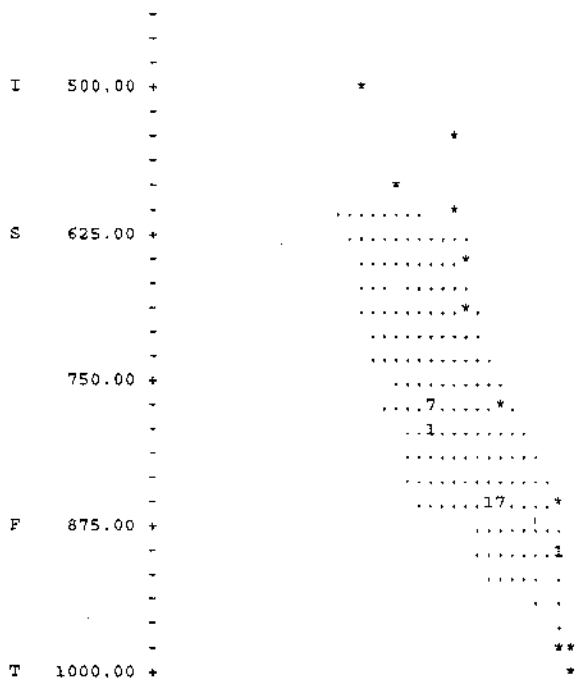
Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	144.69	245.02
2	220.00	180.00
3	490.00	228.00
4	575.00	265.00
5	777.05	298.20
6	846.27	370.37
7	905.48	440.00

*** 2.823 ***

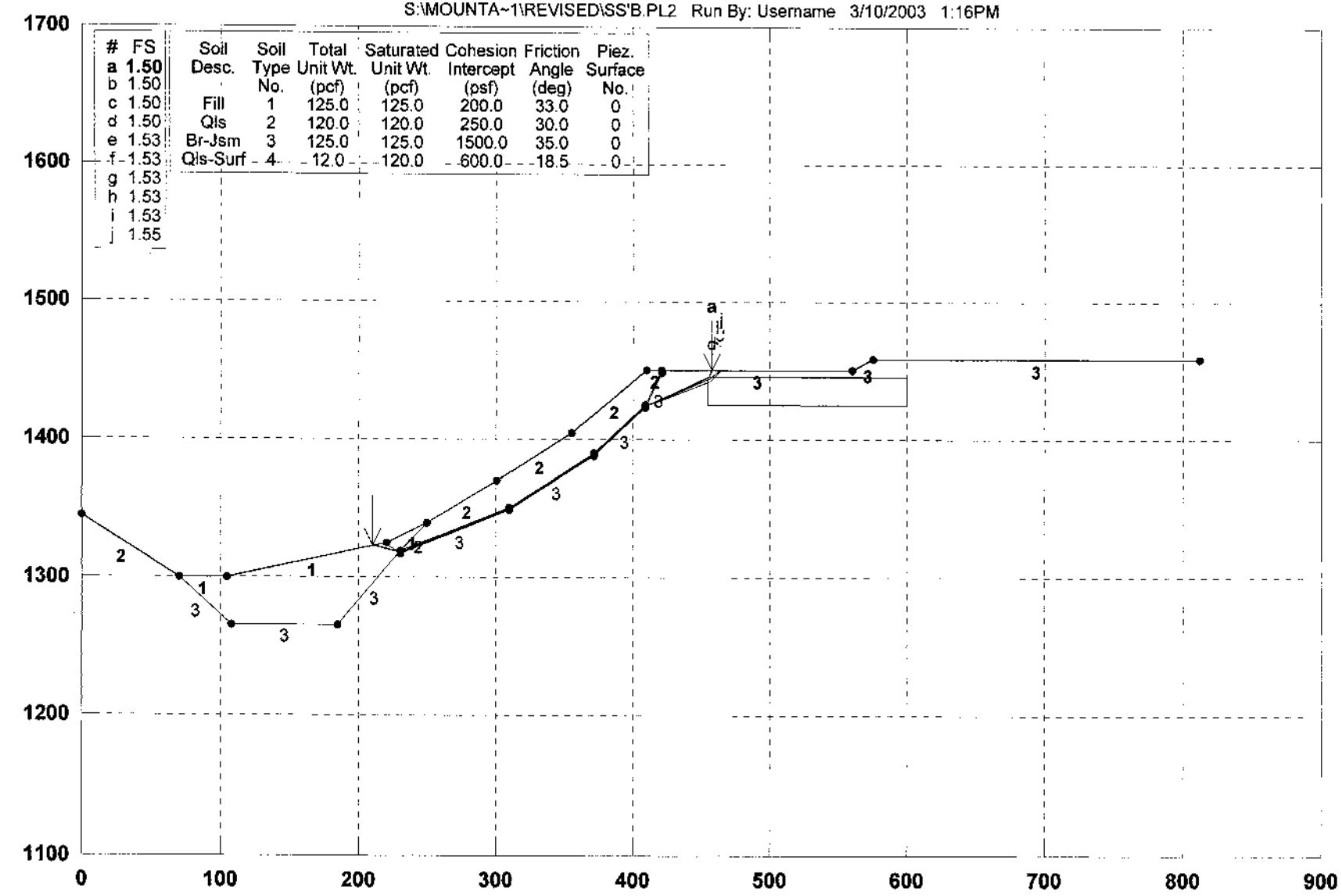
1





Mountain Gate / Section: S-S' ,Static

S:\MOUNTA~1\REVISED\SS'B.PL2 Run By: Username 3/10/2003 1:16PM



#	FS
a	1.50
b	1.50
c	1.50
d	1.50
e	1.53
f	1.53
g	1.53
h	1.53
i	1.53
j	1.55

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	33.0	0
Qls	2	120.0	120.0	250.0	30.0	0
Br-Jsm	3	125.0	125.0	1500.0	35.0	0
Qls-Surf	4	12.0	120.0	600.0	18.5	0

GSTABL7 FSmin=1.50

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

GSTABL7

Figure E-84

*** 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: 1:16PM
Run By: Username
Input Data Filename: S:ss'b.
Output Filename: S:ss'b.OUT
Unit System: English

Plotted Output Filename: S:ss'b.PLT

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

BOUNDARY COORDINATES

11 Top Boundaries
23 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	245.00	70.00	200.00	2
2	70.00	200.00	105.00	200.00	1
3	105.00	200.00	220.00	225.00	1
4	220.00	225.00	250.00	240.00	1
5	250.00	240.00	300.00	270.00	2
6	300.00	270.00	355.00	305.00	2
7	355.00	305.00	410.00	350.00	2
8	410.00	350.00	421.00	350.00	2
9	421.00	350.00	560.00	350.00	3
10	560.00	350.00	575.00	358.00	3
11	575.00	358.00	812.00	358.00	3
12	70.00	200.00	108.00	165.00	3
13	108.00	165.00	185.00	165.00	3
14	185.00	165.00	230.00	219.00	3
15	230.00	219.00	250.00	240.00	2
16	230.00	219.00	310.00	251.00	4
17	310.00	251.00	371.00	290.00	4
18	371.00	290.00	409.00	325.00	4
19	409.00	325.00	421.00	350.00	4
20	230.00	217.00	310.00	249.00	5
21	310.00	249.00	371.00	288.00	5
22	371.00	288.00	409.00	323.00	5
23	409.00	323.00	421.00	348.00	5

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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	30.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0
4	12.0	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	230.00	218.00	230.10	218.00	0.00
2	310.00	250.00	310.10	250.00	0.00
3	371.00	289.00	371.10	289.00	0.00
4	409.00	324.00	409.10	324.00	0.00
5	455.00	335.00	600.00	335.00	20.00

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	210.05	222.84
2	230.05	218.00
3	310.04	250.00
4	371.02	289.00
5	409.09	324.00
6	455.84	344.91
7	457.99	350.00

*** 1.502 ***

Individual data on the 18 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	10.0	2842.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	9.3	9343.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.7	1006.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	63.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	20.0	29530.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	50.0	108609.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	10.0	29140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	112.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	45.0	137039.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	16.0	51382.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	81.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	38.0	119580.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.1	268.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.5	1416.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.4	1179.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	11.0	28693.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	34.8	56112.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	2.1	682.9	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	210.05	222.84
2	230.05	218.00
3	310.04	250.00
4	371.02	289.00
5	409.09	324.00
6	455.84	344.91
7	457.99	350.00

*** 1.502 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	210.05	222.84
2	230.05	218.00
3	310.04	250.00
4	371.02	289.00
5	409.09	324.00
6	455.84	344.91
7	457.99	350.00

*** 1.502 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	210.05	222.84
2	230.05	218.00
3	310.04	250.00
4	371.02	289.00
5	409.09	324.00
6	455.84	344.91
7	457.99	350.00

*** 1.502 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.529 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.529 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.529 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.529 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.529 ***

Failure Surface Specified By 7 Coordinate Points

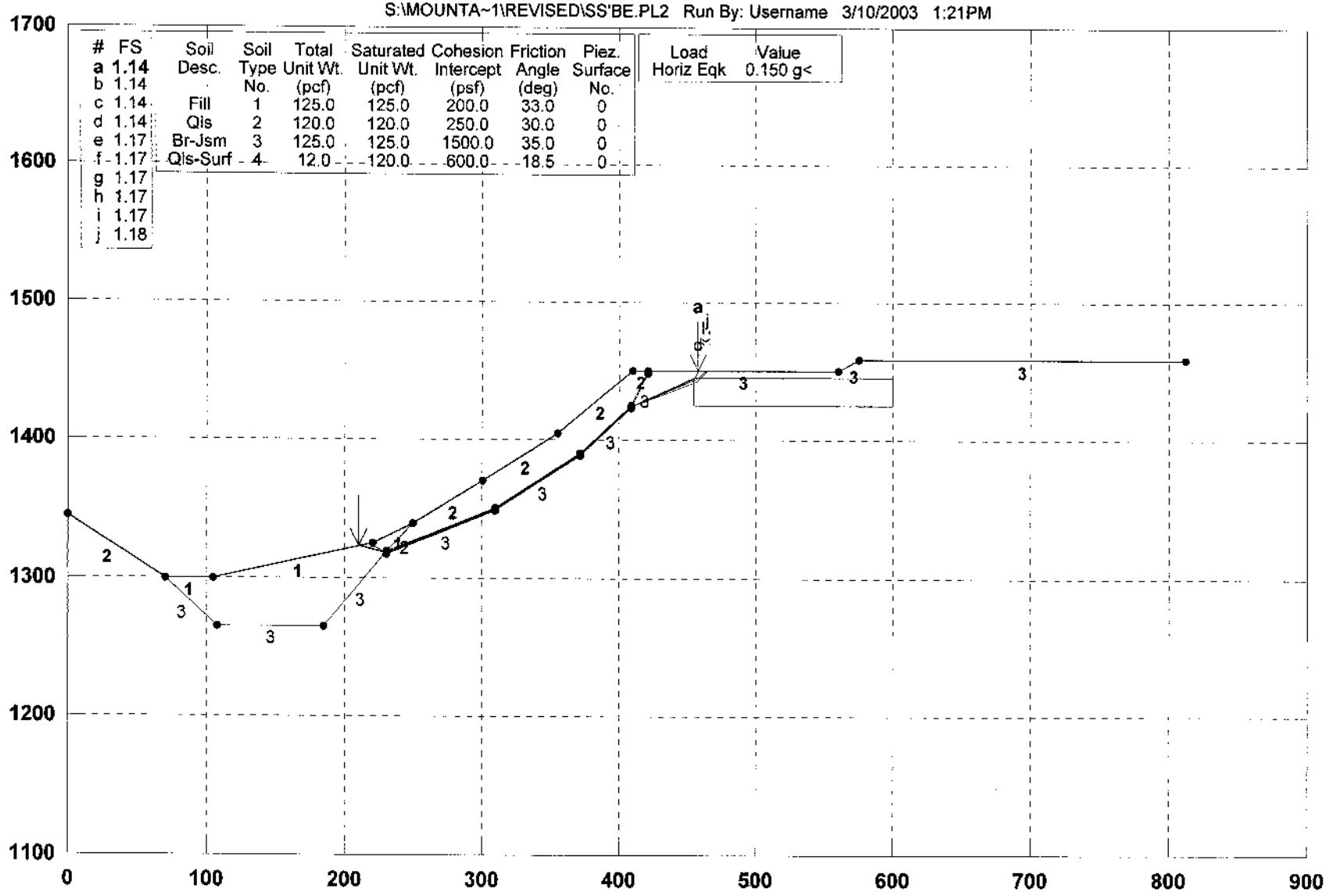
Point No.	X-Surf (ft)	Y-Surf (ft)
1	210.92	223.03
2	230.02	218.00
3	310.03	250.00
4	371.03	289.00
5	409.08	324.00
6	456.73	341.65
7	465.01	350.00

*** 1.547 ***

1

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

S:\MOUNTA~1\REVISED\SS'BE.PL2 Run By: Username 3/10/2003 1:21PM



#	FS
a	1.14
b	1.14
c	1.14
d	1.14
e	1.17
f	1.17
g	1.17
h	1.17
i	1.17
j	1.18

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	33.0	0
Qls	2	120.0	120.0	250.0	30.0	0
Br-Jsm	3	125.0	125.0	1500.0	35.0	0
Qls-Surf	4	12.0	120.0	600.0	18.5	0

Load	Value
Horiz Eqk	0.150 g<

GSTABL7 FSmin=1.14

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

GSTABL7

Figure E-85

*** 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: 1:21PM
Run By: Username
Input Data Filename: S:ss'be.
Output Filename: S:ss'be.OUT
Unit System: English

Plotted Output Filename: S:ss'be.PLT

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

BOUNDARY COORDINATES

11 Top Boundaries
23 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	245.00	70.00	200.00	2
2	70.00	200.00	105.00	200.00	1
3	105.00	200.00	220.00	225.00	1
4	220.00	225.00	250.00	240.00	1
5	250.00	240.00	300.00	270.00	2
6	300.00	270.00	355.00	305.00	2
7	355.00	305.00	410.00	350.00	2
8	410.00	350.00	421.00	350.00	2
9	421.00	350.00	560.00	350.00	3
10	560.00	350.00	575.00	358.00	3
11	575.00	358.00	812.00	358.00	3
12	70.00	200.00	108.00	165.00	3
13	108.00	165.00	185.00	165.00	3
14	185.00	165.00	230.00	219.00	3
15	230.00	219.00	250.00	240.00	2
16	230.00	219.00	310.00	251.00	4
17	310.00	251.00	371.00	290.00	4
18	371.00	290.00	409.00	325.00	4
19	409.00	325.00	421.00	350.00	4
20	230.00	217.00	310.00	249.00	3
21	310.00	249.00	371.00	288.00	3
22	371.00	288.00	409.00	323.00	3
23	409.00	323.00	421.00	348.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	30.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0
4	12.0	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 >

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	230.00	218.00	230.10	218.00	0.00

2	310.00	250.00	310.10	250.00	0.00
3	371.00	289.00	371.10	289.00	0.00
4	409.00	324.00	409.10	324.00	0.00
5	455.00	335.00	600.00	335.00	20.00

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	210.05	222.84
2	230.05	218.00
3	310.04	250.00
4	371.02	289.00
5	409.09	324.00
6	455.84	344.91
7	457.99	350.00

*** 1.144 ***

Individual data on the 18 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	10.0	2842.8	0.0	0.0	0.0	0.0	426.4	0.0	0.0
2	9.3	9343.6	0.0	0.0	0.0	0.0	1401.5	0.0	0.0
3	0.7	1006.0	0.0	0.0	0.0	0.0	150.9	0.0	0.0
4	0.0	63.9	0.0	0.0	0.0	0.0	9.6	0.0	0.0
5	20.0	29530.4	0.0	0.0	0.0	0.0	4429.6	0.0	0.0
6	50.0	108609.8	0.0	0.0	0.0	0.0	16291.5	0.0	0.0
7	10.0	29140.0	0.0	0.0	0.0	0.0	4371.0	0.0	0.0
8	0.0	112.7	0.0	0.0	0.0	0.0	16.9	0.0	0.0
9	45.0	137039.9	0.0	0.0	0.0	0.0	20556.0	0.0	0.0
10	16.0	51382.7	0.0	0.0	0.0	0.0	7707.4	0.0	0.0
11	0.0	81.6	0.0	0.0	0.0	0.0	12.2	0.0	0.0
12	38.0	119590.7	0.0	0.0	0.0	0.0	17937.1	0.0	0.0
13	0.1	268.2	0.0	0.0	0.0	0.0	40.2	0.0	0.0
14	0.5	1416.9	0.0	0.0	0.0	0.0	212.5	0.0	0.0
15	0.4	1179.0	0.0	0.0	0.0	0.0	176.8	0.0	0.0
16	11.0	28693.6	0.0	0.0	0.0	0.0	4304.0	0.0	0.0
17	34.8	56112.8	0.0	0.0	0.0	0.0	8416.9	0.0	0.0
18	2.1	682.9	0.0	0.0	0.0	0.0	102.4	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	210.05	222.84
2	230.05	218.00
3	310.04	250.00
4	371.02	289.00
5	409.09	324.00
6	455.84	344.91
7	457.99	350.00

*** 1.144 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	210.05	222.84
2	230.05	218.00
3	310.04	250.00
4	371.02	289.00
5	409.09	324.00
6	455.84	344.91
7	457.99	350.00

*** 1.144 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	210.05	222.84
2	230.05	218.00
3	310.04	250.00
4	371.02	289.00
5	409.09	324.00
6	455.84	344.91
7	457.99	350.00

*** 1.144 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.169 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00

4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.169 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.169 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

*** 1.169 ***

1

Failure Surface Specified By 7 Coordinate Points

Point	X-Surf	Y-Surf

No.	(ft)	(ft)
1	217.88	224.54
2	230.07	218.00
3	310.08	250.00
4	371.06	289.00
5	409.08	324.00
6	457.26	343.70
7	463.47	350.00

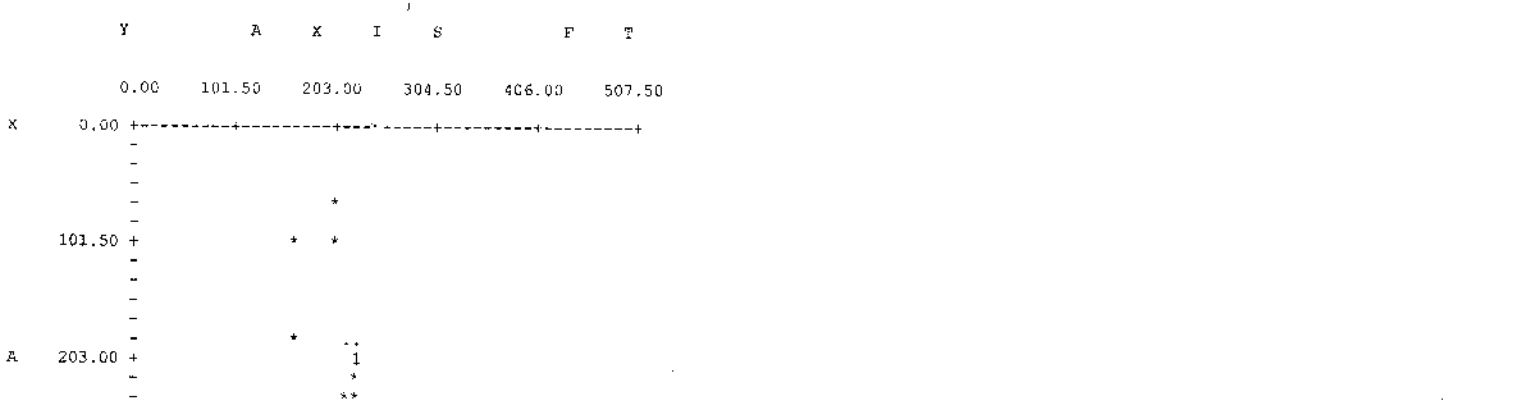
*** 1.169 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	210.92	223.03
2	230.02	218.00
3	310.03	250.00
4	371.03	289.00
5	409.08	324.00
6	456.73	341.65
7	465.01	350.00

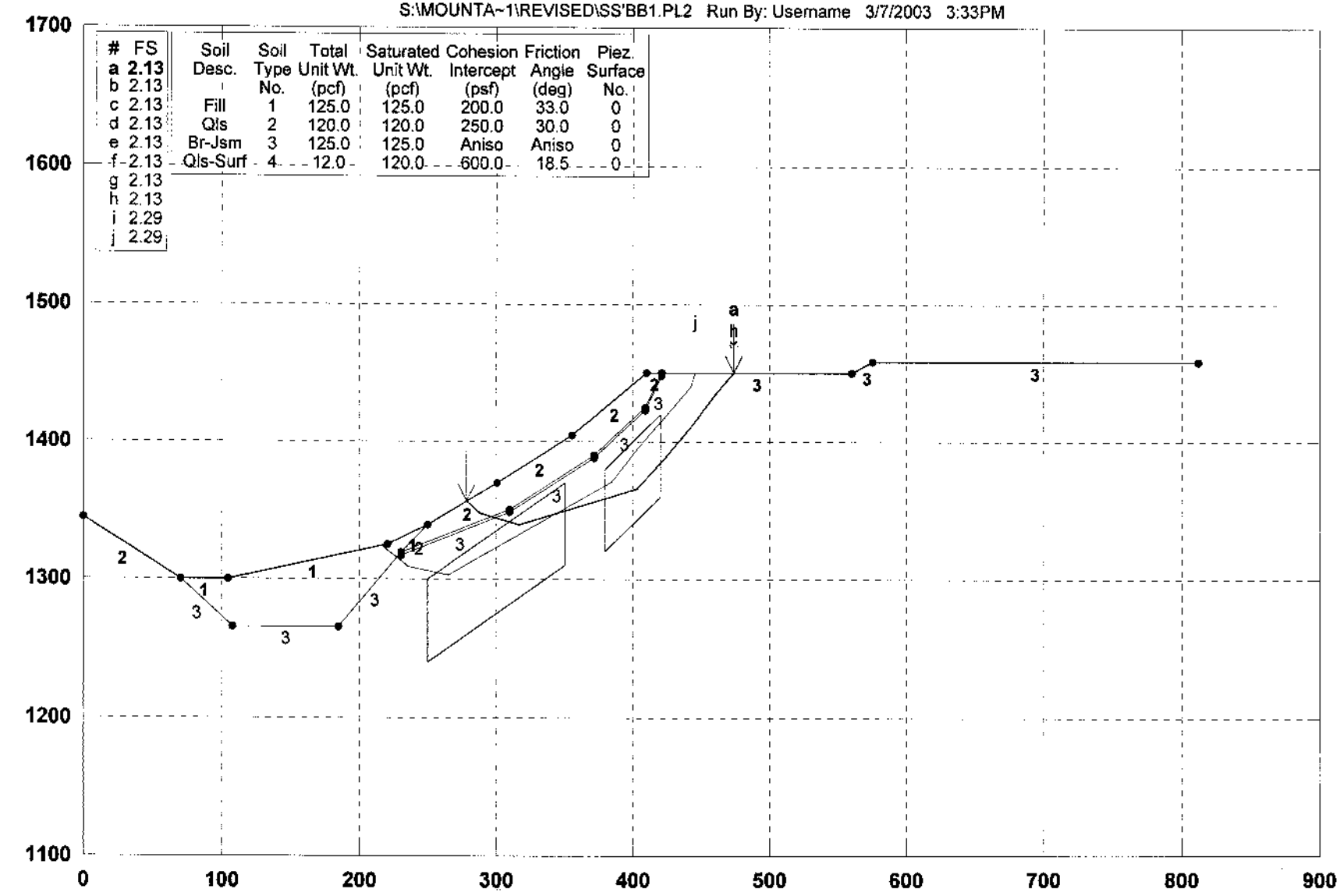
*** 1.179 ***

1



Mountain Gate / Section: S-S' ,Static

S:\MOUNTA~1\REVISED\SS'BB1.PL2 Run By: Username 3/7/2003 3:33PM



#	FS
a	2.13
b	2.13
c	2.13
d	2.13
e	2.13
f	2.13
g	2.13
h	2.13
i	2.29
j	2.29

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	33.0	0
Qls	2	120.0	120.0	250.0	30.0	0
Br-Jsm	3	125.0	125.0	Aniso	Aniso	0
Qls-Surf	4	12.0	120.0	600.0	18.5	0

GSTABL7 FSmin=2.13

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

GSTABL7

Figure E- 86

*** 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:	3/7/2003
Time of Run:	3:33PM
Run By:	Username
Input Data Filename:	S:SS'bb1.
Output Filename:	S:SS'bb1.OUT
Unit System:	English
Plotted Output Filename:	S:SS'bb1.PLT

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

BOUNDARY COORDINATES

11 Top Boundaries
23 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	245.00	70.00	200.00	2
2	70.00	200.00	105.00	200.00	1
3	105.00	200.00	220.00	225.00	1
4	220.00	225.00	250.00	240.00	1
5	250.00	240.00	300.00	270.00	2
6	300.00	270.00	355.00	305.00	2
7	355.00	305.00	410.00	350.00	2
8	410.00	350.00	421.00	350.00	2
9	421.00	350.00	560.00	350.00	3
10	560.00	350.00	575.00	358.00	3
11	575.00	358.00	812.00	358.00	3
12	70.00	200.00	108.00	165.00	3
13	108.00	165.00	185.00	165.00	3
14	185.00	165.00	230.00	219.00	3
15	230.00	219.00	250.00	240.00	2
16	230.00	219.00	310.00	251.00	4
17	310.00	251.00	371.00	290.00	4
18	371.00	290.00	409.00	325.00	4
19	409.00	325.00	421.00	350.00	4
20	230.00	217.00	310.00	249.00	3
21	310.00	249.00	371.00	288.00	3
22	371.00	288.00	409.00	323.00	3
23	409.00	323.00	421.00	348.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	30.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0
4	12.0	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	14.0	1500.0	35.0
2	18.0	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 30.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	250.00	170.00	350.00	240.00	60.00
2	380.00	250.00	420.00	290.00	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 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	278.61	257.16
2	288.24	248.17
3	316.99	239.58
4	402.48	266.31
5	422.95	288.24
6	442.79	310.74
7	461.14	334.47
8	474.12	350.00

*** 2.132 ***

Individual data on the 16 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	9.6	8544.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	8.4	18701.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	2.9	7800.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.5	1389.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	10.0	34059.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	7.0	30689.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	38.0	211763.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	16.0	109414.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	31.5	262507.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	6.5	60266.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	1.0	9126.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	11.0	92778.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	1.9	15294.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	19.8	125256.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	18.4	62841.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	13.0	12592.1	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	278.61	257.16
2	288.24	248.17
3	316.99	239.58
4	402.48	266.31
5	422.95	288.24
6	442.79	310.74
7	461.14	334.47
8	474.12	350.00

*** 2.132 ***

1

Failure Surface Specified By 8 Coordinate Points

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

1	278.61	257.16
2	288.24	248.17
3	316.99	239.58
4	402.48	266.31
5	422.95	288.24
6	442.79	310.74
7	461.14	334.47
8	474.12	350.00

*** 2.132 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	278.61	257.16
2	288.24	248.17
3	316.99	239.58
4	402.48	266.31
5	422.95	288.24
6	442.79	310.74
7	461.14	334.47
8	474.12	350.00

*** 2.132 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	278.61	257.16
2	288.24	248.17
3	316.99	239.58
4	402.48	266.31
5	422.95	288.24
6	442.79	310.74
7	461.14	334.47
8	474.12	350.00

*** 2.132 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	278.61	257.16
2	288.24	248.17
3	316.99	239.58
4	402.48	266.31
5	422.95	288.24
6	442.79	310.74
7	461.14	334.47
8	474.12	350.00

*** 2.132 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	278.61	257.16
2	288.24	248.17
3	316.99	239.58
4	402.48	266.31
5	422.95	288.24
6	442.79	310.74
7	461.14	334.47
8	474.12	350.00

*** 2.132 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	278.61	257.16
2	288.24	248.17
3	316.99	239.58
4	402.48	266.31
5	422.95	288.24
6	442.79	310.74
7	461.14	334.47

8	474.12	350.00

*** 2.132 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	216.24	224.18
2	235.80	208.79
3	265.16	202.61
4	384.32	271.49
5	403.15	294.84
6	423.12	317.23
7	442.06	340.50
8	445.20	350.00

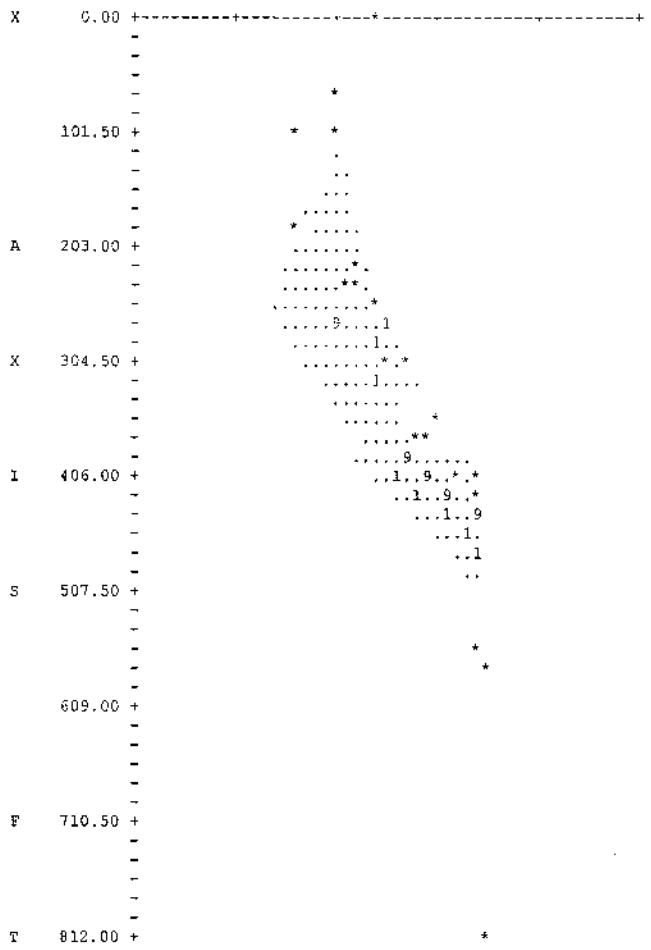
*** 2.289 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	216.24	224.18
2	235.80	208.79
3	265.16	202.61
4	384.32	271.49
5	403.15	294.84
6	423.12	317.23
7	442.06	340.50
8	445.20	350.00

*** 2.289 ***

1

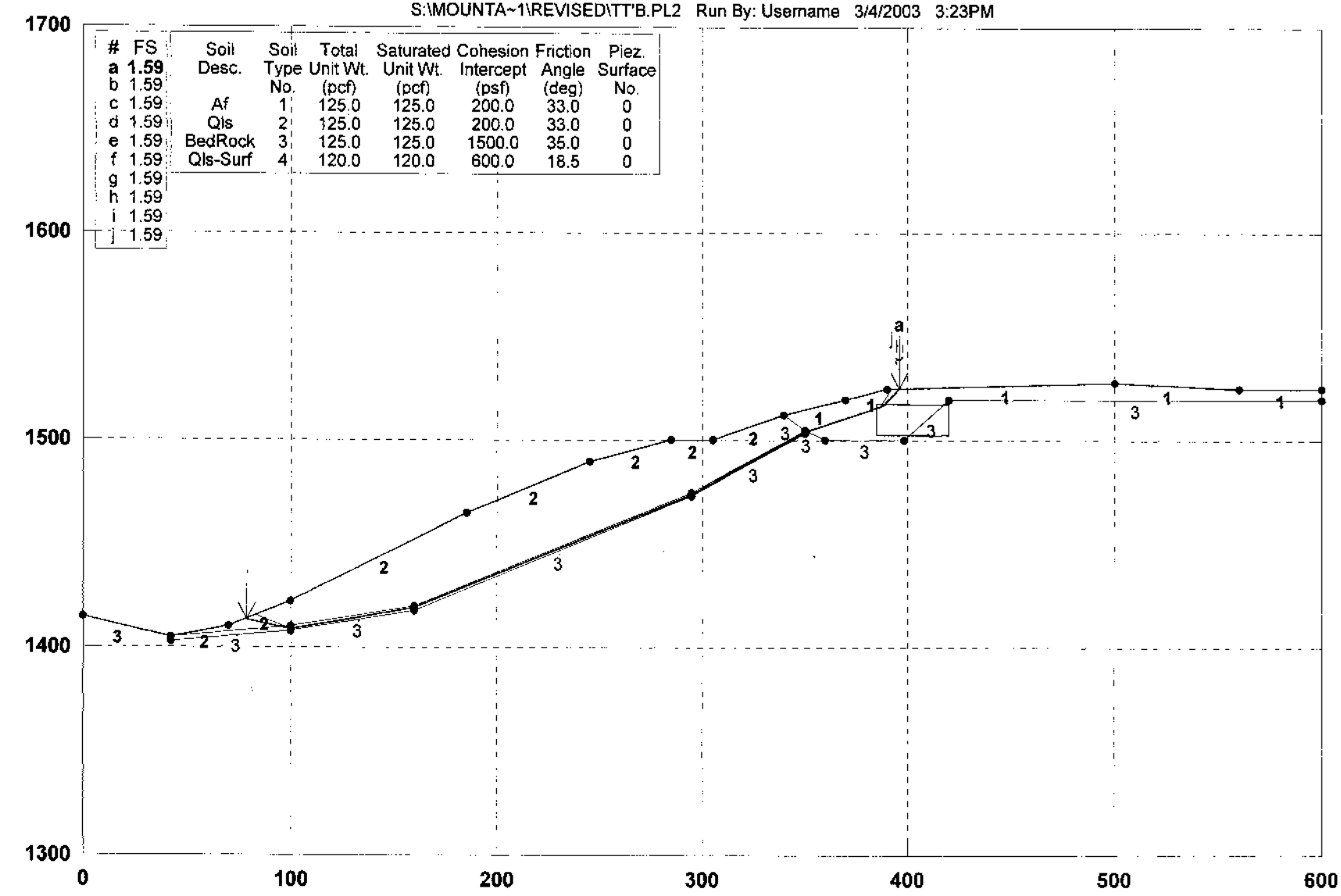


Y A X I S F T

0.00 101.50 203.00 304.50 406.00 507.50

Mountain Gate / Section T-T' Static

S:\MOUNTA~1\REVISED\TT'B.PL2 Run By: Username 3/4/2003 3:23PM



#	FS
a	1.59
b	1.59
c	1.59
d	1.59
e	1.59
f	1.59
g	1.59
h	1.59
i	1.59
j	1.59

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	125.0	125.0	200.0	33.0	0
BedRock	3	125.0	125.0	1500.0	35.0	0
Qls-Surf	4	120.0	120.0	600.0	18.5	0

GSTABL7 FSmin=1.59

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

GSTABL7

Figure E-87

*** 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: 3/4/2003
Time of Run: 3:23PM
Run By: Username
Input Data Filename: S:tt'b.
Output Filename: S:tt'b.OUT
Unit System: English

Plotted Output Filename: S:tt'b.PLT

PROBLEM DESCRIPTION Mountain Gate / Section T-T'
Static

BOUNDARY COORDINATES

13 Top Boundaries
26 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	115.00	42.00	105.00	3
2	42.00	105.00	70.00	110.00	2
3	70.00	110.00	100.00	122.00	2
4	100.00	122.00	185.00	165.00	2
5	185.00	165.00	245.00	190.00	2
6	245.00	190.00	285.00	200.00	2
7	285.00	200.00	305.00	200.00	2
8	305.00	200.00	340.00	212.00	2
9	340.00	212.00	370.00	220.00	1
10	370.00	220.00	390.00	225.00	1
11	390.00	225.00	500.00	228.00	1
12	500.00	228.00	560.00	225.00	1
13	560.00	225.00	600.00	225.00	1
14	340.00	212.00	350.00	205.00	3
15	42.00	105.00	100.00	110.00	4
16	100.00	110.00	160.00	120.00	4
17	160.00	120.00	295.00	175.00	4
18	295.00	175.00	350.00	205.00	4
19	350.00	205.00	360.00	200.00	3
20	360.00	200.00	398.00	200.00	3
21	398.00	200.00	420.00	220.00	3
22	420.00	220.00	600.00	220.00	3
23	42.00	103.00	100.00	108.00	3
24	100.00	108.00	160.00	118.00	3
25	160.00	118.00	295.00	173.00	3
26	295.00	173.00	350.00	203.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	125.0	125.0	200.0	33.0	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.

5 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 25.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	100.00	109.00	100.10	109.00	0.00
2	160.00	119.00	160.10	119.00	0.00
3	295.00	174.00	295.10	174.00	0.00
4	350.00	204.00	350.10	204.00	0.00
5	385.00	210.00	420.00	210.00	15.00

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	X-Surf	Y-Surf

No.	(ft)	(ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.585 ***

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	18.0	12345.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	3.3	4982.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.1	160.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	59.9	173469.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.1	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	24.9	107708.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	60.0	270548.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	40.0	165966.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	10.0	35004.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	43.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	10.0	29011.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	35.0	74328.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	10.0	15085.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.1	132.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	1.1	1515.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	10.8	23388.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	17.6	18911.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	2.4	2040.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	6.0	2254.2	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	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.585 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.585 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.585 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.585 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.585 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.585 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.585 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

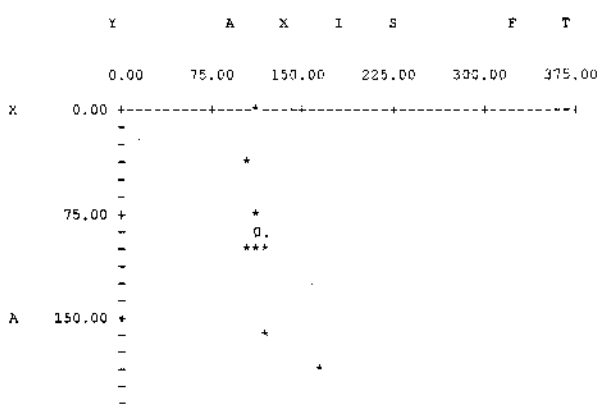
*** 1.585 ***

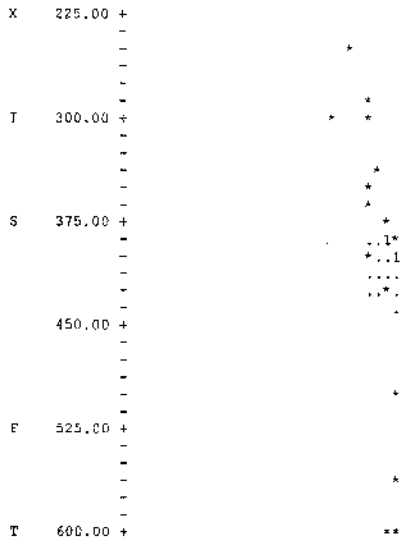
Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	83.12	115.25
2	100.08	109.00
3	160.07	119.00
4	295.06	174.00
5	350.00	204.00
6	387.06	216.63
7	392.13	225.06

*** 1.587 ***

1

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T 300.00
S 375.00
450.00
F 525.00
T 600.00

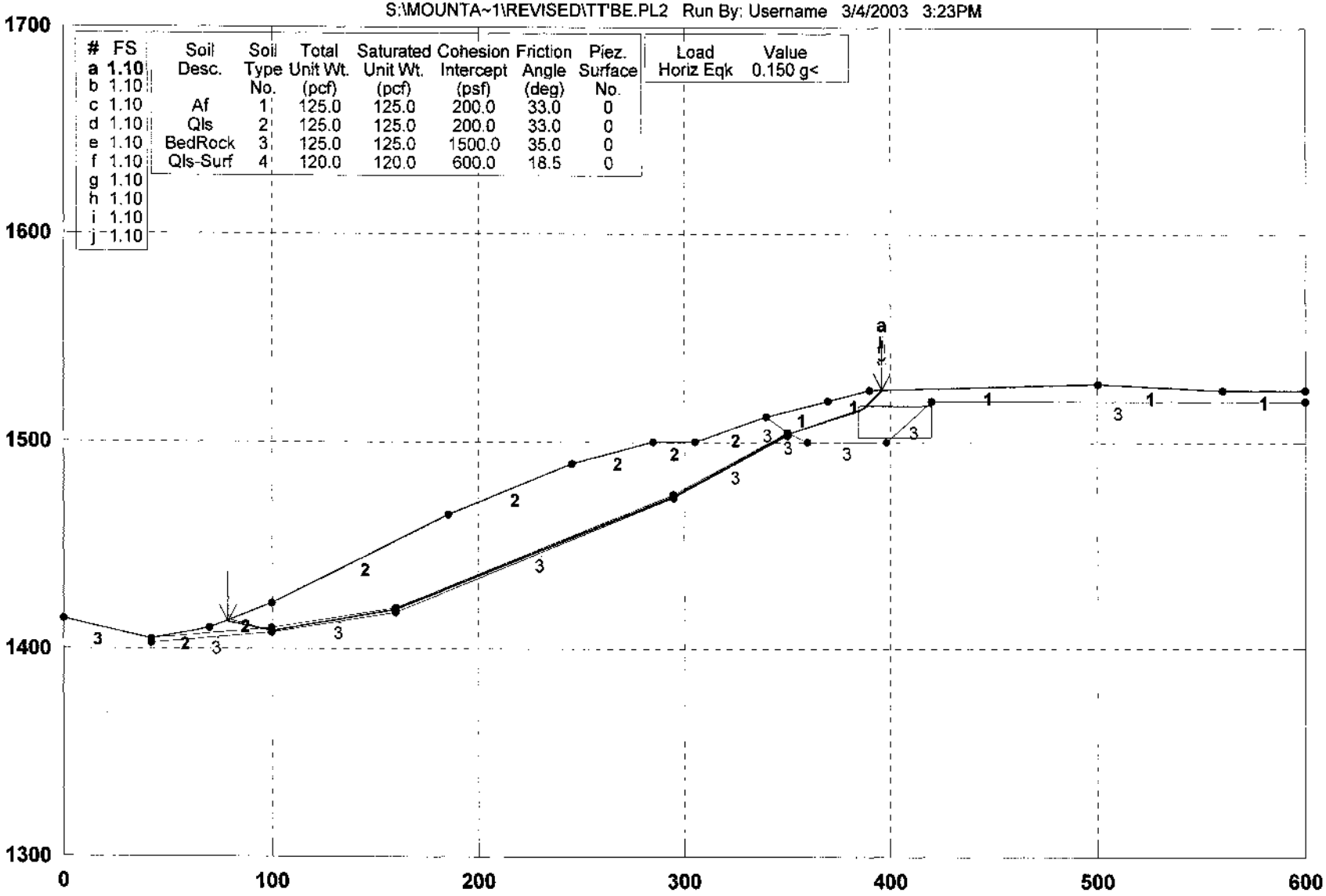
Mountain Gate / Section T-T' Pseudo Static

S:\MOUNTA~1\REVISED\TT'BE.PL2 Run By: Username 3/4/2003 3:23PM

#	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.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	125.0	125.0	200.0	33.0	0
BedRock	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-88

*** 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: 3/4/2003
Time of Run: 3:23PM
Run By: Username
Input Data Filename: S:tt'be.
Output Filename: S:tt'be.OUT
Unit System: English

Plotted Output Filename: S:tt'be.PLT

PROBLEM DESCRIPTION Mountain Gate / Section T-T'
Pseudo Static

BOUNDARY COORDINATES

13 Top Boundaries
26 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	115.00	42.00	105.00	3
2	42.00	105.00	70.00	110.00	2
3	70.00	110.00	100.00	122.00	2
4	100.00	122.00	185.00	165.00	2
5	185.00	165.00	245.00	190.00	2
6	245.00	190.00	285.00	200.00	2
7	285.00	200.00	305.00	200.00	2
8	305.00	200.00	340.00	212.00	2
9	340.00	212.00	370.00	220.00	1
10	370.00	220.00	390.00	225.00	1
11	390.00	225.00	500.00	228.00	1
12	500.00	228.00	560.00	225.00	1
13	560.00	225.00	600.00	225.00	1
14	340.00	212.00	350.00	205.00	3
15	42.00	105.00	100.00	110.00	4
16	100.00	110.00	160.00	120.00	4
17	160.00	120.00	295.00	175.00	4
18	295.00	175.00	350.00	205.00	4
19	350.00	205.00	360.00	200.00	3
20	360.00	200.00	398.00	200.00	3
21	398.00	200.00	420.00	220.00	3
22	420.00	220.00	600.00	220.00	3
23	42.00	103.00	100.00	108.00	3
24	100.00	108.00	160.00	118.00	3
25	160.00	118.00	295.00	173.00	3
26	295.00	173.00	350.00	203.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	125.0	125.0	200.0	33.0	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.

6 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block is 25.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	100.00	109.00	100.10	109.00	0.00
2	160.00	119.00	160.10	119.00	0.00
3	295.00	174.00	295.10	174.00	0.00
4	350.00	204.00	350.10	204.00	0.00
5	385.00	210.00	420.00	210.00	15.00

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	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.095 ***

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	18.0	12345.5	0.0	0.0	0.0	0.0	1851.8	0.0	0.0
2	3.3	4982.4	0.0	0.0	0.0	0.0	747.4	0.0	0.0
3	0.1	160.8	0.0	0.0	0.0	0.0	24.1	0.0	0.0
4	59.9	173469.5	0.0	0.0	0.0	0.0	26020.4	0.0	0.0
5	0.1	330.0	0.0	0.0	0.0	0.0	49.5	0.0	0.0
6	24.9	107708.9	0.0	0.0	0.0	0.0	16156.3	0.0	0.0
7	63.0	270548.3	0.0	0.0	0.0	0.0	40582.2	0.0	0.0
8	40.0	165966.1	0.0	0.0	0.0	0.0	24894.9	0.0	0.0
9	10.0	35004.1	0.0	0.0	0.0	0.0	5250.6	0.0	0.0
10	0.0	43.8	0.0	0.0	0.0	0.0	6.6	0.0	0.0
11	10.0	29011.0	0.0	0.0	0.0	0.0	4351.7	0.0	0.0
12	35.0	74328.6	0.0	0.0	0.0	0.0	11149.3	0.0	0.0
13	10.0	15085.4	0.0	0.0	0.0	0.0	2262.8	0.0	0.0
14	0.1	132.5	0.0	0.0	0.0	0.0	19.9	0.0	0.0
15	1.1	1515.6	0.0	0.0	0.0	0.0	227.3	0.0	0.0
16	18.8	23388.1	0.0	0.0	0.0	0.0	3508.2	0.0	0.0
17	17.6	18911.5	0.0	0.0	0.0	0.0	2836.7	0.0	0.0
18	2.4	2040.4	0.0	0.0	0.0	0.0	306.1	0.0	0.0
19	6.0	2254.2	0.0	0.0	0.0	0.0	338.1	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.095 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.095 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.095 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00

5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.095 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.095 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.095 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58

7	396.01	225.16

*** 1.095 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	78.63	113.45
2	100.10	109.00
3	160.08	119.00
4	295.01	174.00
5	350.10	204.00
6	387.64	216.58
7	396.01	225.16

*** 1.095 ***

Failure Surface Specified By 7 Coordinate Points

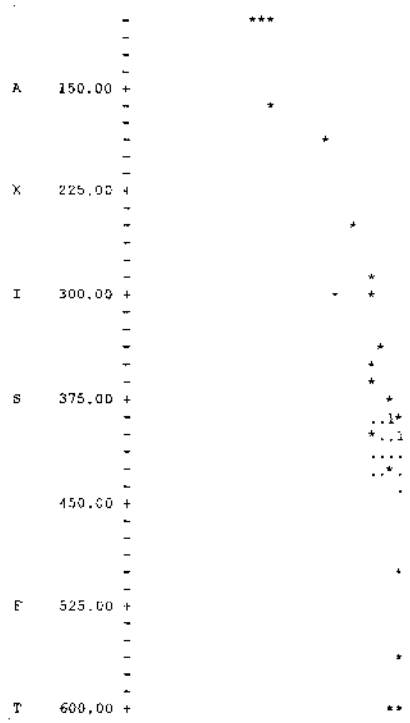
Point No.	X-Surf (ft)	Y-Surf (ft)
1	80.40	114.16
2	100.02	109.00
3	160.03	119.00
4	295.03	174.00
5	350.08	204.00
6	385.42	214.99
7	395.50	225.15

*** 1.097 ***

1

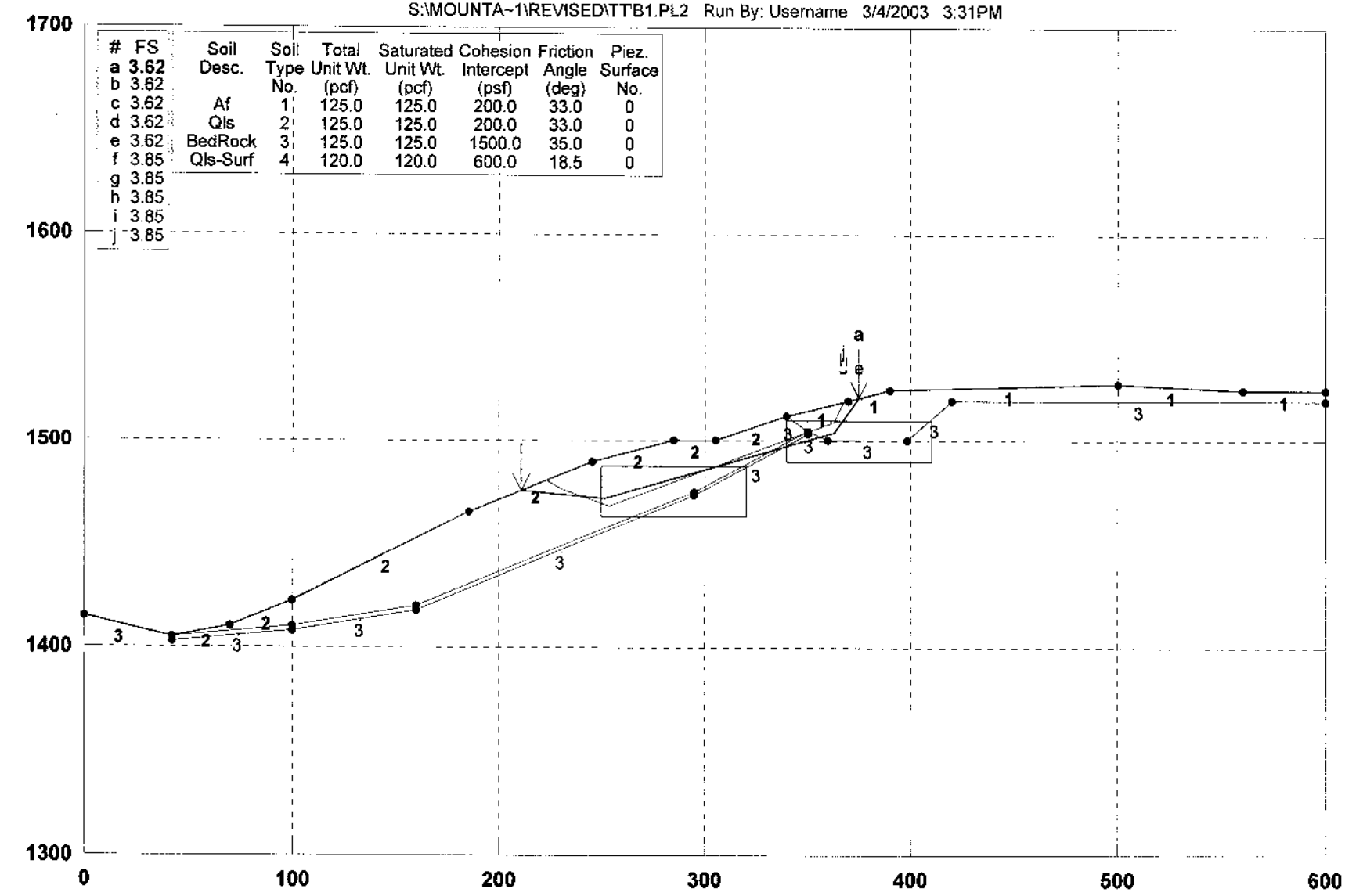
```
          Y           A     X     I     S           F     T

          0.00      75.00    150.00    225.00    300.00    375.00
X      0.00 +---------+----*----+---------+---------+---------+
            -
            -
            -            *
            -
            -
       75.00 +            *
            -             ..
```


A 150.00
X 225.00
I 300.00
S 375.00
450.00
F 525.00
T 600.00

Mountain Gate / Section T-T' Static

S:\MOUNTA~1\REVISED\TTB1.PL2 Run By: Username 3/4/2003 3:31PM



#	FS
a	3.62
b	3.62
c	3.62
d	3.62
e	3.62
f	3.85
g	3.85
h	3.85
i	3.85
j	3.85

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	125.0	125.0	200.0	33.0	0
BedRock	3	125.0	125.0	1500.0	35.0	0
Qls-Surf	4	120.0	120.0	600.0	18.5	0

GSTABL7 FSmin=3.62

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

GSTABL7

Figure E-89

*** 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: 3/4/2003
Time of Run: 3:31PM
Run By: Username
Input Data Filename: S:tt'bl.
Output Filename: S:tt'bl.OUT
Unit System: English

Plotted Output Filename: S:tt'bl.PLT

PROBLEM DESCRIPTION Mountain Gate / Section T-T'
Static

BOUNDARY COORDINATES

13 Top Boundaries
26 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	115.00	42.00	105.00	3
2	42.00	105.00	70.00	110.00	2
3	70.00	110.00	100.00	122.00	2
4	100.00	122.00	185.00	165.00	2
5	185.00	165.00	245.00	190.00	2
6	245.00	190.00	285.00	200.00	2
7	285.00	200.00	305.00	200.00	2
8	305.00	200.00	340.00	212.00	2
9	340.00	212.00	370.00	220.00	1
10	370.00	220.00	390.00	225.00	1
11	390.00	225.00	500.00	228.00	1
12	500.00	228.00	560.00	225.00	1
13	560.00	225.00	600.00	225.00	1
14	340.00	212.00	350.00	205.00	3
15	42.00	105.00	100.00	110.00	4
16	100.00	110.00	160.00	120.00	4
17	160.00	120.00	295.00	175.00	4
18	295.00	175.00	350.00	205.00	4
19	350.00	205.00	360.00	200.00	3
20	360.00	200.00	398.00	200.00	3
21	398.00	200.00	420.00	220.00	3
22	420.00	220.00	600.00	220.00	3
23	42.00	103.00	100.00	108.00	3
24	100.00	108.00	160.00	118.00	3
25	160.00	118.00	295.00	173.00	3
26	295.00	173.00	350.00	203.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	125.0	125.0	200.0	33.0	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	19.5	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.

2 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 25.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	250.00	175.00	320.00	175.00	25.00
2	340.00	200.00	410.00	200.00	20.00

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 5 Coordinate Points

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

1	211.06	175.86
2	226.28	173.96
3	251.19	171.89
4	362.90	204.07
5	375.02	221.26

*** 3.616 ***

Individual data on the 13 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	15.2	7833.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	18.7	30224.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	6.2	14415.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	33.8	80350.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	20.0	38725.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	26.9	44955.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	7.8	13848.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.3	519.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	10.0	17927.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	5.9	10508.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	7.0	12345.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	7.1	8836.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	5.0	1839.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.06	175.86
2	226.28	173.96
3	251.19	171.89
4	362.90	204.07
5	375.02	221.26

*** 3.616 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.06	175.86
2	226.28	173.96
3	251.19	171.89

4	362.90	204.07
5	375.02	221.26

*** 3.616 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.06	175.86
2	226.28	173.96
3	251.19	171.89
4	362.90	204.07
5	375.02	221.26

*** 3.616 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.06	175.86
2	226.28	173.96
3	251.19	171.89
4	362.90	204.07
5	375.02	221.26

*** 3.616 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	222.67	180.70
2	229.92	176.44
3	253.48	168.07
4	362.73	209.37
5	367.23	219.26

*** 3.853 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	222.67	180.70
2	229.92	176.44
3	253.48	168.07
4	362.73	209.37
5	367.23	219.26

*** 3.853 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	222.67	180.70
2	229.92	176.44
3	253.48	168.07
4	362.73	209.37
5	367.23	219.26

*** 3.853 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	222.67	180.70
2	229.92	176.44
3	253.48	168.07
4	362.73	209.37
5	367.23	219.26

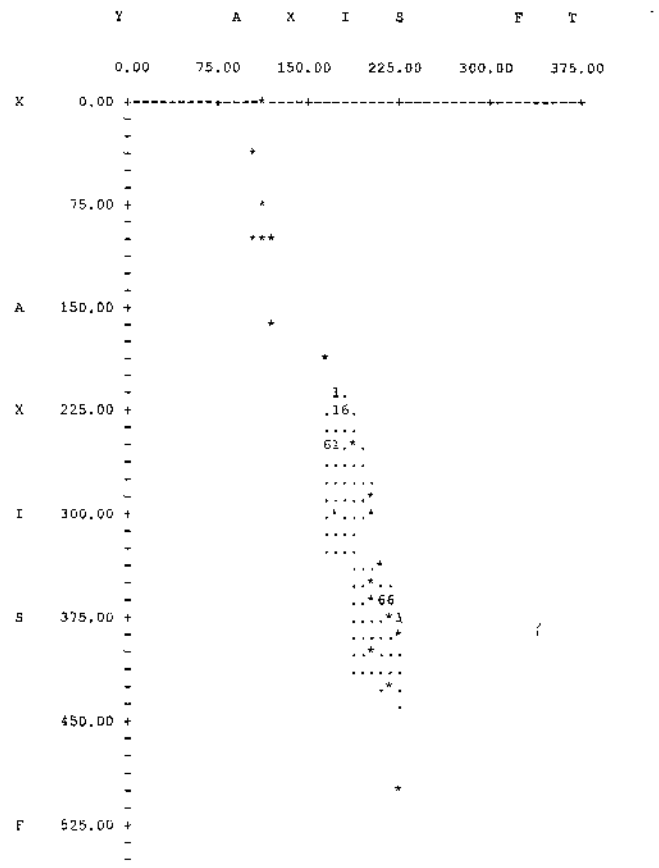
*** 3.853 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	222.67	180.70
2	229.92	176.44
3	253.48	168.07
4	362.73	209.37
5	367.23	219.26

*** 3.853 ***

1



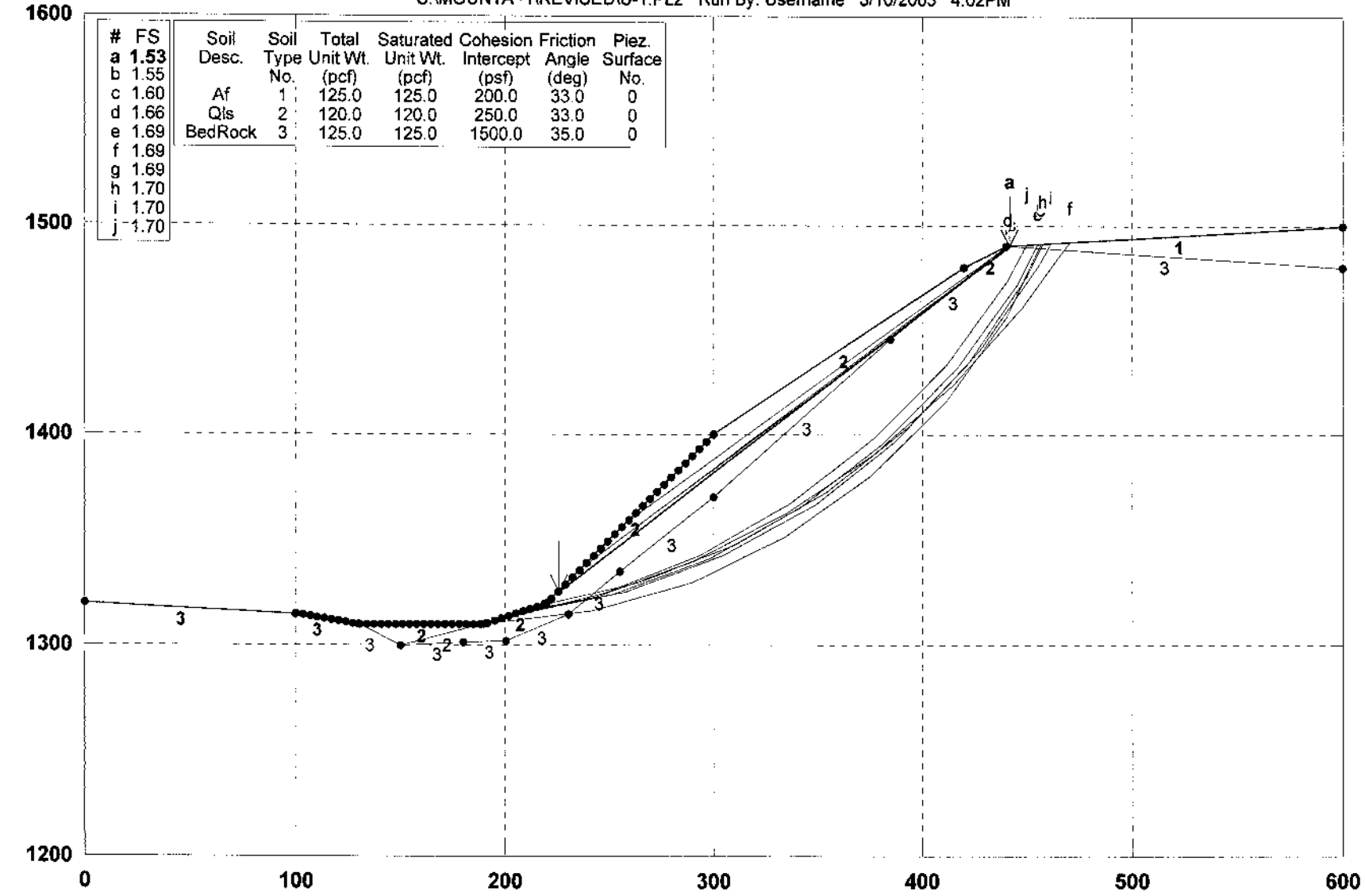

T
600.03

Mountain Gate / Section U-U' , Static

S:\MOUNTA~1\REVISED\U-1.PL2 Run By: Username 3/10/2003 4:02PM

#	FS
a	**1.53**
b	1.55
c	1.60
d	1.66
e	1.69
f	1.69
g	1.69
h	1.70
i	1.70
j	1.70

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	250.0	33.0	0
BedRock	3	125.0	125.0	1500.0	35.0	0



GSTABL7 FSmin=1.53

Safety Factors Are Calculated By The Modified Bishop Method

GSTABL7

Figure E- 90

*** 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: 4:02PM
Run By: Username
Input Data Filename: S:u-1.
Output Filename: S:u-1.OUT
Unit System: English

Plotted Output Filename: S:u-1.PLT

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

BOUNDARY COORDINATES

8 Top Boundaries
18 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	120.00	100.00	115.00	3
2	100.00	115.00	130.00	110.00	3
3	130.00	110.00	190.00	110.00	2
4	190.00	110.00	220.00	120.00	2
5	220.00	120.00	300.00	200.00	2
6	300.00	200.00	420.00	280.00	2
7	420.00	280.00	440.00	290.00	2
8	440.00	290.00	600.00	300.00	1
9	440.00	290.00	600.00	280.00	3
10	130.00	110.00	150.00	100.00	3
11	150.00	100.00	190.00	110.00	2
12	150.00	100.00	180.00	101.00	3
13	180.00	101.00	200.00	102.00	3
14	200.00	102.00	230.00	115.00	3
15	230.00	115.00	255.00	135.00	3
16	255.00	135.00	300.00	170.00	3
17	300.00	170.00	385.00	245.00	3
18	385.00	245.00	440.00	290.00	3

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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	33.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	0.00	0.0	0

1

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

3600 Trial Surfaces Have Been Generated.

60 Surfaces Initiate From Each Of 60 Points Equally Spaced Along The Ground Surface Between X = 100.00(ft)
and X = 300.00(ft)

Each Surface Terminates Between X = 440.00(ft)
and X = 600.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00(ft)

50.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	225.42	125.42
2	265.31	155.58
3	305.15	185.78
4	344.96	216.04
5	384.73	246.35
6	424.46	276.70
7	441.98	290.12

Circle Center At X = ****** ; Y = ****** and Radius, ******

*** 1.530 ***

Individual data on the 11 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	39.9	23280.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	34.7	57972.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	5.2	11060.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	39.8	75437.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	39.8	57442.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	29.0	30343.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	6.3	5310.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	4.5	3282.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	15.5	6529.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	1.7	168.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.3	3.9	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	235.59	135.59
2	275.69	165.47
3	315.74	195.39
4	355.77	225.36
5	395.76	255.38
6	435.71	285.44
7	441.92	290.12

Circle Center At X = ****** ; Y = ****** and Radius, ******

*** 1.553 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	235.59	135.59
2	275.75	165.38
3	315.86	195.24
4	355.91	225.17
5	395.92	255.16
6	435.87	285.23
7	442.39	290.15

Circle Center At X = ****** ; Y = ****** and Radius, ******

*** 1.598 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	259.32	159.32
2	300.05	188.32
3	340.71	217.43
4	381.30	246.63
5	421.81	275.93
6	441.28	290.08

Circle Center At X = ****** ; Y = ****** and Radius, ******

*** 1.665 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	201.70	113.90
2	250.67	123.99
3	297.60	141.22
4	341.46	165.23
5	381.28	195.46
6	416.18	231.27
7	445.39	271.85
8	455.22	290.95

Circle Center At X = 159.8 ; Y = 443.9 and Radius, 332.6

*** 1.692 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.92	111.64
2	243.64	122.88
3	290.63	139.96

4	335.20	162.62
5	376.68	190.53
6	414.47	223.27
7	448.01	260.36
8	470.19	291.89

Circle Center At X = 128.1 ; Y = 514.1 and Radius, 408.0

*** 1.693 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	191.53	110.51
2	241.21	116.10
3	289.27	129.88
4	334.37	151.46
5	375.24	180.28
6	410.74	215.49
7	439.88	256.12
8	456.97	291.06

Circle Center At X = 183.6 ; Y = 407.5 and Radius, 297.1

*** 1.694 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	208.48	116.16
2	257.58	125.55
3	304.62	142.52
4	346.42	166.63
5	387.91	197.31
6	422.10	233.78
7	450.17	275.16
8	457.66	291.10

Circle Center At X = 174.6 ; Y = 429.4 and Radius, 315.0

*** 1.695 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	215.25	118.42
2	264.03	129.43
3	310.63	147.55
4	354.03	172.37
5	393.28	203.34
6	427.51	239.79
7	455.95	280.91
8	461.06	291.32

Circle Center At X = 166.8 ; Y = 448.4 and Radius, 333.5

*** 1.697 ***

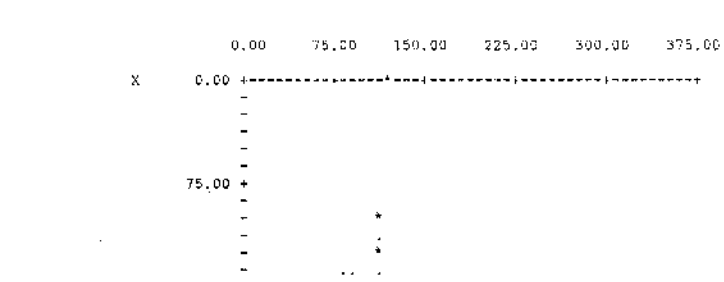
Failure Surface Specified By 8 Coordinate Points

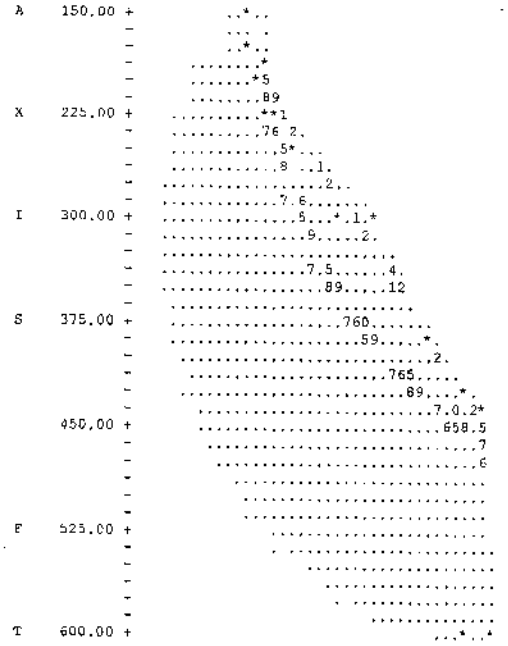
Point No.	X-Surf (ft)	Y-Surf (ft)
1	198.31	112.77
2	246.96	124.31
3	293.50	142.57
4	337.03	167.18
5	376.67	197.65
6	411.64	233.39
7	441.24	273.68
8	450.35	290.65

Circle Center At X = 142.3 ; Y = 459.7 and Radius, 351.4

*** 1.701 ***

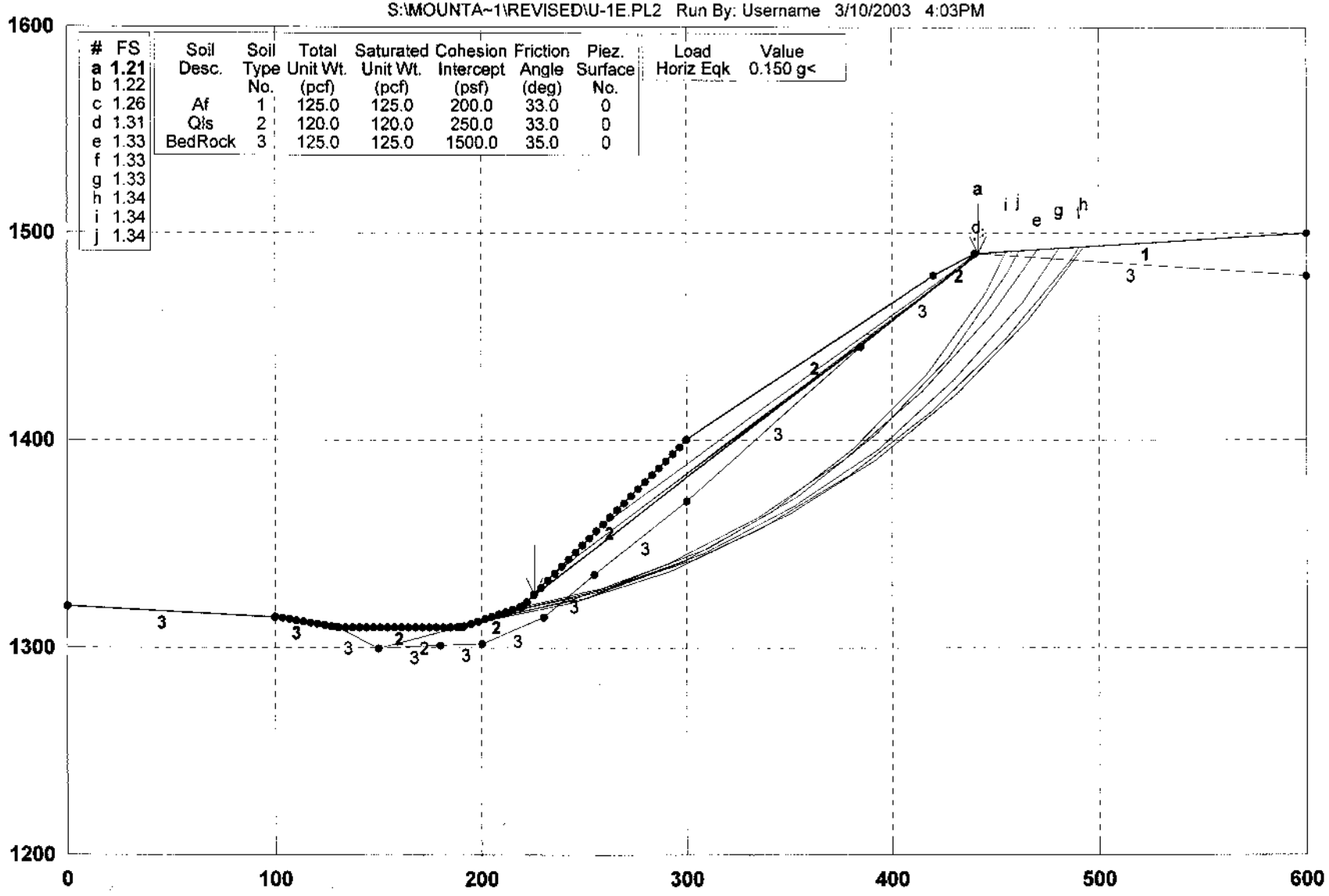
1




A
150.00
X
225.00
I
300.00
S
375.00
450.00
F
525.00
T
600.00

Mountain Gate / Section U-U' , Pseudo Static

S:\MOUNTA~1\REVISED\U-1E.PL2 Run By: Username 3/10/2003 4:03PM



#	FS
a	1.21
b	1.22
c	1.26
d	1.31
e	1.33
f	1.33
g	1.33
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.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	250.0	33.0	0
BedRock	3	125.0	125.0	1500.0	35.0	0

Load	Value
Horiz Eqk	0.150 g<

GSTABL7 FSmin=1.21

Safety Factors Are Calculated By The Modified Bishop Method

GSTABL7

Figure E-91

*** 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: 4:03PM
Run By: Username
Input Data Filename: S:u-1e.
Output Filename: S:u-1e.OUT
Unit System: English

Plotted Output Filename: S:u-1e.PLT

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

BOUNDARY COORDINATES

6 Top Boundaries
16 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	120.00	100.00	115.00	3
2	100.00	115.00	130.00	110.00	3
3	130.00	110.00	190.00	110.00	2
4	190.00	110.00	220.00	120.00	2
5	220.00	120.00	300.00	200.00	2
6	300.00	200.00	420.00	280.00	2
7	420.00	280.00	440.00	290.00	2
8	440.00	290.00	600.00	300.00	1
9	440.00	290.00	600.00	280.00	3
10	130.00	110.00	150.00	100.00	3
11	150.00	100.00	190.00	110.00	2
12	150.00	100.00	180.00	101.00	3
13	180.00	101.00	200.00	102.00	3
14	200.00	102.00	230.00	115.00	3
15	230.00	115.00	255.00	135.00	3
16	255.00	135.00	300.00	170.00	3
17	300.00	170.00	385.00	245.00	3
18	385.00	245.00	440.00	290.00	3

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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	33.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	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)

1

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

3600 Trial Surfaces Have Been Generated.

60 Surfaces Initiate From Each Of 60 Points Equally Spaced
Along The Ground Surface Between X = 100.00(ft)
and X = 300.00(ft)

Each Surface Terminates Between X = 440.00(ft)
and X = 600.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)

50.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 7 Coordinate Points

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

1	225.42	125.42
2	265.31	155.58
3	305.15	185.78
4	344.96	216.04
5	384.73	246.35
6	424.46	276.70
7	441.98	290.12

Circle Center At X = ****** ; Y = ****** and Radius, ******

*** 1.208 ***

Individual data on the 11 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	39.9	23280.8	0.0	0.0	0.0	0.0	3492.1	0.0	0.0
2	34.7	57972.3	0.0	0.0	0.0	0.0	8695.8	0.0	0.0
3	5.2	11060.3	0.0	0.0	0.0	0.0	1659.0	0.0	0.0
4	39.8	75437.1	0.0	0.0	0.0	0.0	11315.6	0.0	0.0
5	39.8	57442.1	0.0	0.0	0.0	0.0	8616.3	0.0	0.0
6	28.8	30343.6	0.0	0.0	0.0	0.0	4551.5	0.0	0.0
7	6.3	5310.1	0.0	0.0	0.0	0.0	796.5	0.0	0.0
8	4.5	3282.9	0.0	0.0	0.0	0.0	492.4	0.0	0.0
9	15.5	6529.3	0.0	0.0	0.0	0.0	979.4	0.0	0.0
10	1.7	168.3	0.0	0.0	0.0	0.0	25.3	0.0	0.0
11	0.3	3.9	0.0	0.0	0.0	0.0	0.6	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	235.59	135.59
2	275.69	165.47
3	315.74	195.39
4	355.77	225.36
5	395.76	255.38
6	435.71	285.44
7	441.92	290.12

Circle Center At X = ****** ; Y = ****** and Radius, ******

*** 1.224 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	235.59	135.59
2	275.75	165.38
3	315.86	195.24
4	355.91	225.17
5	395.92	255.16
6	435.87	285.23
7	442.39	290.15

Circle Center At X = ****** ; Y = ****** and Radius, ******

*** 1.260 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	259.32	159.32
2	300.05	188.32
3	340.71	217.43
4	381.30	246.63
5	421.81	275.93
6	441.28	290.08

Circle Center At X = ****** ; Y = ****** and Radius, ******

*** 1.308 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.92	111.64
2	243.64	122.88
3	290.63	139.96
4	335.20	162.62
5	376.68	190.53
6	414.47	223.27
7	448.01	260.36
8	470.19	291.89

Circle Center At X = 128.1 ; Y = 514.1 and Radius, 498.0

*** 1.329 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	194.92	111.64
2	243.94	121.45
3	291.52	136.81
4	337.03	157.53
5	379.86	183.32
6	419.46	213.86
7	455.29	248.73
8	486.90	287.47
9	490.53	293.16

Circle Center At X = 134.1 ; Y = 542.9 and Radius, 435.6

*** 1.330 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	211.86	117.29
2	260.68	128.09
3	307.73	145.01
4	352.25	167.78
5	393.51	196.02
6	430.85	229.27
7	463.66	267.00
8	480.71	292.54

Circle Center At X = 153.0 ; Y = 501.5 and Radius, 388.7

*** 1.332 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	208.48	116.16
2	257.40	126.46
3	304.77	142.46
4	349.92	163.94
5	392.22	190.60
6	431.07	222.08
7	465.94	257.92
8	493.03	293.31

Circle Center At X = 146.5 ; Y = 532.7 and Radius, 421.2

*** 1.336 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	201.70	113.90
2	250.67	123.99
3	297.60	141.22
4	341.46	165.23
5	381.28	195.46
6	416.18	231.27
7	445.39	271.85
8	455.22	290.95

Circle Center At X = 159.8 ; Y = 443.9 and Radius, 332.6

*** 1.338 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	215.25	118.42
2	264.03	129.43
3	310.63	147.55
4	354.03	172.37
5	393.28	203.34
6	427.51	239.79
7	455.95	280.91
8	461.06	291.32

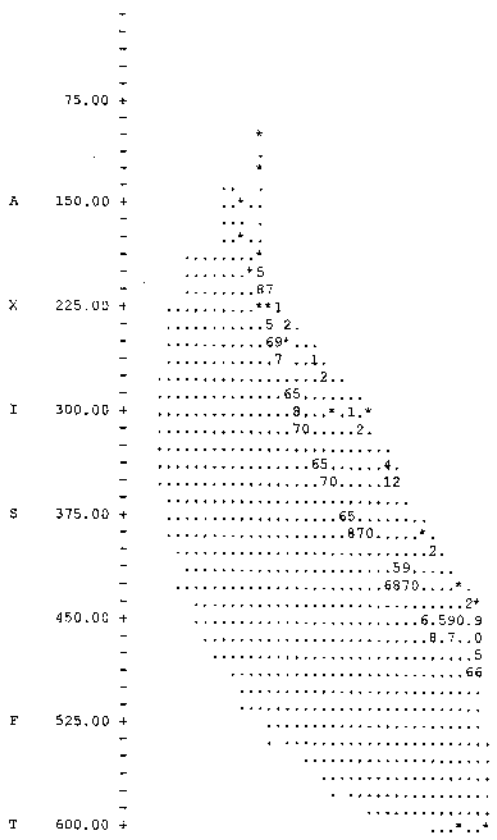
Circle Center At X = 166.8 ; Y = 448.4 and Radius, 333.5

*** 1.338 ***

1

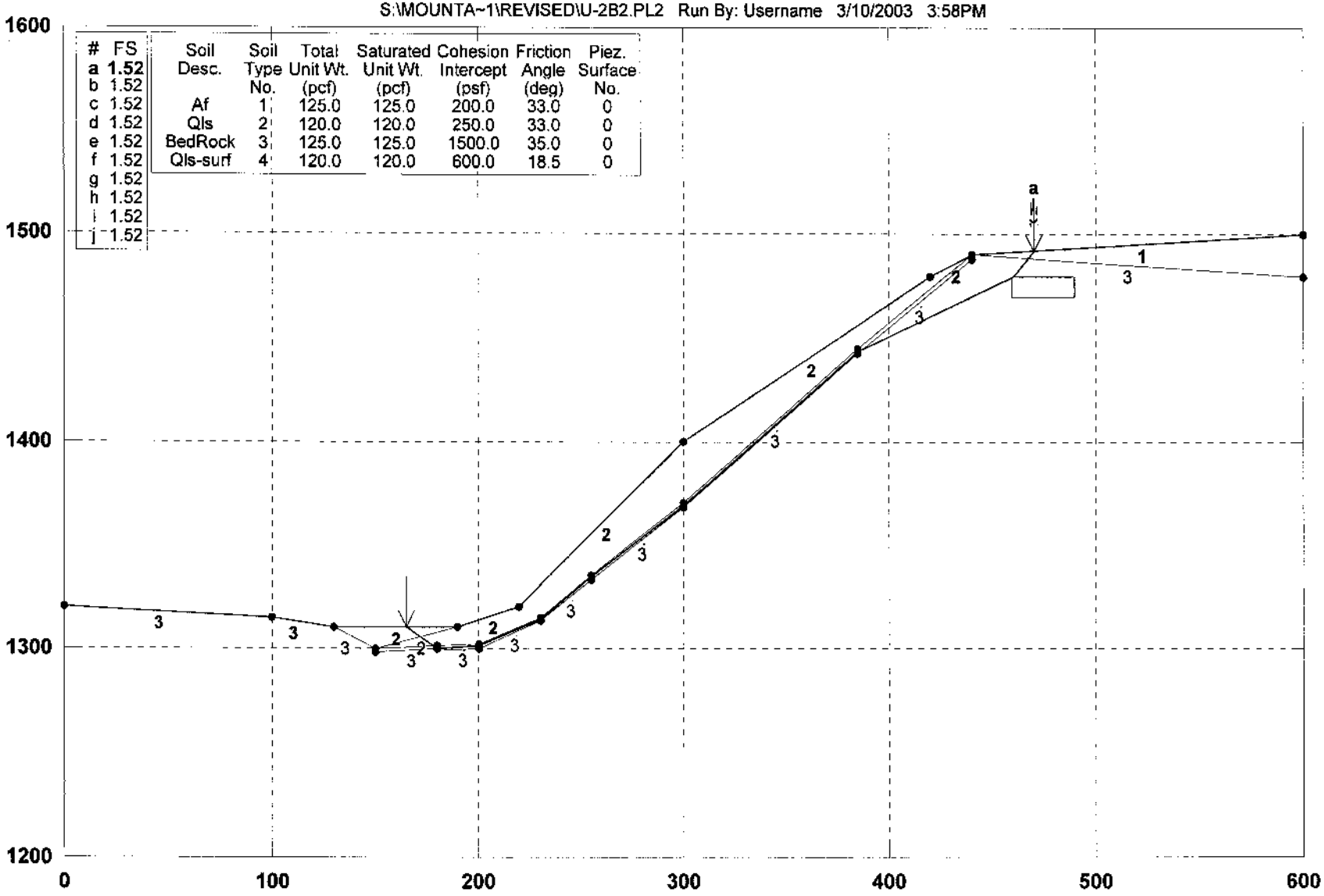
```
          Y           A     X     T     S           F     T

          0.00     75.00   150.00   225.00   300.00   375.00
X      0.00 +----------+------*---+----------+----------+---------+
```


75.00
A 150.00
X 225.00
I 300.00
S 375.00
450.00
F 525.00
T 600.00

Mountain Gate / Section U-U' , Static

S:\MOUNTA~1\REVISED\U-2B2.PL2 Run By: Username 3/10/2003 3:58PM



#	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.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	250.0	33.0	0
BedRock	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-92

*** 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: 3:58PM
Run By: Username
Input Data Filename: S:u-2b2.
Output Filename: S:u-2b2.OUT
Unit System: English

Plotted Output Filename: S:u-2b2.PLT

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

BOUNDARY COORDINATES

8 Top Boundaries
25 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	120.00	100.00	115.00	3
2	100.00	115.00	130.00	110.00	3
3	130.00	110.00	190.00	110.00	2
4	190.00	110.00	220.00	120.00	2
5	220.00	120.00	300.00	200.00	2
6	300.00	200.00	420.00	280.00	2
7	420.00	280.00	440.00	290.00	2
8	440.00	290.00	600.00	300.00	1
9	440.00	290.00	600.00	280.00	3
10	130.00	110.00	150.00	100.00	3
11	150.00	100.00	190.00	110.00	2
12	150.00	100.00	180.00	101.00	4
13	180.00	101.00	200.00	102.00	4
14	200.00	102.00	230.00	115.00	4
15	230.00	115.00	255.00	135.00	4
16	255.00	135.00	300.00	170.00	4
17	300.00	170.00	385.00	245.00	4
18	385.00	245.00	440.00	290.00	4
19	150.00	98.00	180.00	100.00	3
20	180.00	99.00	200.00	100.00	3
21	200.00	100.00	230.00	113.00	3
22	230.00	113.00	255.00	133.00	3
23	255.00	133.00	300.00	168.00	3
24	300.00	168.00	385.00	243.00	3
25	385.00	243.00	440.00	288.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	33.0	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

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 20.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	180.00	100.00	180.10	100.00	0.00
2	200.00	101.00	200.10	101.00	0.00
3	230.00	114.00	230.10	114.00	0.00
4	255.00	134.00	255.10	134.00	0.00
5	300.00	169.00	300.10	169.00	0.00
6	385.00	244.00	385.10	244.00	0.00
7	460.00	275.00	490.00	275.00	10.00

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	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

Individual data on the 22 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	6.9	1878.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	6.8	5541.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	1.4	1617.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	28.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	10.0	11673.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	10.0	13101.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	26.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	20.0	27196.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	10.0	15813.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	54.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	25.0	55943.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.1	134.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	44.5	140510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.1	235.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	84.9	222775.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	2.8	4421.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	32.1	64267.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	20.0	49308.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	20.8	41623.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	6.6	6324.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	2.7	579.8	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	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00

3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

Failure Surface Specified By 9 Coordinate Points

Point X-Surf Y-Surf

No.	(ft)	(ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

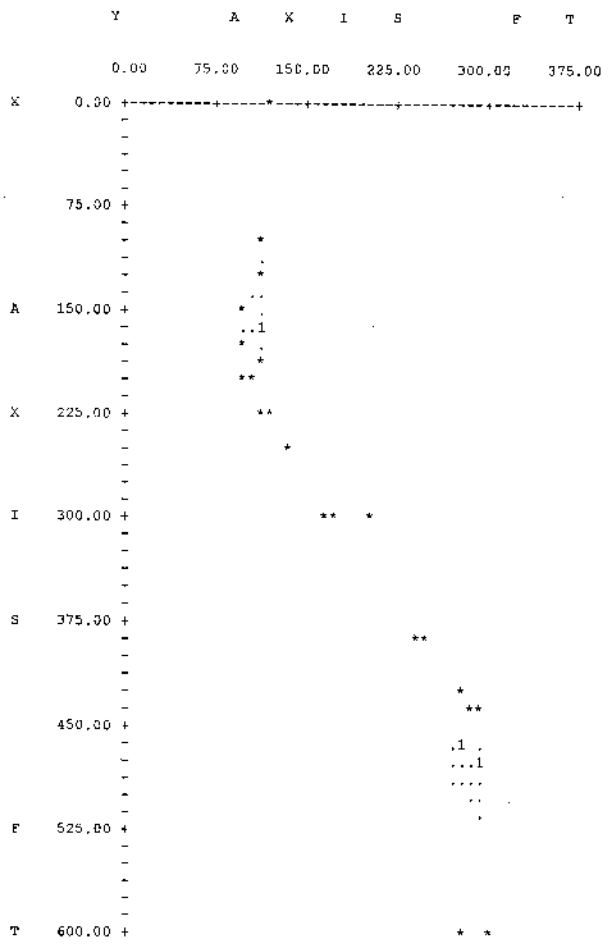
*** 1.517 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.517 ***

1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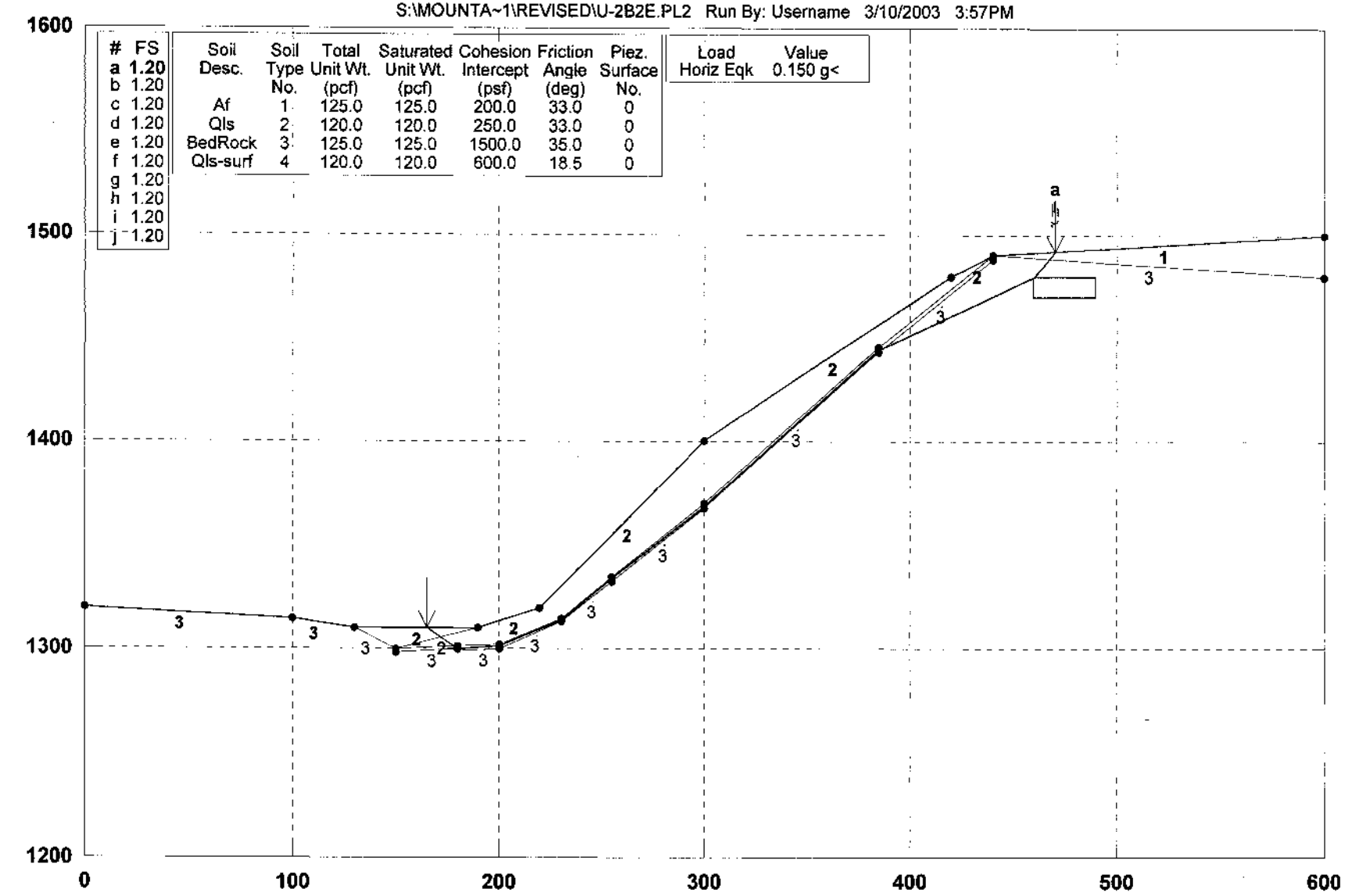
X 0.00
75.00
A 150.00
X 225.00
I 300.00
S 375.00
450.00
F 525.00
T 600.00

Mountain Gate / Section U-U' , PseudoStatic

S:\MOUNTA~1\REVISED\U-2B2E.PL2 Run By: Username 3/10/2003 3:57PM



#	FS
a	1.20
b	1.20
c	1.20
d	1.20
e	1.20
f	1.20
g	1.20
h	1.20
i	1.20
j	1.20

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	250.0	33.0	0
BedRock	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=1.20

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

GSTABL7

Figure E-93

*** 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: 3:57PM
Run By: Username
Input Data Filename: S:u-2b2e.
Output Filename: S:u-2b2e.OUT
Unit System: English

Plotted Output Filename: S:u-2b2e.PLT

PROBLEM DESCRIPTION Mountain Gate / Section U-U'
, PseudoStatic

BOUNDARY COORDINATES

8 Top Boundaries
25 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	120.00	100.00	115.00	3
2	100.00	115.00	130.00	110.00	3
3	130.00	110.00	190.00	110.00	2
4	190.00	110.00	220.00	120.00	2
5	220.00	120.00	300.00	200.00	2
6	300.00	200.00	420.00	280.00	2
7	420.00	280.00	440.00	290.00	2
8	440.00	290.00	600.00	300.00	1
9	440.00	290.00	600.00	280.00	3
10	130.00	110.00	150.00	100.00	3
11	150.00	100.00	190.00	110.00	2
12	150.00	100.00	180.00	101.00	4
13	180.00	101.00	200.00	102.00	4
14	200.00	102.00	230.00	115.00	4
15	230.00	115.00	255.00	135.00	4
16	255.00	135.00	300.00	170.00	4
17	300.00	170.00	385.00	245.00	4
18	385.00	245.00	440.00	290.00	4
19	150.00	98.00	180.00	100.00	3
20	180.00	99.00	200.00	100.00	3
21	200.00	100.00	230.00	113.00	3
22	230.00	113.00	255.00	133.00	3
23	255.00	133.00	300.00	168.00	3
24	300.00	168.00	385.00	243.00	3
25	385.00	243.00	440.00	288.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	33.0	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

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 20.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	180.00	100.00	180.10	100.00	0.00
2	200.00	101.00	200.10	101.00	0.00
3	230.00	114.00	230.10	114.00	0.00
4	255.00	134.00	255.10	134.00	0.00
5	300.00	169.00	300.10	169.00	0.00
6	385.00	244.00	385.10	244.00	0.00
7	460.00	275.00	490.00	275.00	10.00

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

    1        164.91      110.00
    2        180.02      100.00
    3        200.02      101.00
    4        230.03      114.00
    5        255.05      134.00
    6        300.06      169.00
    7        385.01      244.00
    8        460.77      279.48
    9        470.11      291.88


      ***      1.195    ***



       Individual data on the    22  slices


                            Water  Water     Tie     Tie     Earthquake
                            Force  Force    Force   Force      Force   Surcharge
Slice  Width    Weight      Top    Bot     Norm     Tan     Hor     Ver     Load
 No.   (ft)     (lbs)      (lbs)  (lbs)    (lbs)   (lbs)   (lbs)   (lbs)   (lbs)

  1     6.9    1878.4       0.0     0.0      0.0     0.0   281.8     0.0      0.0
  2     6.8    5541.8       0.0     0.0      0.0     0.0   831.3     0.0      0.0
  3     1.4    1617.0       0.0     0.0      0.0     0.0   242.5     0.0      0.0
  4     0.0      28.2       0.0     0.0      0.0     0.0     4.2     0.0      0.0
  5    10.0   11673.1       0.0     0.0      0.0     0.0  1751.0     0.0      0.0
  6    10.0   13101.1       0.0     0.0      0.0     0.0  1965.2     0.0      0.0
  7     0.0      26.1       0.0     0.0      0.0     0.0     3.9     0.0      0.0
  8    20.0   27196.0       0.0     0.0      0.0     0.0  4079.4     0.0      0.0
  9    10.0   15813.9       0.0     0.0      0.0     0.0  2372.1     0.0      0.0
 10     0.0      54.9       0.0     0.0      0.0     0.0     8.2     0.0      0.0
 11    25.0   55543.0       0.0     0.0      0.0     0.0  8331.4     0.0      0.0
 12     0.1     134.1       0.0     0.0      0.0     0.0    20.1     0.0      0.0
 13    44.9  140510.0       0.0     0.0      0.0     0.0 21076.5     0.0      0.0
 14     0.1     235.5       0.0     0.0      0.0     0.0    35.3     0.0      0.0
 15    84.9  222775.0       0.0     0.0      0.0     0.0 33416.2     0.0      0.0
 16     0.0       8.7       0.0     0.0      0.0     0.0     1.3     0.0      0.0
 17     2.8    4421.2       0.0     0.0      0.0     0.0   663.2     0.0      0.0
 18    32.1   64267.6       0.0     0.0      0.0     0.0  9640.1     0.0      0.0
 19    20.0   49308.0       0.0     0.0      0.0     0.0  7396.2     0.0      0.0
 20    20.8   41623.7       0.0     0.0      0.0     0.0  6243.6     0.0      0.0
 21     6.6    6324.9       0.0     0.0      0.0     0.0   948.7     0.0      0.0
 22     2.7     579.8       0.0     0.0      0.0     0.0    87.0     0.0      0.0
        Failure Surface Specified By  9 Coordinate Points
```

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

    1        164.91      110.00
    2        180.02      100.00
    3        200.02      101.00
    4        230.03      114.00
    5        255.05      134.00
    6        300.06      169.00
    7        385.01      244.00
    8        460.77      279.48
    9        470.11      291.88


      ***      1.195    ***



Failure Surface Specified By  9 Coordinate Points


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

    1        164.91      110.00
    2        180.02      100.00
    3        200.02      101.00
    4        230.03      114.00
    5        255.05      134.00
    6        300.06      169.00
    7        385.01      244.00
    8        460.77      279.48
    9        470.11      291.88


      ***      1.195    ***



Failure Surface Specified By  9 Coordinate Points


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

    1        164.91      110.00
    2        180.02      100.00
    3        200.02      101.00
    4        230.03      114.00
    5        255.05      134.00
    6        300.06      169.00
    7        385.01      244.00
    8        460.77      279.48
    9        470.11      291.88


      ***      1.195    ***
```

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.195 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.195 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.195 ***

*** 1.195 ***

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.195 ***

1

Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00
7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.195 ***

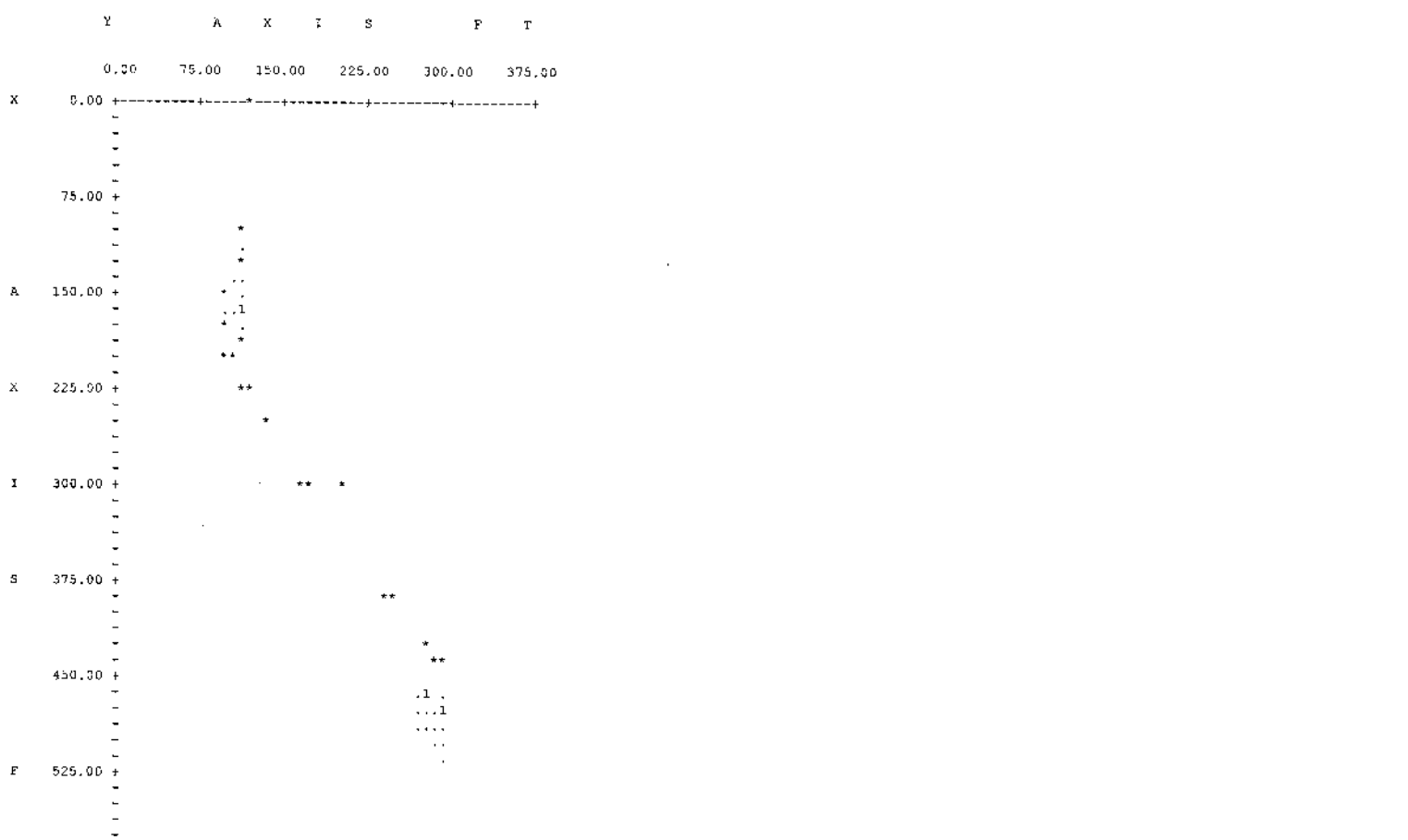
Failure Surface Specified By 9 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	164.91	110.00
2	180.02	100.00
3	200.02	101.00
4	230.03	114.00
5	255.05	134.00
6	300.06	169.00

7	385.01	244.00
8	460.77	279.48
9	470.11	291.88

*** 1.195 ***

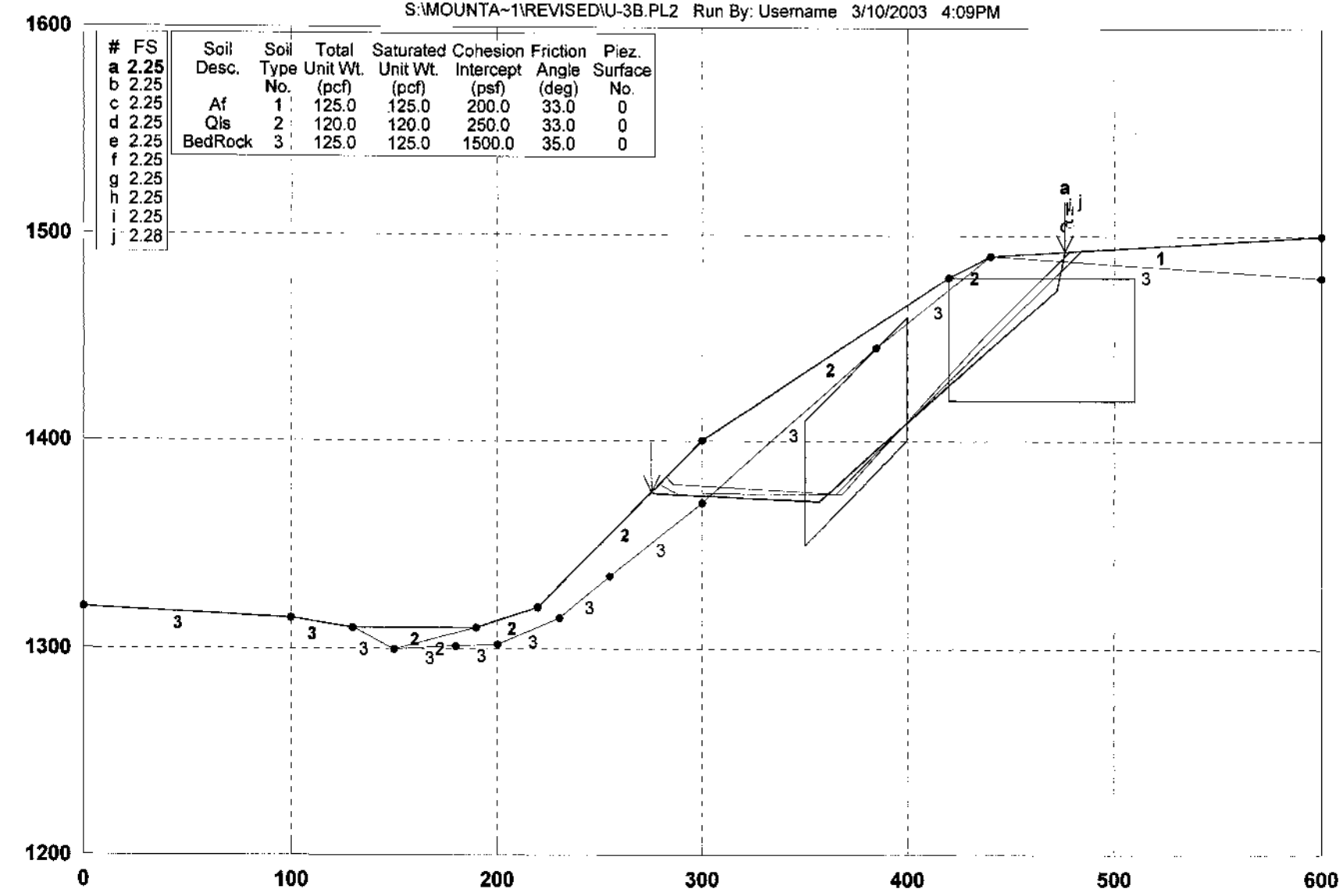
1



T 600.00

Mountain Gate / Section U-U' , Static

S:\MOUNTA~1\REVISED\U-3B.PL2 Run By: Username 3/10/2003 4:09PM



#	FS
a	2.25
b	2.25
c	2.25
d	2.25
e	2.25
f	2.25
g	2.25
h	2.25
i	2.25
j	2.28

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	250.0	33.0	0
BedRock	3	125.0	125.0	1500.0	35.0	0

GSTABL7 FSmin=2.25

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

GSTABL7

Figure E-94

*** 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: 4:09PM
Run By: Username
Input Data Filename: S:u-3b.
Output Filename: S:u-3b.OUT
Unit System: English

Plotted Output Filename: S:u-3b.PLT

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

BOUNDARY COORDINATES

8 Top Boundaries
18 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	120.00	100.00	115.00	3
2	100.00	115.00	130.00	120.00	3
3	130.00	110.00	190.00	110.00	2
4	190.00	110.00	220.00	120.00	2
5	220.00	120.00	300.00	200.00	2
6	300.00	200.00	420.00	280.00	2
7	420.00	280.00	440.00	290.00	2
8	440.00	290.00	600.00	300.00	1
9	440.00	290.00	600.00	280.00	3
10	130.00	110.00	150.00	100.00	3
11	150.00	100.00	190.00	110.00	2
12	150.00	100.00	180.00	101.00	3
13	180.00	101.00	200.00	102.00	3
14	200.00	102.00	230.00	115.00	3
15	230.00	115.00	255.00	135.00	3
16	255.00	135.00	300.00	170.00	3
17	300.00	170.00	385.00	245.00	3
18	385.00	245.00	440.00	290.00	3

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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	33.0	0.00	0.0	0
3	125.0	125.0	1500.0	35.0	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.

2 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 80.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	350.00	180.00	400.00	230.00	60.00
2	420.00	250.00	510.00	250.00	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 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	275.46	175.46
2	276.89	174.60
3	356.81	171.03
4	472.82	273.57
5	476.09	292.26

*** 2.247 ***

Individual data on the 10 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	1.4	196.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	23.1	39821.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	3.8	12843.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	53.0	311584.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	28.2	222691.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	35.3	247443.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	20.3	122879.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	32.8	131114.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	2.5	3566.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.8	215.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	275.46	175.46
2	276.89	174.60
3	356.81	171.03
4	472.82	273.57
5	476.09	292.26

*** 2.247 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	275.46	175.46
2	276.89	174.60
3	356.81	171.03
4	472.82	273.57
5	476.09	292.26

*** 2.247 ***

Failure Surface Specified By 5 Coordinate Points

Point	X-Surf	Y-Surf

No.	(ft)	(ft)
1	275.46	175.46
2	276.89	174.60
3	356.81	171.03
4	472.82	273.57
5	476.09	292.26

*** 2.247 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	279.11	179.11
2	287.92	174.74
3	367.92	174.49
4	440.43	254.43
5	478.38	292.40

*** 2.250 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	279.11	179.11
2	287.92	174.74
3	367.92	174.49
4	440.43	254.43
5	478.38	292.40

*** 2.250 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	279.11	179.11
2	287.92	174.74
3	367.92	174.49
4	440.43	254.43
5	478.38	292.40

*** 2.250 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	279.11	179.11
2	287.92	174.74
3	367.92	174.49
4	440.43	254.43
5	478.38	292.40

*** 2.250 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	279.11	179.11
2	287.92	174.74
3	367.92	174.49
4	440.43	254.43
5	478.38	292.40

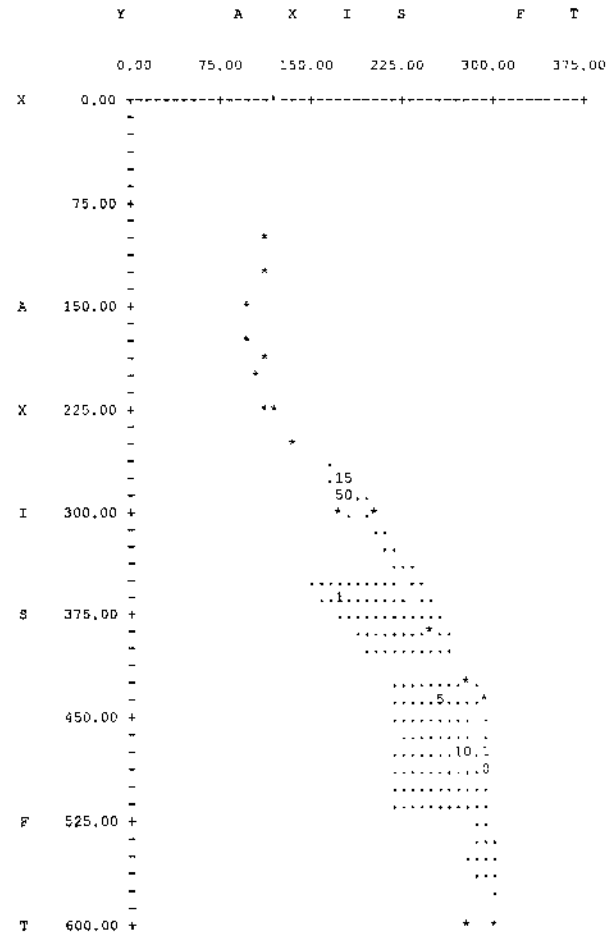
*** 2.250 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	282.58	182.58
2	285.75	179.42
3	365.60	174.43
4	468.95	277.55
5	483.58	292.72

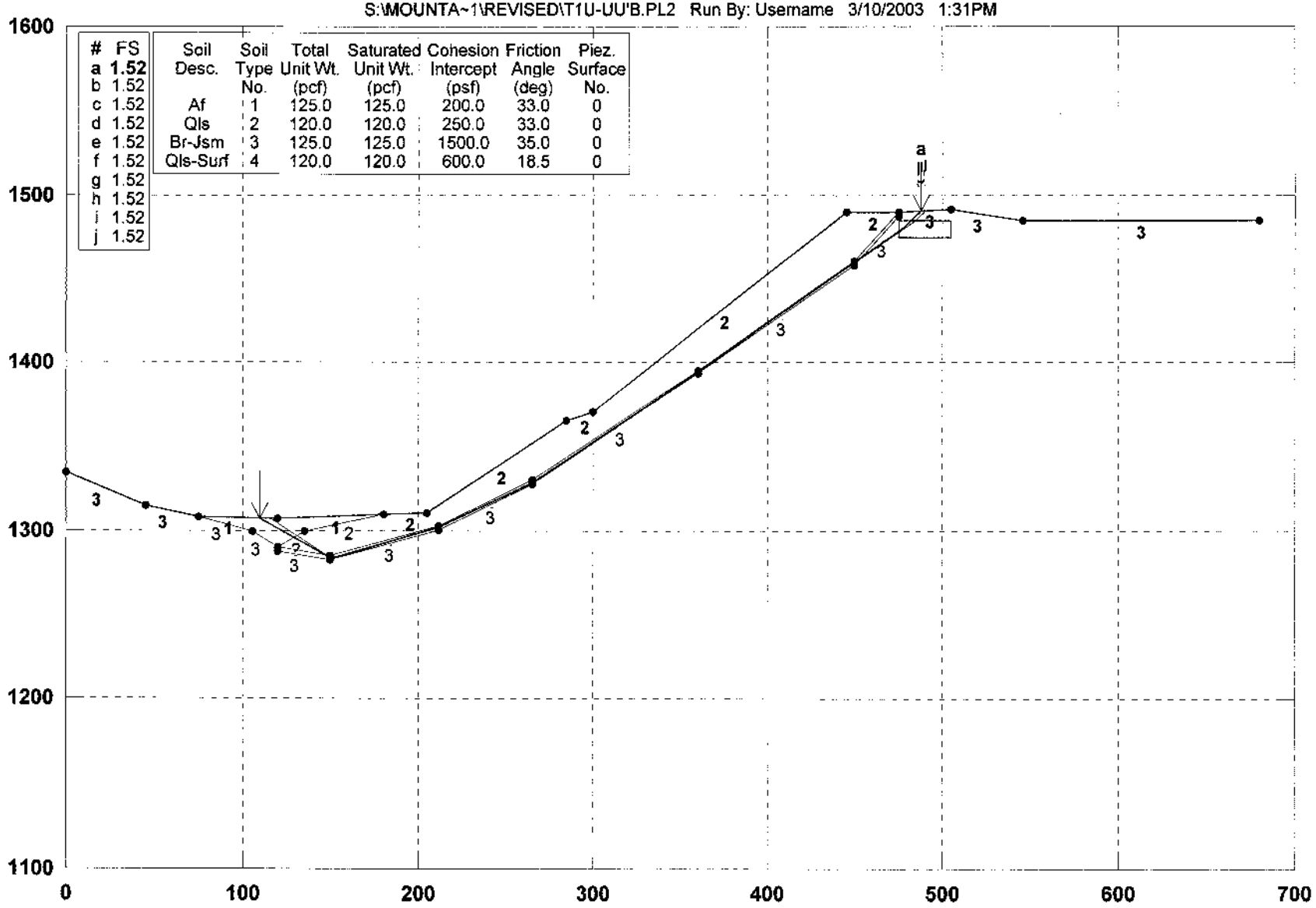
*** 2.283 ***

1



Mountain Gate / Section UU-UU' , Static

S:\MOUNTA~1\REVISED\T1U-UU'B.PL2 Run By: Username 3/10/2003 1:31PM



#	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.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	250.0	33.0	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-95

*** 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: 1:31PM
Run By: Username
Input Data Filename: S:tlu-uu'b.
Output Filename: S:tlu-uu'b.OUT
Unit System: English

Plotted Output Filename: S:tlu-uu'b.PLT

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

BOUNDARY COORDINATES

12 Top Boundaries
28 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	235.00	45.00	215.00	3
2	45.00	215.00	75.00	208.00	3
3	75.00	208.00	120.00	207.00	1
4	120.00	207.00	180.00	210.00	1
5	180.00	210.00	205.00	211.00	2
6	205.00	211.00	285.00	265.00	2
7	285.00	265.00	300.00	270.00	2
8	300.00	270.00	445.00	390.00	2
9	445.00	390.00	475.00	390.00	2
10	475.00	390.00	505.00	392.00	3
11	505.00	392.00	546.00	385.00	3
12	546.00	385.00	680.00	385.00	3
13	75.00	208.00	105.00	200.00	3
14	105.00	200.00	120.00	190.00	3
15	120.00	190.00	135.00	200.00	2
16	135.00	200.00	180.00	210.00	2
17	120.00	190.00	150.00	185.00	4
18	150.00	185.00	212.00	203.00	4
19	212.00	203.00	265.00	230.00	4
20	265.00	230.00	360.00	295.00	4
21	360.00	295.00	450.00	360.00	4
22	450.00	360.00	475.00	390.00	4
23	120.00	188.00	150.00	183.00	3
24	150.00	183.90	212.00	201.00	3
25	212.00	201.00	265.00	228.00	3
26	265.00	226.00	360.00	293.00	3
27	360.00	293.00	450.00	358.00	3
28	450.00	358.00	475.00	388.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	33.0	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.

5 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	150.00	184.00	150.10	184.00	0.00
2	212.00	202.00	212.10	202.00	0.00
3	265.00	229.00	265.10	229.00	0.00
4	360.00	294.00	360.10	294.00	0.00
5	475.00	380.00	505.00	380.00	10.00

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	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.517 ***

Individual data on the 22 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	10.2	3587.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	9.1	9708.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	5.9	9583.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	12.7	29346.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	2.3	6693.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.1	226.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	29.9	75452.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	25.0	42526.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	7.0	10407.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	59.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	53.0	115262.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	113.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	20.0	53740.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	15.0	35496.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	60.0	154079.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.1	243.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	84.9	303050.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	5.0	19154.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	4.1	14020.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	20.9	49278.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	1.8	2532.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	11.1	7340.2	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	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.517 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00

4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.517 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.517 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.517 ***

Failure Surface Specified By 7 Coordinate Points

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

1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.517 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.517 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.517 ***

1

Failure Surface Specified By 7 Coordinate Points

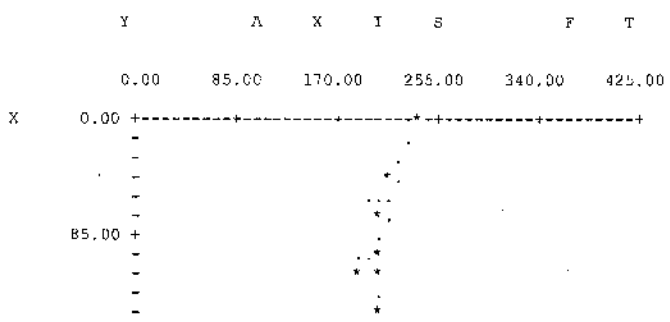
Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.06	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

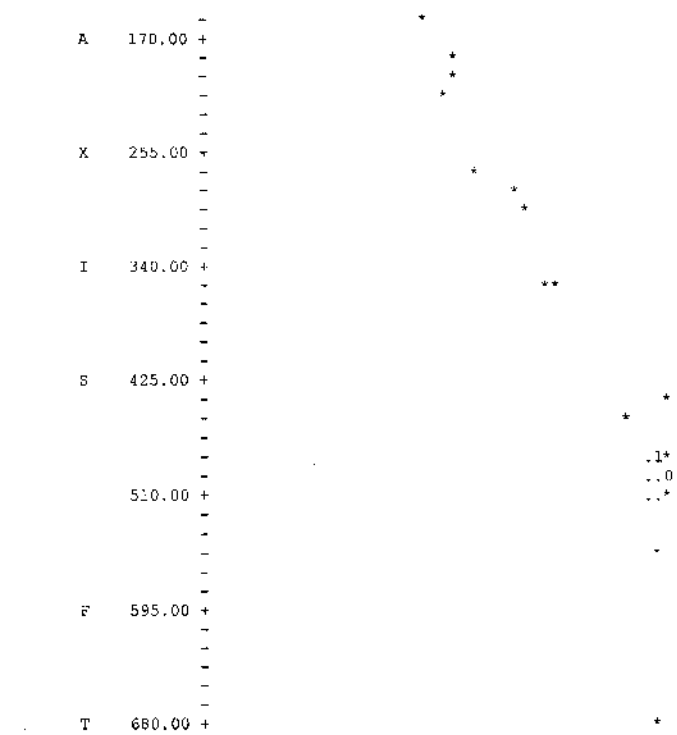
*** 1.517 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	115.38	207.10
2	150.04	184.00
3	212.02	202.00
4	265.06	229.00
5	360.04	294.00
6	483.44	383.88
7	490.25	391.02

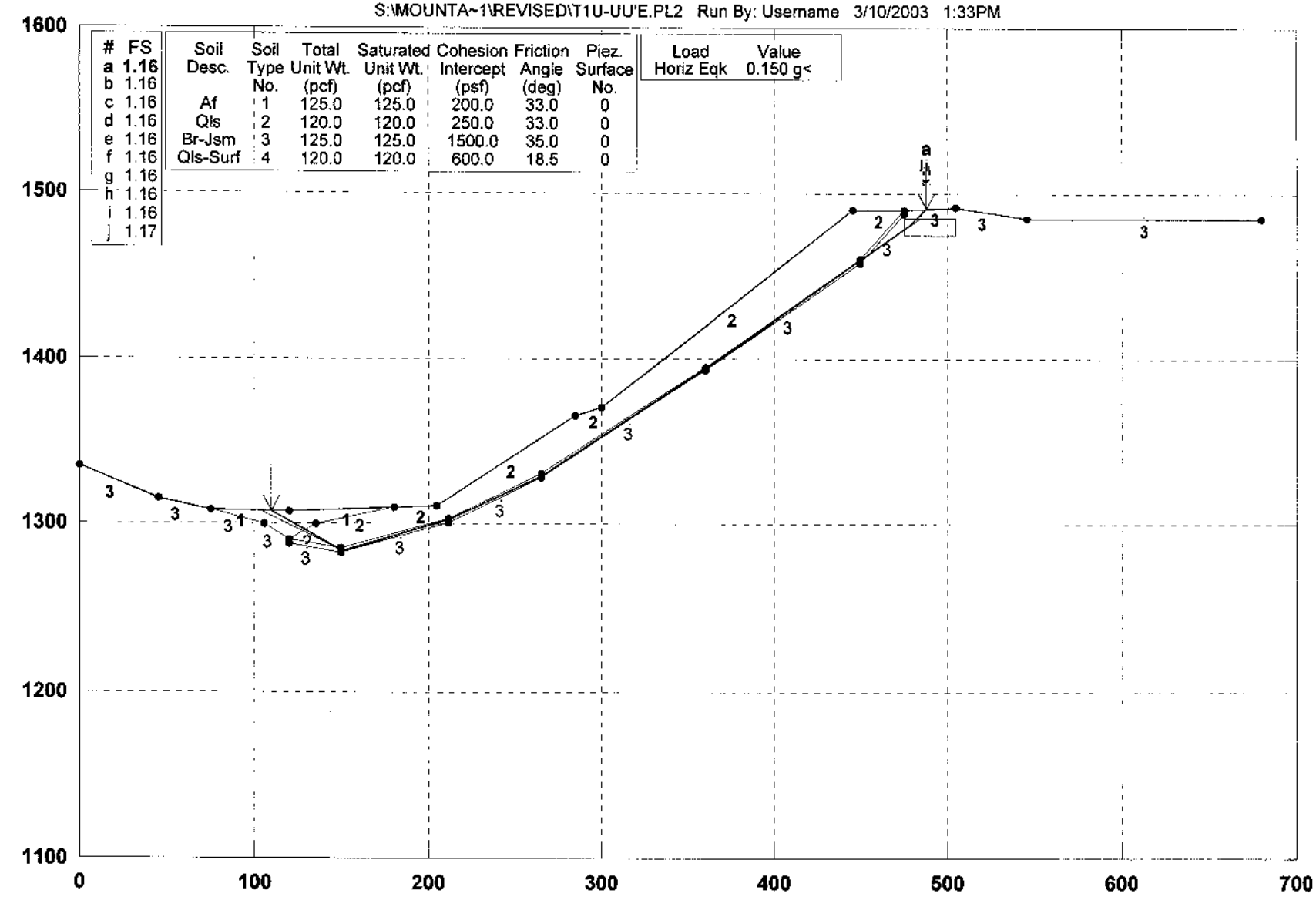
*** 1.524 ***





Mountain Gate/ Section UU-UU' , Pseudo Static

S:\MOUNTA~1\REVISED\T1U-UU'E.PL2 Run By: Username 3/10/2003 1:33PM



#	FS
a	1.16
b	1.16
c	1.16
d	1.16
e	1.16
f	1.16
g	1.16
h	1.16
i	1.16
j	1.17

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	250.0	33.0	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=1.16

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

GSTABL7

Figure E-96

*** 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: 1:33PM
Run By: Username
Input Data Filename: S:tlu-uu'e.
Output Filename: S:tlu-uu'e.OUT
Unit System: English

Plotted Output Filename: S:tlu-uu'e.PLT

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

BOUNDARY COORDINATES

12 Top Boundaries
28 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	235.00	45.00	215.00	3
2	45.00	215.00	75.00	208.00	3
3	75.00	208.00	120.00	207.00	1
4	120.00	207.00	180.00	210.00	1
5	180.00	210.00	205.00	211.00	2
6	205.00	211.00	285.00	265.00	2
7	285.00	265.00	300.00	270.00	2
8	300.00	270.00	445.00	390.00	2
9	445.00	390.00	475.00	390.00	2
10	475.00	390.00	505.00	392.00	3
11	505.00	392.00	546.00	385.00	3
12	546.00	385.00	680.00	385.00	3
13	75.00	208.00	105.00	200.00	3
14	105.00	200.00	120.00	190.00	3
15	120.00	190.00	135.00	200.00	2
16	135.00	200.00	180.00	210.00	2
17	120.00	190.00	150.00	185.00	4
18	150.00	185.00	212.00	203.00	4
19	212.00	203.00	265.00	230.00	4
20	265.00	230.00	360.00	295.00	4
21	360.00	295.00	450.00	360.00	4
22	450.00	360.00	475.00	390.00	4
23	120.00	188.00	150.00	183.00	3
24	150.00	183.00	212.00	201.00	3
25	212.00	201.00	265.00	228.00	3
26	265.00	228.00	360.00	293.00	3
27	360.00	293.00	450.00	358.00	3
28	450.00	358.00	475.00	388.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	33.0	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.

5 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of
Sliding Block Is 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	150.00	184.00	150.10	184.00	0.00
2	212.00	202.00	212.10	202.00	0.00
3	265.00	229.00	265.10	229.00	0.00
4	360.00	294.00	360.10	294.00	0.00
5	475.00	380.00	505.00	380.00	10.00

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	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.163 ***

Individual data on the 22 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	10.2	3587.5	0.0	0.0	0.0	0.0	538.1	0.0	0.0
2	9.1	9708.9	0.0	0.0	0.0	0.0	1456.3	0.0	0.0
3	5.9	9583.8	0.0	0.0	0.0	0.0	1437.6	0.0	0.0
4	12.7	29346.2	0.0	0.0	0.0	0.0	4401.9	0.0	0.0
5	2.3	6693.1	0.0	0.0	0.0	0.0	1004.0	0.0	0.0
6	0.1	226.9	0.0	0.0	0.0	0.0	34.0	0.0	0.0
7	29.9	75452.7	0.0	0.0	0.0	0.0	11317.9	0.0	0.0
8	25.0	42526.4	0.0	0.0	0.0	0.0	6379.0	0.0	0.0
9	7.0	10407.4	0.0	0.0	0.0	0.0	1561.1	0.0	0.0
10	0.0	59.5	0.0	0.0	0.0	0.0	8.9	0.0	0.0
11	53.0	115262.6	0.0	0.0	0.0	0.0	17289.4	0.0	0.0
12	0.0	113.8	0.0	0.0	0.0	0.0	17.1	0.0	0.0
13	20.0	53740.6	0.0	0.0	0.0	0.0	8061.1	0.0	0.0
14	15.0	35496.5	0.0	0.0	0.0	0.0	5324.5	0.0	0.0
15	60.0	154079.5	0.0	0.0	0.0	0.0	23111.9	0.0	0.0
16	0.1	243.6	0.0	0.0	0.0	0.0	36.5	0.0	0.0
17	84.9	303050.3	0.0	0.0	0.0	0.0	45457.5	0.0	0.0
18	5.0	19154.4	0.0	0.0	0.0	0.0	2873.2	0.0	0.0
19	4.1	14020.8	0.0	0.0	0.0	0.0	2103.1	0.0	0.0
20	20.9	49278.7	0.0	0.0	0.0	0.0	7391.8	0.0	0.0
21	1.8	2532.0	0.0	0.0	0.0	0.0	379.8	0.0	0.0
22	11.1	7340.2	0.0	0.0	0.0	0.0	1101.0	0.0	0.0

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.163 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.163 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.163 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.163 ***

*** 1.163 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.163 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

*** 1.163 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00

6	476.81	379.56
7	487.94	390.86

*** 1.163 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	109.83	207.23
2	150.08	184.00
3	212.04	202.00
4	265.04	229.00
5	360.08	294.00
6	476.81	379.56
7	487.94	390.86

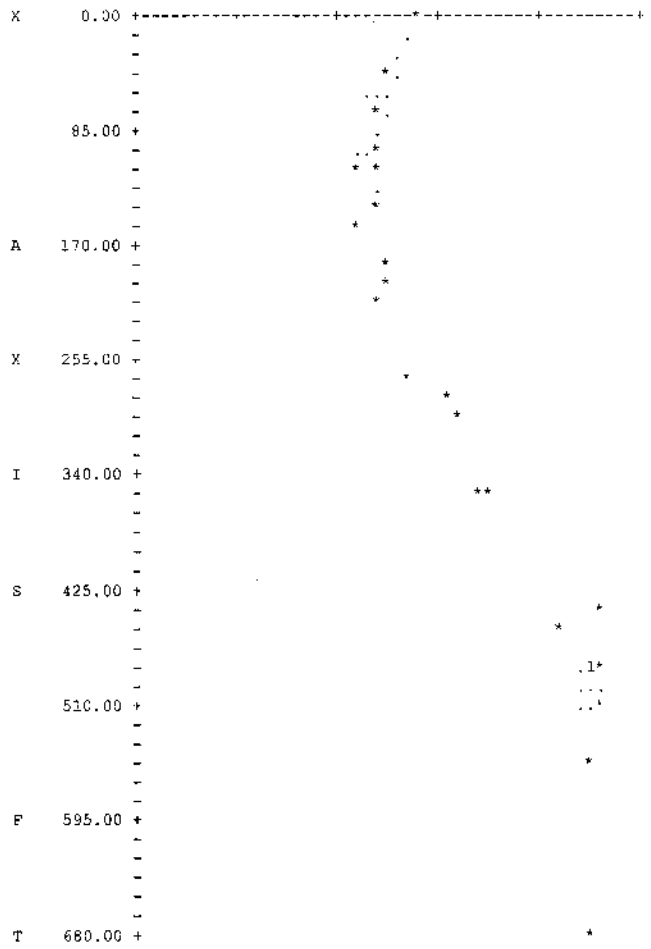
*** 1.163 ***

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	104.80	207.34
2	105.49	206.64
3	150.07	184.00
4	212.02	202.00
5	265.08	229.00
6	360.01	294.00
7	484.24	384.71
8	485.20	390.68

*** 1.169 ***

1

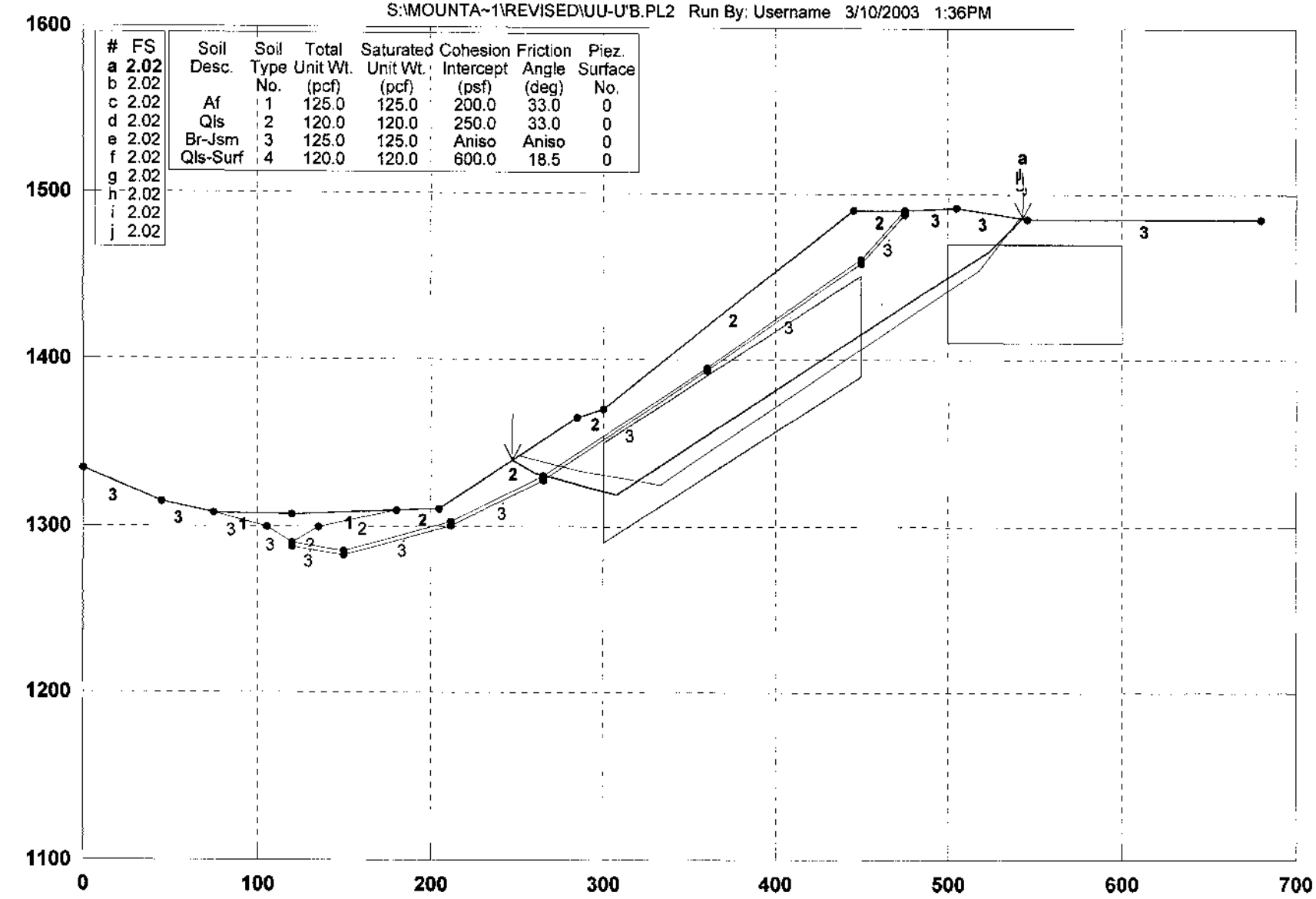


Mountain Gate/ Section UU-UU' , Static

S:\MOUNTA~1\REVISED\UU-U'B.PL2 Run By: Username 3/10/2003 1:36PM

#	FS
a	**2.02**
b	2.02
c	2.02
d	2.02
e	2.02
f	2.02
g	2.02
h	2.02
i	2.02
j	2.02

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Af	1	125.0	125.0	200.0	33.0	0
Qls	2	120.0	120.0	250.0	33.0	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=2.02

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

GSTABL7

Figure E-97

*** 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: 1:36PM
Run By: Username
Input Data Filename: S:uu-u'b.
Output Filename: S:uu-u'b.OUT
Unit System: English

Plotted Output Filename: S:uu-u'b.PLT

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

BOUNDARY COORDINATES

12 Top Boundaries
28 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	235.00	45.00	215.00	3
2	45.00	215.00	75.00	208.00	3
3	75.00	208.00	120.00	207.00	1
4	120.00	207.00	180.00	210.00	1
5	180.00	210.00	205.00	211.00	2
6	205.00	211.00	285.00	265.00	2
7	285.00	265.00	300.00	270.00	2
8	300.00	270.00	445.00	390.00	2
9	445.00	390.00	475.00	390.00	2
10	475.00	390.00	505.00	392.00	3
11	505.00	392.00	546.00	385.00	3
12	546.00	385.00	680.00	385.00	3
13	75.00	208.00	105.00	200.00	3
14	105.00	200.00	120.00	190.00	3
15	120.00	190.00	135.00	200.00	2
16	135.00	200.00	180.00	210.00	2
17	120.00	190.00	150.00	185.00	4
18	150.00	185.00	212.00	203.00	4
19	212.00	203.00	265.00	230.00	4
20	265.00	230.00	360.00	295.00	4
21	360.00	295.00	450.00	360.00	4
22	450.00	360.00	475.00	390.00	4
23	120.00	188.00	150.00	183.00	3
24	150.00	183.00	212.00	201.00	3
25	212.00	201.00	265.00	228.00	3
26	265.00	228.00	360.00	293.00	3
27	360.00	293.00	450.00	358.00	3
28	450.00	358.00	475.00	388.00	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	125.0	125.0	200.0	33.0	0.00	0.0	0
2	120.0	120.0	250.0	33.0	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	83.0	1500.0	35.0
2	88.0	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 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	300.00	220.00	450.00	320.00	60.00
2	500.00	340.00	600.00	340.00	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 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	247.32	239.56
2	259.72	232.11
3	308.05	219.28
4	523.48	365.53
5	542.82	385.54

*** 2.018 ***

Individual data on the 13 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	12.4	11778.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	6.0	13493.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	2.1	5682.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	17.1	65586.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	15.0	81118.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	8.0	52544.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	52.0	391749.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	85.0	745673.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	5.0	46686.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	25.0	203711.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	30.0	180748.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	18.5	71995.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	19.3	28181.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	247.32	239.56
2	259.72	232.11
3	308.05	219.28
4	523.48	365.53
5	542.82	385.54

*** 2.018 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	247.32	239.56
2	259.72	232.11
3	308.05	219.28
4	523.48	365.53
5	542.82	385.54

*** 2.018 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	247.32	239.56
2	259.72	232.11
3	308.05	219.28
4	523.48	365.53
5	542.82	385.54

*** 2.018 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	247.32	239.56
2	259.72	232.11
3	308.05	219.28
4	523.48	365.53
5	542.82	385.54

*** 2.018 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	251.89	242.65
2	283.63	233.92
3	332.88	225.26
4	517.77	353.78
5	541.68	385.74

*** 2.023 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	251.89	242.65
2	283.63	233.92
3	332.88	225.26
4	517.77	353.78
5	541.68	385.74

*** 2.023 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	251.89	242.65
2	283.63	233.92
3	332.88	225.26
4	517.77	353.78
5	541.68	385.74

*** 2.023 ***

1

Failure Surface Specified By 5 Coordinate Points

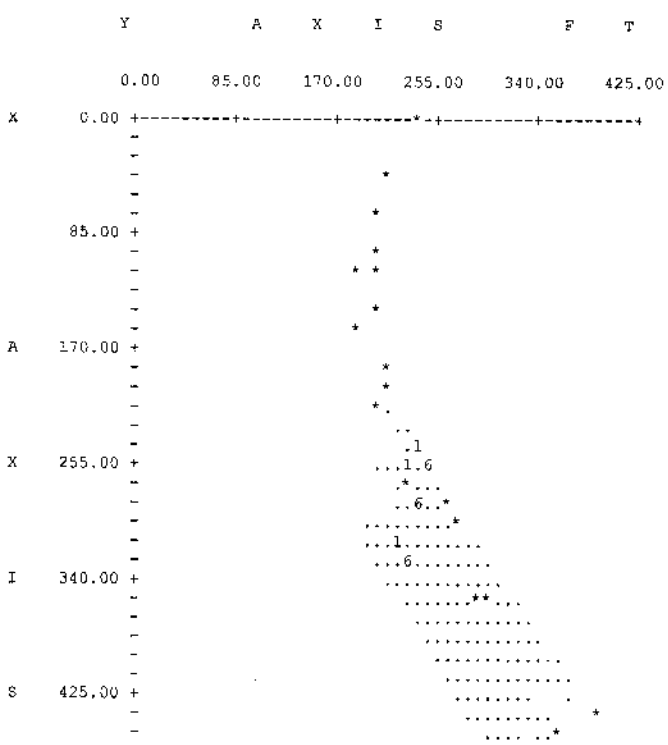
Point No.	X-Surf (ft)	Y-Surf (ft)
1	251.89	242.65
2	283.63	233.92
3	332.88	225.26
4	517.77	353.78
5	541.68	385.74

*** 2.023 ***

Failure Surface Specified By 5 Coordinate Points

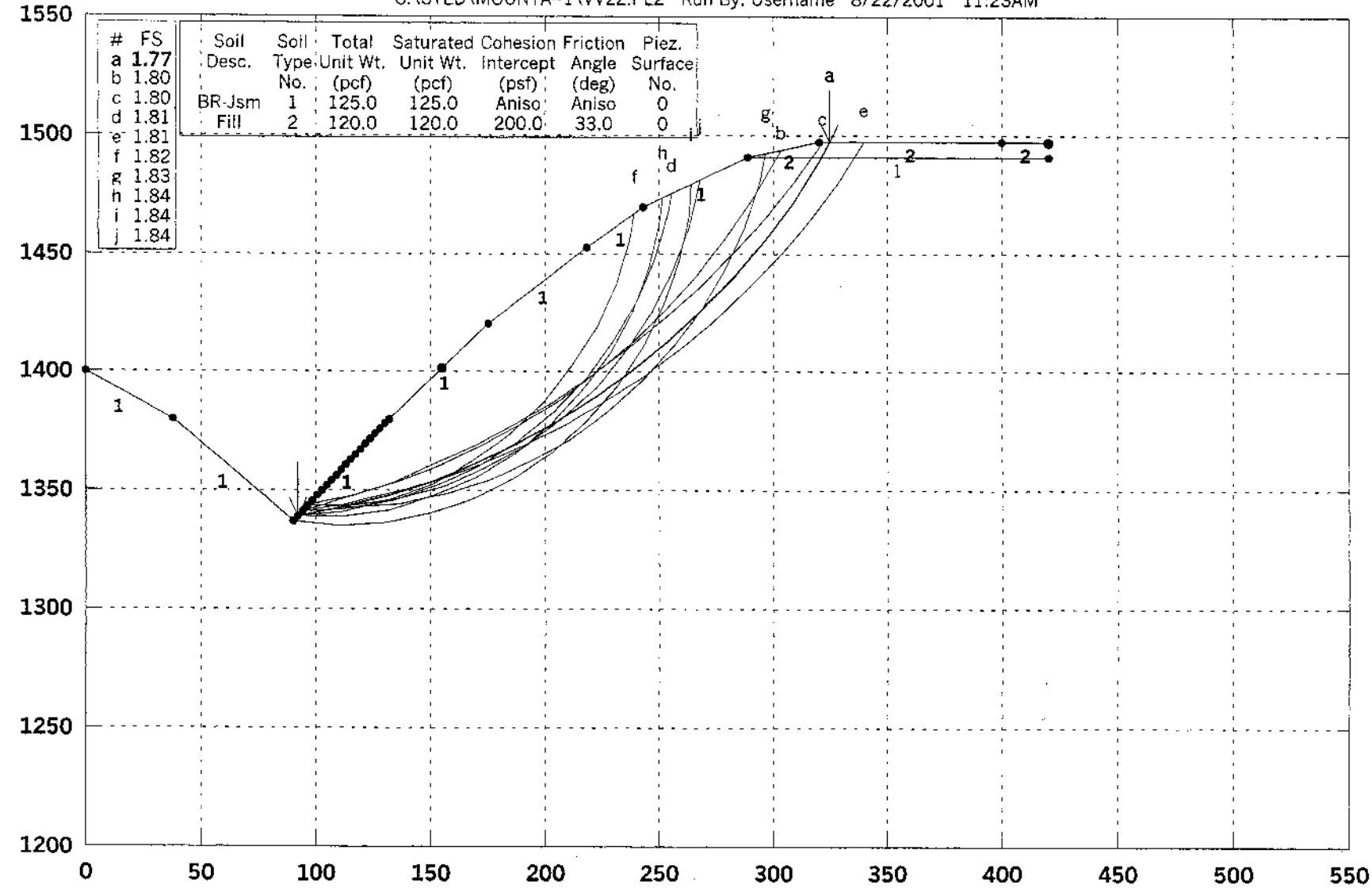
Point No.	X-Surf (ft)	Y-Surf (ft)
1	251.89	242.65
2	283.63	233.92
3	332.88	225.26
4	517.77	353.78
5	541.68	385.74

*** 2.023 ***



Mountaingate Section V-V'

C:\STED\MOUNTA~1\VV2Z.PL2 Run By: Username 8/22/2001 11:23AM



GSTABL7 FSmin=1.77

Safety Factors Are Calculated By The Modified Bishop Method

STED

Figure E-98

*** 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:	8/22/2001
Time of Run:	11:23AM
Run By:	Username
Input Data Filename:	C:vv2z.dat
Output Filename:	C:vv2z.OUT
Unit System:	English
Plotted Output Filename:	C:vv2z.PLT

PROBLEM DESCRIPTION Mountaingate Section V-V'

BOUNDARY COORDINATES

10 Top Boundaries
11 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	200.00	38.00	180.00	1
2	38.00	180.00	90.00	137.00	1
3	90.00	137.00	132.00	180.00	1
4	132.00	180.00	175.00	220.00	1
5	175.00	220.00	218.00	253.00	1
6	218.00	253.00	243.00	270.00	1
7	243.00	270.00	289.00	291.00	1
8	289.00	291.00	320.00	297.00	2
9	320.00	297.00	400.00	297.00	2
10	400.00	297.00	420.00	297.00	2
11	289.00	291.00	420.00	291.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 1 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	0.0	1500.0	35.0
2	70.0	1500.0	35.0
3	90.0	0.0	35.0

1

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

800 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 20 Points Equally Spaced
Along The Ground Surface Between X = 90.00(ft)
and X = 130.00(ft)

Each Surface Terminates Between X = 155.00(ft)
and X = 420.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)

20.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	92.11	139.16
2	111.76	142.86
3	131.15	147.74
4	150.22	153.79
5	168.88	160.98
6	187.07	169.29
7	204.73	178.68
8	221.79	189.12
9	238.19	200.58
10	253.86	213.00
11	268.75	226.35
12	282.81	240.58
13	295.98	255.63
14	308.22	271.44
15	319.48	287.97
16	324.86	297.00

Circle Center At X = 41.0 ; Y = 465.0 and Radius, 329.8

*** 1.774 ***

Individual data on the 22 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	19.7	20169.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	19.4	57951.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.8	3350.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	18.2	85556.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	18.7	112534.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	6.1	41899.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	12.1	87688.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	17.7	136977.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	13.3	108079.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	3.8	31423.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	16.4	135882.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	4.8	39647.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	10.9	86568.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	14.9	109239.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	14.1	90502.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	6.2	35193.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	7.0	34912.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	12.2	45737.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	11.3	22387.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.5	542.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	1.3	1093.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	3.6	1287.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.32	143.47
2	115.85	147.75
3	135.06	153.34
4	153.84	160.21
5	172.11	168.34
6	189.79	177.69
7	206.80	188.20
8	223.07	199.85
9	238.50	212.56
10	253.05	226.29
11	266.63	240.97
12	279.19	256.54
13	290.67	272.91
14	301.02	290.03
15	302.91	293.69

Circle Center At X = 42.8 ; Y = 434.4 and Radius, 295.9

*** 1.798 ***

1

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	94.21	141.31
2	113.46	146.74
3	132.42	153.12
4	151.03	160.44
5	169.25	168.67
6	187.05	177.80
7	204.36	187.81
8	221.16	198.67
9	237.40	210.35
10	253.03	222.82
11	268.02	236.06
12	282.33	250.03
13	295.93	264.69
14	308.79	280.02
15	320.86	295.96
16	321.57	297.00

Circle Center At X = -5.0 ; Y = 530.0 and Radius, 401.1

*** 1.800 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	94.21	141.31
2	114.18	142.44
3	133.86	146.00
4	152.96	151.93
5	171.19	160.16
6	188.28	170.55
7	203.97	182.95
8	218.03	197.18
9	230.24	213.01
10	240.43	230.22
11	248.44	248.55

12	254.15	267.72
13	255.50	275.71

Circle Center At X = 95.0 ; Y = 304.7 and Radius, 163.4

*** 1.814 ***

1

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	94.21	141.31
2	113.96	144.46
3	133.50	148.75
4	152.75	154.17
5	171.65	160.70
6	190.14	168.32
7	208.16	177.00
8	225.64	186.71
9	242.53	197.43
10	258.77	209.10
11	274.30	221.71
12	289.07	235.19
13	303.03	249.51
14	316.13	264.62
15	328.34	280.47
16	339.60	296.99
17	339.60	297.00

Circle Center At X = 50.0 ; Y = 482.2 and Radius, 343.7

*** 1.814 ***

Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	92.11	139.16
2	112.01	141.09
3	131.50	145.57
4	150.25	152.53
5	167.95	161.85
6	184.29	173.38
7	199.01	186.93

8	211.85	202.26
9	222.61	219.12
10	231.10	237.22
11	237.19	256.27
12	239.21	267.43

Circle Center At X = 87.4 ; Y = 293.0 and Radius, 153.9

*** 1.818 ***

1

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.32	143.47
2	116.31	143.03
3	136.24	144.69
4	155.89	148.41
5	175.05	154.17
6	193.49	161.90
7	211.04	171.50
8	227.48	182.89
9	242.64	195.93
10	256.36	210.48
11	268.49	226.38
12	278.89	243.47
13	287.45	261.54
14	294.08	280.41
15	296.96	292.54

Circle Center At X = 110.5 ; Y = 334.3 and Radius, 191.4

*** 1.834 ***

Failure Surface Specified By 13 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	92.11	139.16
2	112.11	139.30
3	131.91	142.07
4	151.18	147.42
5	169.59	155.25
6	186.80	165.42

7	202.54	177.77
8	216.51	192.08
9	228.48	208.10
10	238.25	225.56
11	245.64	244.14
12	250.53	263.53
13	251.74	273.99

Circle Center At X = 101.0 ; Y = 290.9 and Radius, 152.0

*** 1.837 ***

1

Failure Surface Specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	90.00	137.00
2	109.95	135.52
3	129.91	136.65
4	149.57	140.37
5	168.57	146.61
6	186.59	155.27
7	203.34	166.20
8	218.53	179.22
9	231.89	194.10
10	243.20	210.59
11	252.27	228.42
12	258.94	247.27
13	263.11	266.83
14	264.12	279.64

Circle Center At X = 111.4 ; Y = 288.5 and Radius, 153.0

*** 1.840 ***

Failure Surface Specified By 14 Coordinate Points

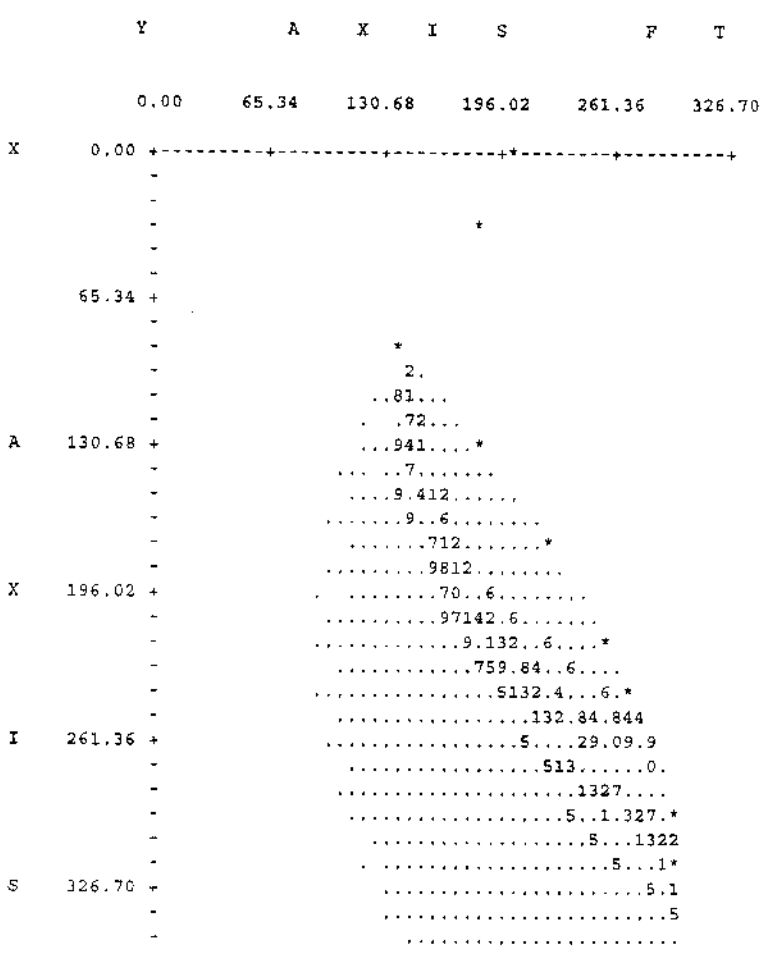
Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.32	143.47
2	116.31	143.89
3	136.12	146.68
4	155.45	151.80
5	174.03	159.19

6	191.61	168.74
7	207.92	180.30
8	222.75	193.73
9	235.88	208.82
10	247.11	225.36
11	256.31	243.12
12	263.32	261.85
13	268.06	281.28
14	268.08	281.45

Circle Center At X = 102.8 ; Y = 311.3 and Radius, 167.9

*** 1.842 ***

1



Mountaingate Section V-V' Pseud Static

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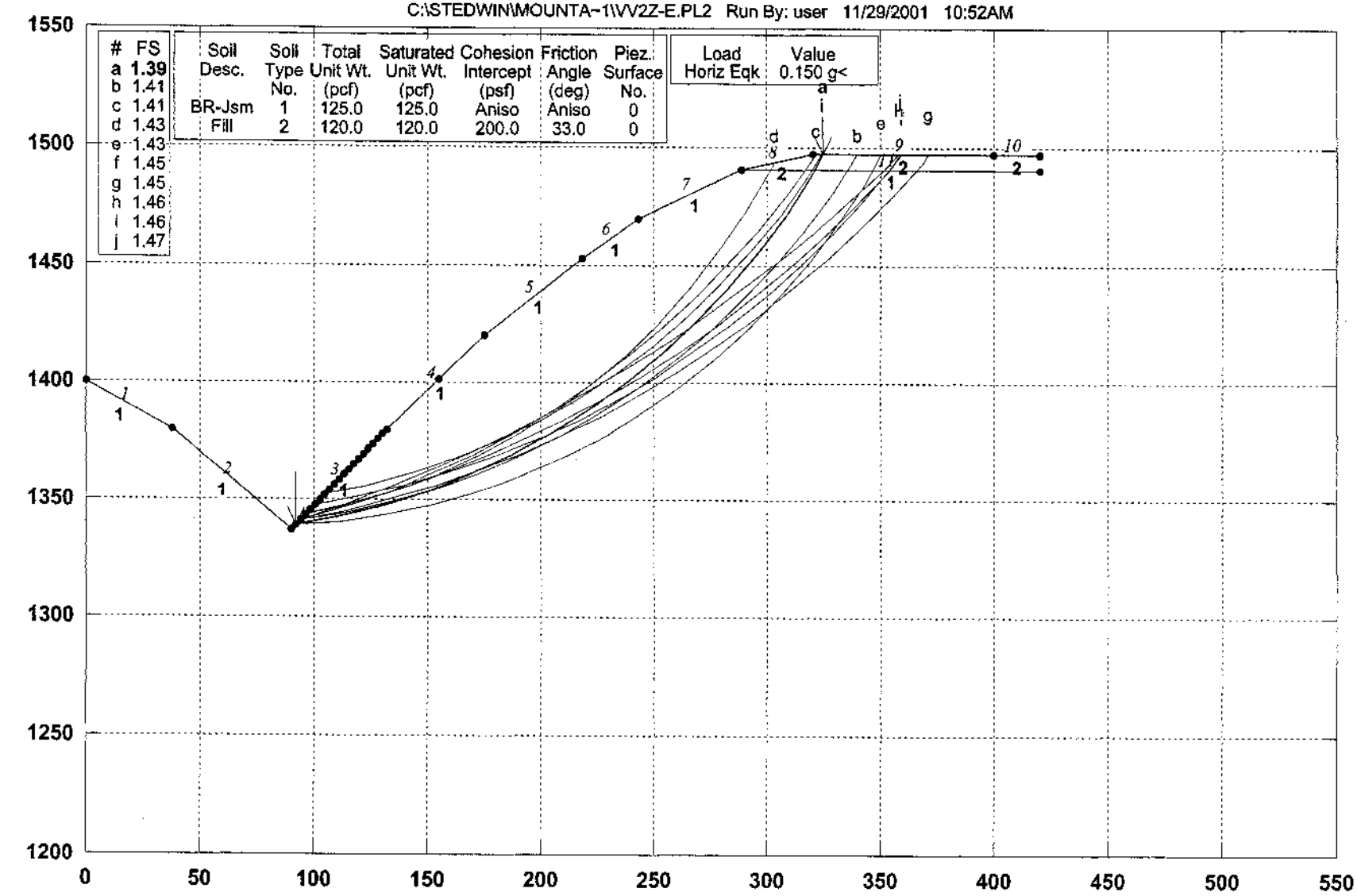


GSTABL7 FSmin=1.39

Safety Factors Are Calculated By The Modified Bishop Method

STED

Figure E-99

*** 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: 11/29/2001
Time of Run: 10:52AM
Run By: user
Input Data Filename: C:vv2z-e.dat
Output Filename: C:vv2z-e.OUT
Unit System: English

Plotted Output Filename: C:vv2z-e.PLT

PROBLEM DESCRIPTION Mountaingate Section V-V'
Pseud Static

BOUNDARY COORDINATES

10 Top Boundaries
11 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	200.00	38.00	180.00	1
2	38.00	180.00	90.00	137.00	1
3	90.00	137.00	132.00	180.00	1
4	132.00	180.00	175.00	220.00	1
5	175.00	220.00	218.00	253.00	1
6	218.00	253.00	243.00	270.00	1
7	243.00	270.00	289.00	291.00	1
8	289.00	291.00	320.00	297.00	2
9	320.00	297.00	400.00	297.00	2
10	400.00	297.00	420.00	297.00	2
11	289.00	291.00	420.00	291.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 1 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	0.0	1500.0	35.0
2	70.0	1500.0	35.0
3	90.0	0.0	35.0

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)

1

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

800 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 20 Points Equally Spaced
Along The Ground Surface Between X = 90.00(ft)
and X = 130.00(ft)

Each Surface Terminates Between X = 155.00(ft)
and X = 420.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)

20.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	92.11	139.16
2	111.76	142.86
3	131.15	147.74
4	150.22	153.79
5	168.88	160.98
6	187.07	169.29
7	204.73	178.68
8	221.79	189.12
9	238.19	200.58
10	253.86	213.00
11	268.75	226.35
12	282.81	240.58
13	295.98	255.63
14	308.22	271.44
15	319.48	287.97
16	324.86	297.00

Circle Center At X = 41.0 ; Y = 465.0 and Radius, 329.8

*** 1.394 ***

Individual data on the 22 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	19.7	20169.0	0.0	0.0	0.0	0.0	3025.4	0.0	0.0
2	19.4	57951.8	0.0	0.0	0.0	0.0	8692.8	0.0	0.0
3	0.8	3350.2	0.0	0.0	0.0	0.0	502.5	0.0	0.0
4	18.2	85556.7	0.0	0.0	0.0	0.0	12833.5	0.0	0.0
5	18.7	112534.3	0.0	0.0	0.0	0.0	16880.1	0.0	0.0
6	6.1	41899.6	0.0	0.0	0.0	0.0	6284.9	0.0	0.0
7	12.1	87688.2	0.0	0.0	0.0	0.0	13153.2	0.0	0.0
8	17.7	136977.5	0.0	0.0	0.0	0.0	20546.6	0.0	0.0
9	13.3	108079.8	0.0	0.0	0.0	0.0	16212.0	0.0	0.0
10	3.8	31423.6	0.0	0.0	0.0	0.0	4713.5	0.0	0.0
11	16.4	135882.2	0.0	0.0	0.0	0.0	20382.3	0.0	0.0
12	4.8	39647.7	0.0	0.0	0.0	0.0	5947.2	0.0	0.0
13	10.9	86568.4	0.0	0.0	0.0	0.0	12985.3	0.0	0.0
14	14.9	109239.7	0.0	0.0	0.0	0.0	16386.0	0.0	0.0
15	14.1	90502.0	0.0	0.0	0.0	0.0	13575.3	0.0	0.0
16	6.2	35193.7	0.0	0.0	0.0	0.0	5279.1	0.0	0.0
17	7.0	34912.8	0.0	0.0	0.0	0.0	5236.9	0.0	0.0
18	12.2	45737.6	0.0	0.0	0.0	0.0	6860.6	0.0	0.0
19	11.3	22387.8	0.0	0.0	0.0	0.0	3358.2	0.0	0.0
20	0.5	542.3	0.0	0.0	0.0	0.0	81.3	0.0	0.0
21	1.3	1093.9	0.0	0.0	0.0	0.0	164.1	0.0	0.0
22	3.6	1287.2	0.0	0.0	0.0	0.0	193.1	0.0	0.0

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	94.21	141.31
2	113.96	144.46
3	133.50	148.75
4	152.75	154.17
5	171.65	160.70
6	190.14	168.32

7	208.16	177.00
8	225.64	186.71
9	242.53	197.43
10	258.77	209.10
11	274.30	221.71
12	289.07	235.19
13	303.03	249.51
14	316.13	264.62
15	328.34	280.47
16	339.60	296.99
17	339.60	297.00

Circle Center At X = 50.0 ; Y = 482.2 and Radius, 343.7

*** 1.411 ***

1

Failure Surface Specified By 16 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	94.21	141.31
2	113.46	146.74
3	132.42	153.12
4	151.03	160.44
5	169.25	168.67
6	187.05	177.80
7	204.36	187.81
8	221.16	198.67
9	237.40	210.35
10	253.03	222.82
11	268.02	236.06
12	282.33	250.03
13	295.93	264.69
14	308.79	280.02
15	320.86	295.96
16	321.57	297.00

Circle Center At X = -5.0 ; Y = 530.0 and Radius, 401.1

*** 1.414 ***

Failure Surface Specified By 15 Coordinate Points

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

1	96.32	143.47
2	115.85	147.75
3	135.06	153.34
4	153.84	160.21
5	172.11	168.34
6	189.79	177.69
7	206.80	188.20
8	223.07	199.85
9	238.50	212.56
10	253.05	226.29
11	266.63	240.97
12	279.19	256.54
13	290.67	272.91
14	301.02	290.03
15	302.91	293.69

Circle Center At X = 42.8 ; Y = 434.4 and Radius, 295.9

*** 1.429 ***

1

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	92.11	139.16
2	112.04	140.72
3	131.84	143.55
4	151.42	147.63
5	170.70	152.95
6	189.61	159.48
7	208.06	167.20
8	225.98	176.07
9	243.30	186.07
10	259.95	197.15
11	275.87	209.26
12	290.98	222.36
13	305.23	236.40
14	318.56	251.31
15	330.91	267.04
16	342.24	283.52
17	350.29	297.00

Circle Center At X = 77.5 ; Y = 453.4 and Radius, 314.5

*** 1.435 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.32	143.47
2	115.73	148.26
3	134.94	153.82
4	153.92	160.13
5	172.64	167.19
6	191.06	174.98
7	209.16	183.48
8	226.91	192.69
9	244.29	202.60
10	261.26	213.18
11	277.80	224.42
12	293.88	236.31
13	309.49	248.82
14	324.59	261.93
15	339.16	275.63
16	353.18	289.90
17	359.63	297.00

Circle Center At X = -15.7 ; Y = 638.4 and Radius, 507.5

*** 1.445 ***

1

Failure Surface Specified By 18 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	94.21	141.31
2	113.81	145.31
3	133.22	150.11
4	152.43	155.70
5	171.38	162.07
6	190.07	169.21
7	208.44	177.11
8	226.48	185.75
9	244.15	195.12
10	261.42	205.20
11	278.26	215.98
12	294.65	227.45
13	310.56	239.57
14	325.96	252.33
15	340.83	265.71
16	355.13	279.69
17	368.85	294.24

18	371.25	297.00

Circle Center At X = 6.3 ; Y = 622.1 and Radius, 488.7

*** 1.453 ***

Failure Surface Specified By 17 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	94.21	141.31
2	113.17	147.68
3	131.94	154.59
4	150.50	162.04
5	168.83	170.03
6	186.93	178.55
7	204.77	187.58
8	222.35	197.13
9	239.64	207.18
10	256.63	217.73
11	273.31	228.77
12	289.66	240.29
13	305.67	252.27
14	321.33	264.71
15	336.62	277.60
16	351.53	290.93
17	357.94	297.00

Circle Center At X = -116.1 ; Y = 799.2 and Radius, 690.7

*** 1.456 ***

1

Failure Surface Specified By 15 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	104.74	152.09
2	124.34	156.08
3	143.65	161.26
4	162.62	167.60
5	181.16	175.09
6	199.22	183.70
7	216.71	193.39
8	233.58	204.14

9	249.76	215.89
10	265.20	228.60
11	279.83	242.24
12	293.61	256.74
13	306.47	272.05
14	318.38	288.12
15	324.15	297.00

Circle Center At X = 49.2 ; Y = 475.1 and Radius, 327.8

*** 1.460 ***

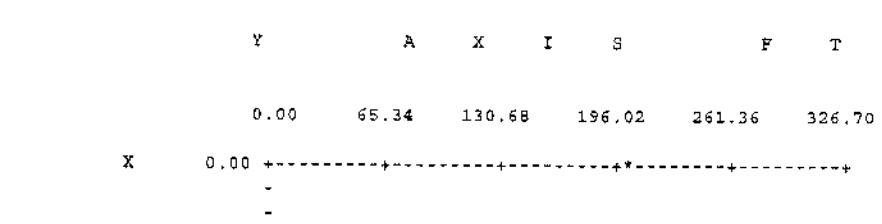
Failure Surface Specified By 17 Coordinate Points

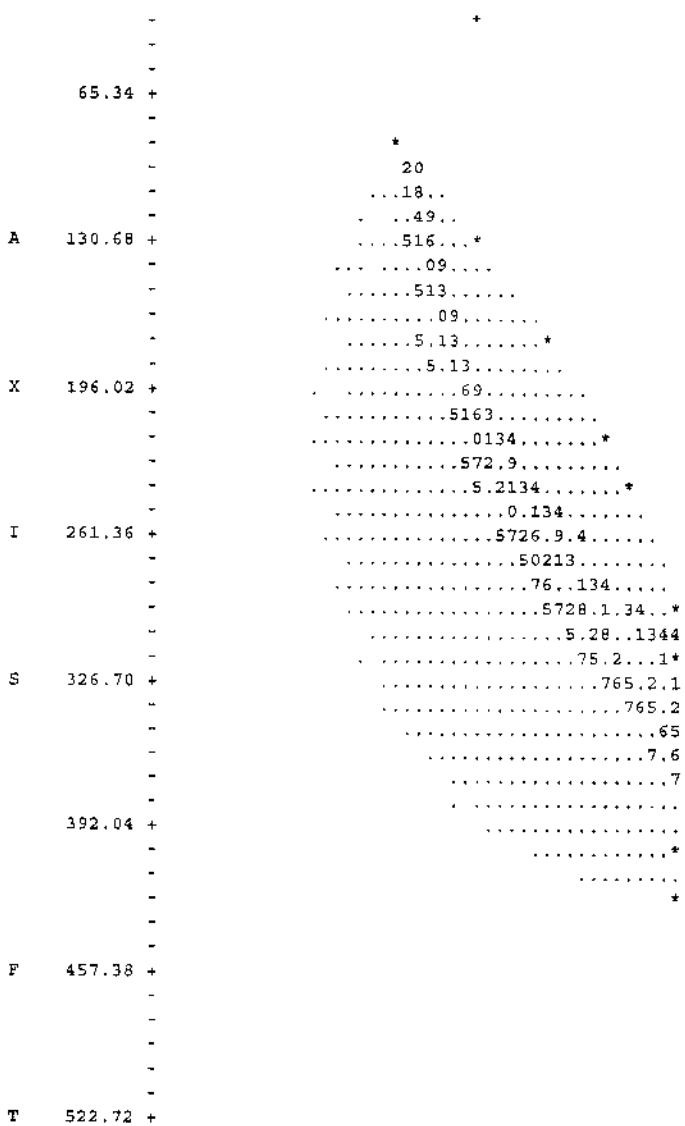
Point No.	X-Surf (ft)	Y-Surf (ft)
1	100.53	147.78
2	120.21	151.34
3	139.69	155.86
4	158.93	161.30
5	177.89	167.68
6	196.52	174.96
7	214.78	183.13
8	232.61	192.17
9	250.00	202.06
10	266.88	212.78
11	283.23	224.31
12	299.00	236.61
13	314.15	249.66
14	328.66	263.42
15	342.49	277.87
16	355.61	292.97
17	358.78	297.00

Circle Center At X = 36.6 ; Y = 556.8 and Radius, 414.0

*** 1.465 ***

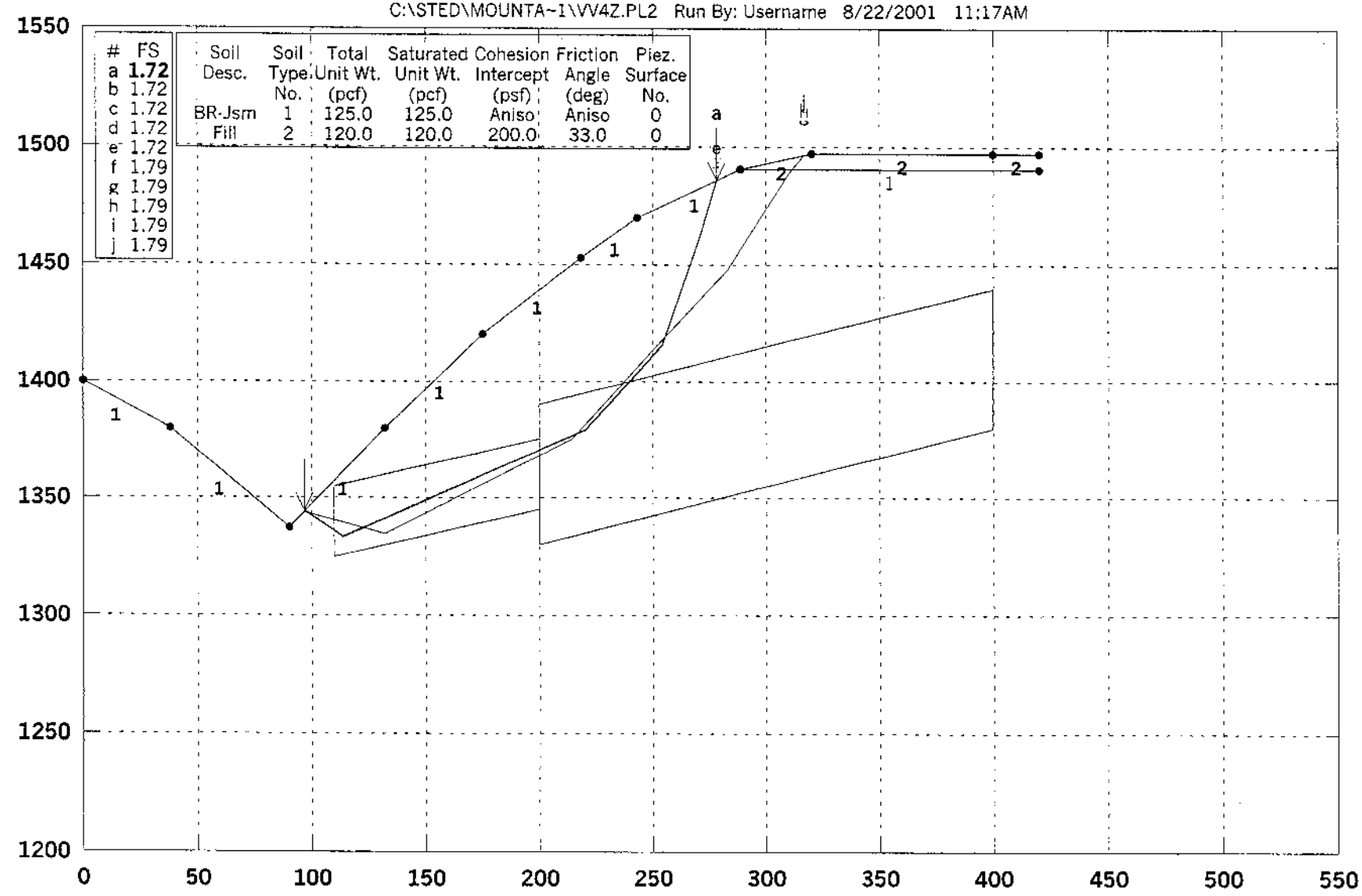
1





Mountaingate Section V-V'

C:\STED\MOUNTA~1\VV4Z.PL2 Run By: Username 8/22/2001 11:17AM



#	FS
a	**1.72**
b	1.72
c	1.72
d	1.72
e	1.72
f	1.79
g	1.79
h	1.79
i	1.79
j	1.79

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
BR-Jsm	1	125.0	125.0	Aniso	Aniso	0
Fill	2	120.0	120.0	200.0	33.0	0

GSTABL7 FSmin=1.72

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

STED

Figure E-100

*** 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: 8/22/2001
Time of Run: 11:17AM
Run By: Username
Input Data Filename: C:vv4z.dat
Output Filename: C:vv4z.OUT
Unit System: English

Plotted Output Filename: C:vv4z.PLT

PROBLEM DESCRIPTION Mountaingate Section V-V'

BOUNDARY COORDINATES

10 Top Boundaries
11 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	200.00	38.00	180.00	1
2	38.00	180.00	90.00	137.00	1
3	90.00	137.00	132.00	180.00	1
4	132.00	180.00	175.00	220.00	1
5	175.00	220.00	218.00	253.00	1
6	218.00	253.00	243.00	270.00	1
7	243.00	270.00	289.00	291.00	1
8	289.00	291.00	320.00	297.00	2
9	320.00	297.00	400.00	297.00	2
10	400.00	297.00	420.00	297.00	2
11	289.00	291.00	420.00	291.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 1 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	0.0	1500.0	35.0
2	70.0	1500.0	35.0
3	90.0	0.0	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.

2000 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 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	110.00	140.00	199.90	160.00	30.00
2	200.00	160.00	400.00	210.00	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 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.91	144.07
2	113.88	133.02
3	220.25	178.77
4	254.31	215.38
5	271.01	262.51
6	278.17	286.06

*** 1.718 ***

Individual data on the 9 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	17.0	30145.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	18.1	76567.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	43.0	268409.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	43.0	365200.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	2.3	21242.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	22.7	202659.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	11.3	89456.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	16.7	83560.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	7.2	9078.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 6 Coordinate Points

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

1	96.91	144.07
2	113.88	133.02
3	220.25	178.77
4	254.31	215.38
5	271.01	262.51
6	278.17	286.06

*** 1.718 ***

1

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Point No.	X-Surf (ft)	Y-Surf (ft)
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2	113.88	133.02
3	220.25	178.77
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*** 1.718 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
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2	113.88	133.02
3	220.25	178.77
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*** 1.718 ***

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Point No.	X-Surf (ft)	Y-Surf (ft)
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2	113.88	133.02
3	220.25	178.77
4	254.31	215.38
5	271.01	262.51
6	278.17	286.06

*** 1.718 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.40	143.55
2	132.07	134.68
3	214.25	174.94
4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

*** 1.794 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.40	143.55
2	132.07	134.68
3	214.25	174.94
4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

*** 1.794 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
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3	214.25	174.94
4	248.07	211.76
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*** 1.794 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.40	143.55
2	132.07	134.68
3	214.25	174.94
4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

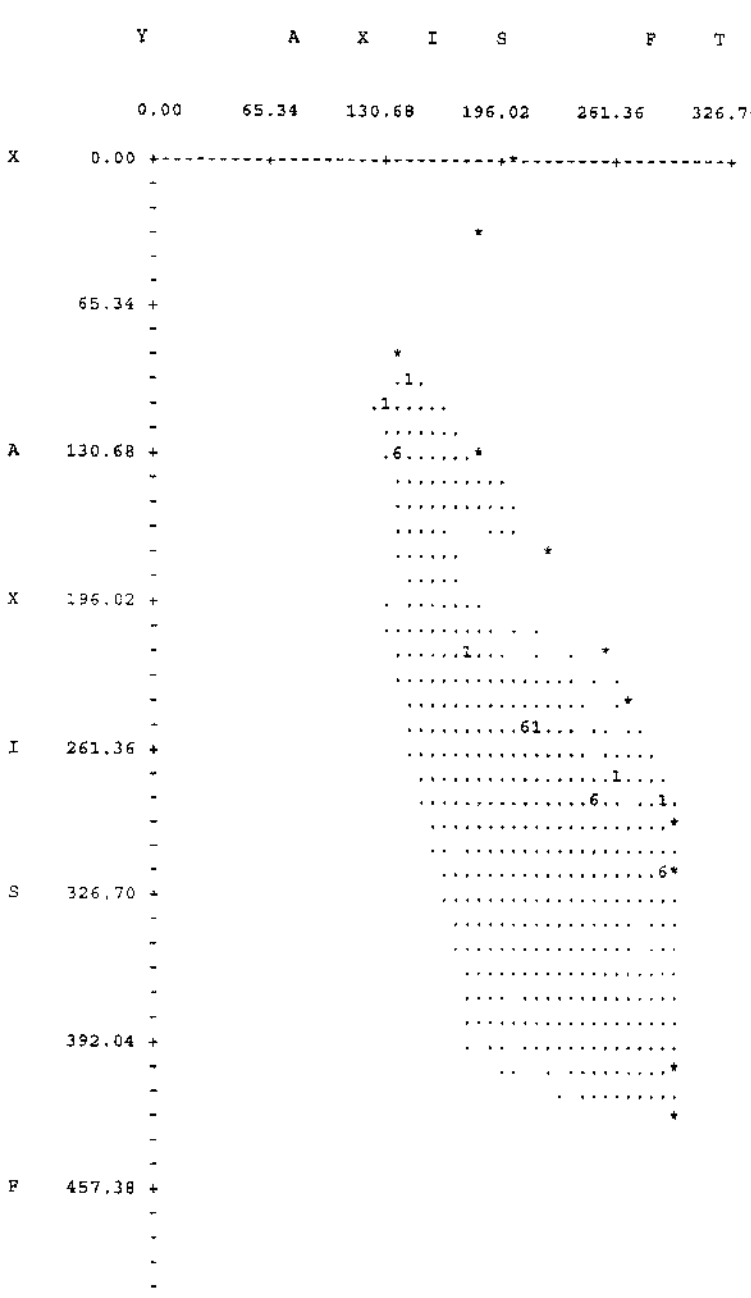
*** 1.794 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.40	143.55
2	132.07	134.68
3	214.25	174.94
4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

*** 1.794 ***

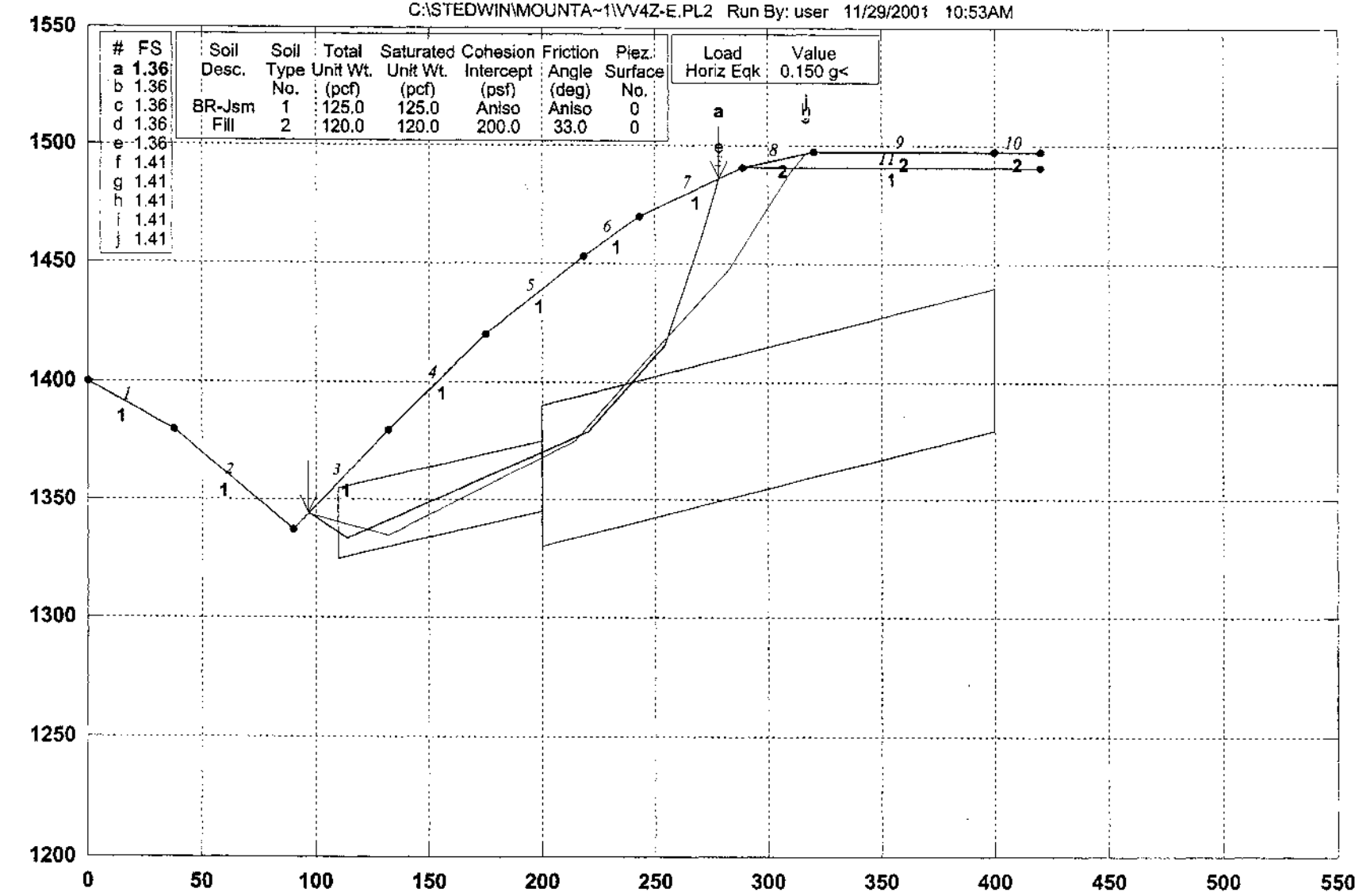
1


Y A X I S F T
0.00 65.34 130.68 196.02 261.36 326.70
X 0.00
65.34
A 130.68
X 196.02
I 261.36
S 326.70
392.04
F 457.38

T 522.72

Mountaingate Section V-V' Pseudo Static

C:\STEDWIN\MOUNTA~1\VV4Z-E.PL2 Run By: user 11/29/2001 10:53AM



GSTABL7 FSmin=1.36

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

STED

Figure E-101

*** 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: 11/29/2001
Time of Run: 10:53AM
Run By: user
Input Data Filename: C:vv4z-e.dat
Output Filename: C:vv4z-e.OUT
Unit System: English

Plotted Output Filename: C:vv4z-e.PLT

PROBLEM DESCRIPTION Mountaingate Section V-V'
Pseudo Static

BOUNDARY COORDINATES

10 Top Boundaries
11 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	200.00	38.00	180.00	1
2	38.00	180.00	90.00	137.00	1
3	90.00	137.00	132.00	180.00	1
4	132.00	180.00	175.00	220.00	1
5	175.00	220.00	218.00	253.00	1
6	218.00	253.00	243.00	270.00	1
7	243.00	270.00	289.00	291.00	1
8	289.00	291.00	320.00	297.00	2
9	320.00	297.00	400.00	297.00	2
10	400.00	297.00	420.00	297.00	2
11	289.00	291.00	420.00	291.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 1 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	0.0	1500.0	35.0
2	70.0	1500.0	35.0
3	90.0	0.0	35.0

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.

2000 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 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	110.00	140.00	199.90	160.00	30.00
2	200.00	160.00	400.00	210.00	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 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.91	144.07
2	113.88	133.02
3	220.25	178.77
4	254.31	215.38
5	271.01	262.51
6	278.17	286.06

*** 1.364 ***

Individual data on the 9 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	17.0	30145.2	0.0	0.0	0.0	0.0	4521.8	0.0	0.0
2	18.1	76567.1	0.0	0.0	0.0	0.0	11485.1	0.0	0.0
3	43.0	268409.5	0.0	0.0	0.0	0.0	40261.4	0.0	0.0
4	43.0	365200.6	0.0	0.0	0.0	0.0	54780.1	0.0	0.0
5	2.3	21242.4	0.0	0.0	0.0	0.0	3186.4	0.0	0.0
6	22.7	202659.7	0.0	0.0	0.0	0.0	30399.0	0.0	0.0
7	11.3	89456.2	0.0	0.0	0.0	0.0	13418.4	0.0	0.0

8	16.7	83560.8	0.0	0.0	0.0	0.0	12534.1	0.0	0.0
9	7.2	9078.2	0.0	0.0	0.0	0.0	1361.7	0.0	0.0

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.91	144.07
2	113.88	133.02
3	220.25	178.77
4	254.31	215.38
5	271.01	262.51
6	278.17	286.06

*** 1.364 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.91	144.07
2	113.88	133.02
3	220.25	178.77
4	254.31	215.38
5	271.01	262.51
6	278.17	286.06

*** 1.364 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.91	144.07
2	113.88	133.02
3	220.25	178.77
4	254.31	215.38
5	271.01	262.51
6	278.17	286.06

*** 1.364 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.91	144.07
2	113.88	133.02
3	220.25	178.77
4	254.31	215.38
5	271.01	262.51
6	278.17	286.06

*** 1.364 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.40	143.55
2	132.07	134.68
3	214.25	174.94
4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

*** 1.408 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.40	143.55
2	132.07	134.68
3	214.25	174.94

4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

*** 1.408 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.40	143.55
2	132.07	134.68
3	214.25	174.94
4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

*** 1.408 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	96.40	143.55
2	132.07	134.68
3	214.25	174.94
4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

*** 1.408 ***

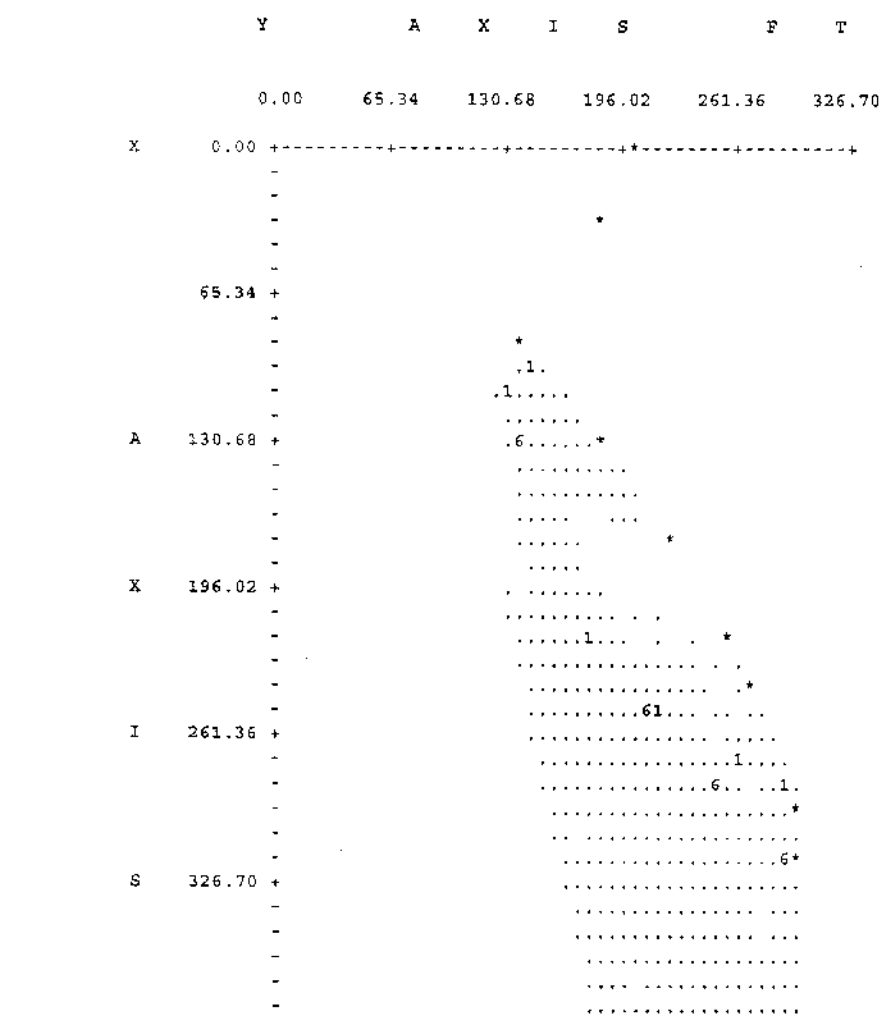
Failure Surface Specified By 7 Coordinate Points

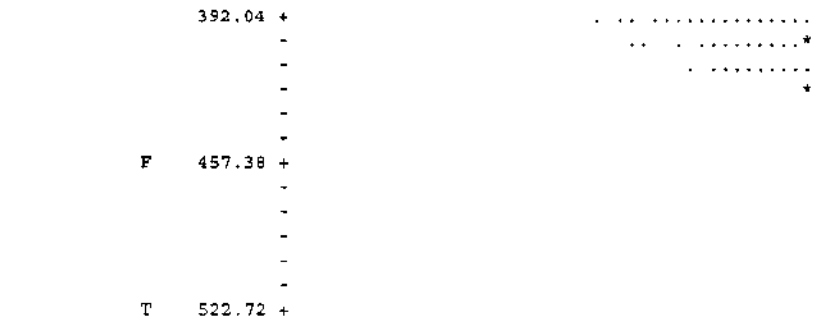
Point No.	X-Surf (ft)	Y-Surf (ft)

1	96.40	143.55
2	132.07	134.68
3	214.25	174.94
4	248.07	211.76
5	283.05	247.49
6	310.66	289.18
7	317.11	296.44

*** 1.408 ***

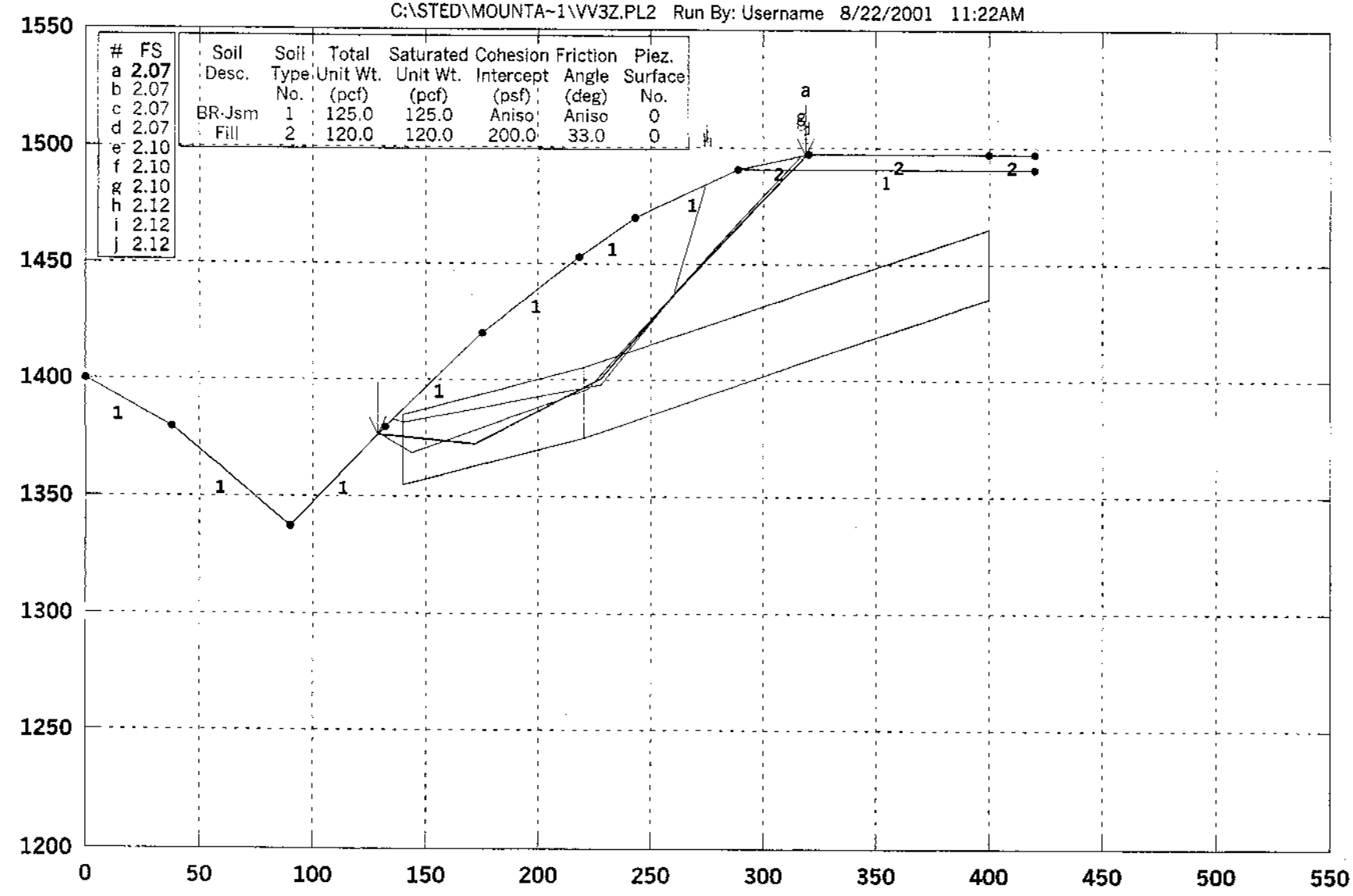
1





Mountaingate Section V-V'

C:\STED\MOUNTA~1\VV3Z.PL2 Run By: Username 8/22/2001 11:22AM



GSTABL7 FSmin=2.07

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

STED

Figure E-102

*** 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: 8/22/2001
Time of Run: 11:22AM
Run By: Username
Input Data Filename: C:vv3z.dat
Output Filename: C:vv3z.OUT
Unit System: English

Plotted Output Filename: C:vv3z.PLT

PROBLEM DESCRIPTION Mountaingate Section V-V'

BOUNDARY COORDINATES

10 Top Boundaries
11 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	200.00	38.00	180.00	1
2	38.00	180.00	90.00	137.00	1
3	90.00	137.00	132.00	180.00	1
4	132.00	180.00	175.00	220.00	1
5	175.00	220.00	218.00	253.00	1
6	218.00	253.00	243.00	270.00	1
7	243.00	270.00	289.00	291.00	1
8	289.00	291.00	320.00	297.00	2
9	320.00	297.00	400.00	297.00	2
10	400.00	297.00	420.00	297.00	2
11	289.00	291.00	420.00	291.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 1 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	0.0	1500.0	35.0
2	70.0	1500.0	35.0
3	90.0	0.0	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.

2000 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 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	140.00	170.00	220.00	190.00	30.00
2	220.10	190.00	400.00	250.00	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 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.49	176.40
2	171.91	172.23
3	228.17	200.29
4	261.41	237.64
5	295.96	273.77
6	318.68	296.74

*** 2.071 ***

Individual data on the 11 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	3.5	863.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	39.9	121805.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	3.1	17604.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	43.0	279553.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	10.2	74637.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	14.8	104439.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	18.4	107954.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	27.6	112562.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	7.0	18731.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	17.0	24465.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	5.7	1583.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.49	176.40
2	171.91	172.23
3	228.17	200.29
4	261.41	237.64
5	295.96	273.77
6	318.68	296.74

*** 2.071 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.49	176.40
2	171.91	172.23
3	228.17	200.29
4	261.41	237.64
5	295.96	273.77
6	318.68	296.74

*** 2.071 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.49	176.40
2	171.91	172.23
3	228.17	200.29
4	261.41	237.64
5	295.96	273.77
6	318.68	296.74

*** 2.071 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.94	176.87
2	143.76	168.38
3	222.15	196.25
4	256.35	232.73
5	290.27	269.46
6	317.10	296.44

*** 2.097 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.94	176.87
2	143.76	168.38
3	222.15	196.25
4	256.35	232.73
5	290.27	269.46
6	317.10	296.44

*** 2.097 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.94	176.87
2	143.76	168.38
3	222.15	196.25
4	256.35	232.73
5	290.27	269.46
6	317.10	296.44

*** 2.097 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	135.35	183.12
2	140.17	181.83
3	228.13	198.07
4	260.18	236.44
5	274.75	284.27
6	274.76	284.50

*** 2.123 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	135.35	183.12
2	140.17	181.83
3	228.13	198.07
4	260.18	236.44
5	274.75	284.27
6	274.76	284.50

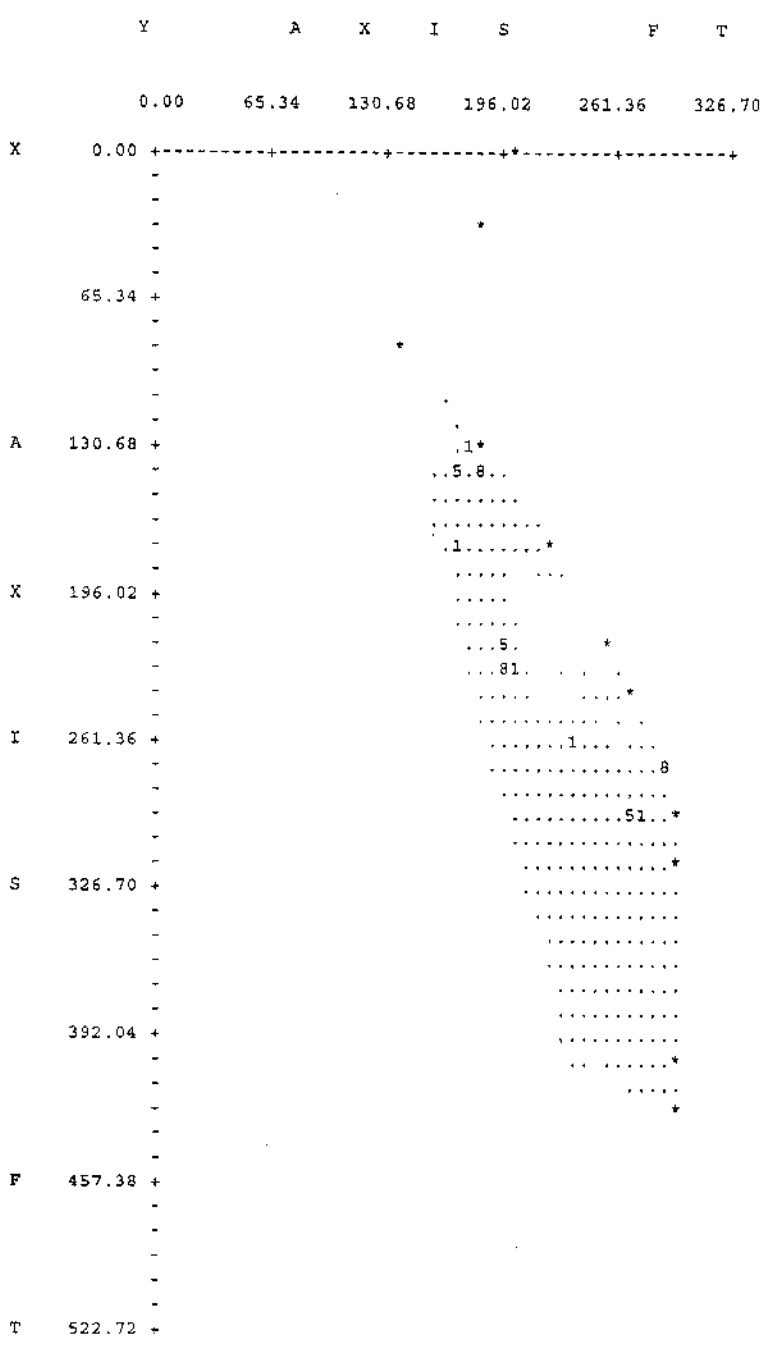
*** 2.123 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	135.35	183.12
2	140.17	181.83
3	228.13	198.07
4	260.18	236.44
5	274.75	284.27
6	274.76	284.50

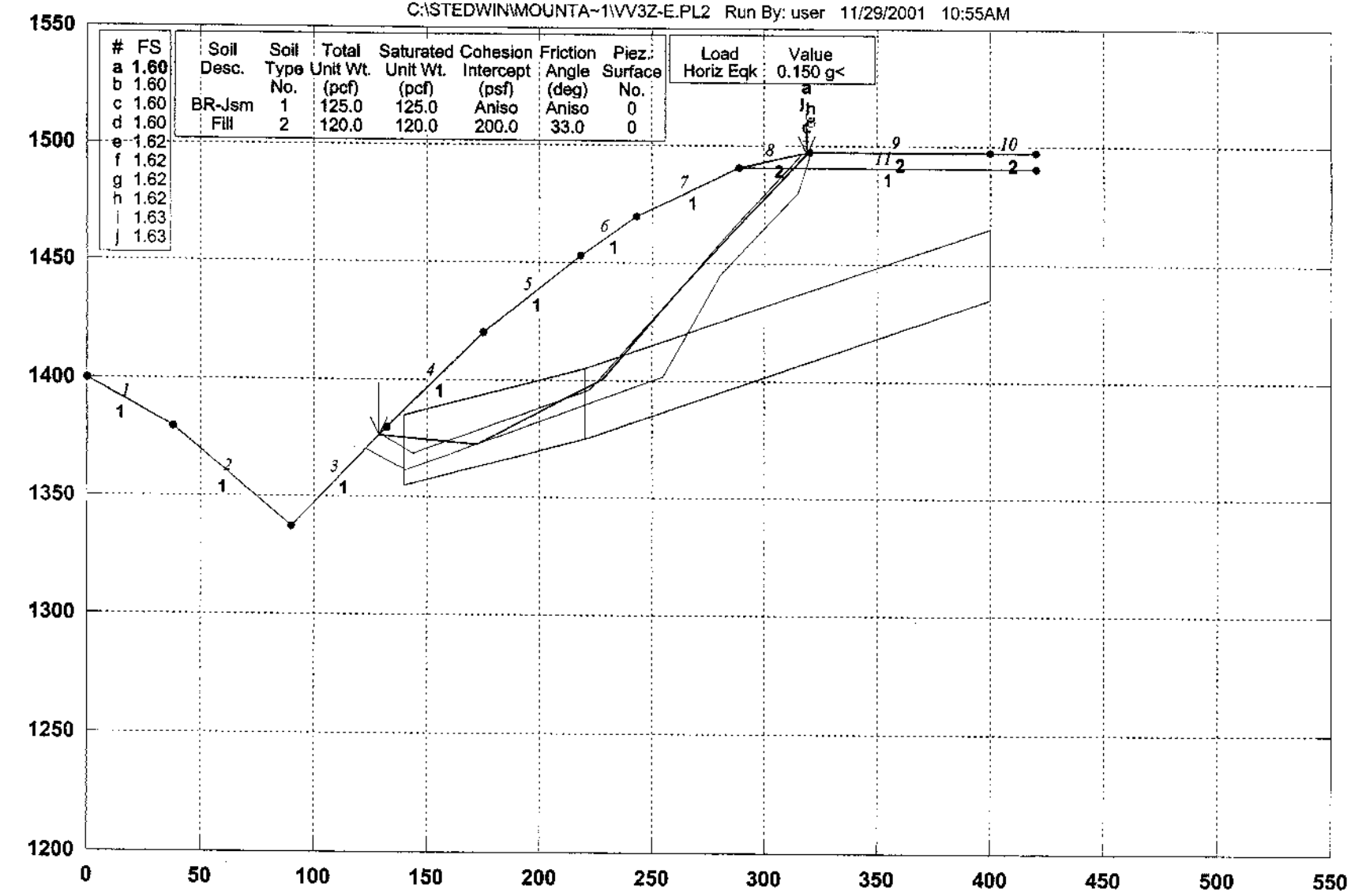
*** 2.123 ***

1


Y A X I S F T
0.00 65.34 130.68 196.02 261.36 326.70
X 0.00
65.34
A 130.68
X 196.02
I 261.36
S 326.70
392.04
F 457.38
T 522.72

Mountaingate Section V-V' pseudo Static

C:\STEDWIN\MOUNTA~1\VV3Z-E.PL2 Run By: user 11/29/2001 10:55AM



GSTABL7 FSmin=1.60

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

STED

Figure E-103

*** 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: 11/29/2001
Time of Run: 10:55AM
Run By: user
Input Data Filename: C:vv3z-e.dat
Output Filename: C:vv3z-e.OUT
Unit System: English

Plotted Output Filename: C:vv3z-e.PLT

PROBLEM DESCRIPTION Mountaingate Section V-V'
pseudo Static

BOUNDARY COORDINATES

10 Top Boundaries
11 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	200.00	38.00	180.00	1
2	38.00	180.00	90.00	137.00	1
3	90.00	137.00	132.00	180.00	1
4	132.00	180.00	175.00	220.00	1
5	175.00	220.00	218.00	253.00	1
6	218.00	253.00	243.00	270.00	1
7	243.00	270.00	289.00	291.00	1
8	289.00	291.00	320.00	297.00	2
9	320.00	297.00	400.00	297.00	2
10	400.00	297.00	420.00	297.00	2
11	289.00	291.00	420.00	291.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	0.00	0.0	0

ANISOTROPIC STRENGTH PARAMETERS
1 soil type(s)

Soil Type 1 Is Anisotropic

Number Of Direction Ranges Specified = 3

Direction Range No.	Counterclockwise Direction Limit (deg)	Cohesion Intercept (psf)	Friction Angle (deg)
1	0.0	1500.0	35.0
2	70.0	1500.0	35.0
3	90.0	0.0	35.0

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.

2000 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 50.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	140.00	170.00	220.00	190.00	30.00
2	220.10	190.00	400.00	250.00	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 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.49	176.40
2	171.91	172.23
3	228.17	200.29
4	261.41	237.64
5	295.96	273.77
6	318.68	296.74

*** 1.599 ***

Individual data on the 11 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	3.5	863.8	0.0	0.0	0.0	0.0	129.6	0.0	0.0
2	39.9	121805.9	0.0	0.0	0.0	0.0	18270.9	0.0	0.0
3	3.1	17604.4	0.0	0.0	0.0	0.0	2640.7	0.0	0.0
4	43.0	279553.3	0.0	0.0	0.0	0.0	41933.0	0.0	0.0
5	10.2	74637.4	0.0	0.0	0.0	0.0	11195.6	0.0	0.0
6	14.8	104439.0	0.0	0.0	0.0	0.0	15665.8	0.0	0.0
7	18.4	107954.1	0.0	0.0	0.0	0.0	16193.1	0.0	0.0
8	27.6	112562.4	0.0	0.0	0.0	0.0	16884.4	0.0	0.0
9	7.0	18731.1	0.0	0.0	0.0	0.0	2809.7	0.0	0.0
10	17.0	24465.0	0.0	0.0	0.0	0.0	3669.8	0.0	0.0
11	5.7	1583.4	0.0	0.0	0.0	0.0	237.5	0.0	0.0

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.49	176.40
2	171.91	172.23
3	228.17	200.29
4	261.41	237.64
5	295.96	273.77
6	318.68	296.74

*** 1.599 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.49	176.40
2	171.91	172.23
3	228.17	200.29
4	261.41	237.64
5	295.96	273.77
6	318.68	296.74

*** 1.599 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.49	176.40
2	171.91	172.23
3	228.17	200.29

4	261.41	237.64
5	295.96	273.77
6	318.68	296.74

*** 1.599 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	122.69	170.47
2	140.52	161.60
3	254.92	201.80
4	280.04	245.03
5	315.26	280.53
6	320.86	297.00

*** 1.623 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	122.69	170.47
2	140.52	161.60
3	254.92	201.80
4	280.04	245.03
5	315.26	280.53
6	320.86	297.00

*** 1.623 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	122.69	170.47

2	140.52	161.60
3	254.92	201.80
4	280.04	245.03
5	315.26	280.53
6	320.86	297.00

*** 1.623 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	122.69	170.47
2	140.52	161.60
3	254.92	201.80
4	280.04	245.03
5	315.26	280.53
6	320.86	297.00

*** 1.623 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	128.94	176.87
2	143.76	168.38
3	222.15	196.25
4	256.35	232.73
5	290.27	269.46
6	317.10	296.44

*** 1.627 ***

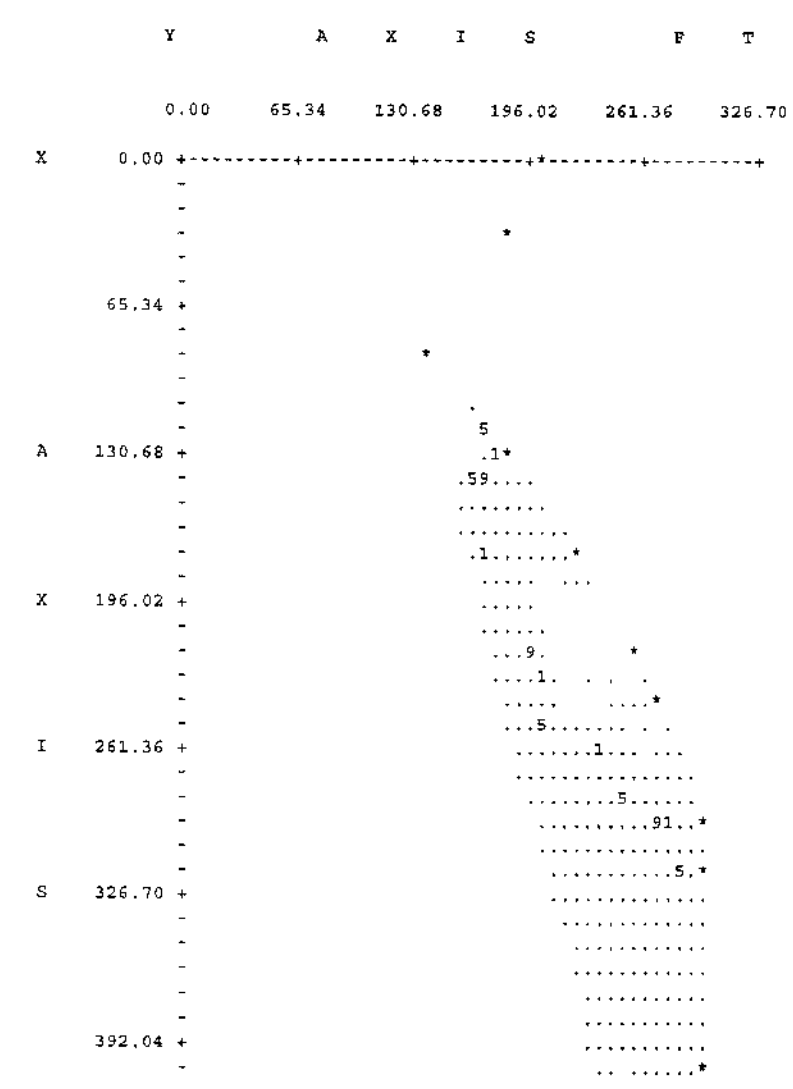
Failure Surface Specified By 6 Coordinate Points

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

1	128.94	176.87
2	143.76	168.38
3	222.15	196.25
4	256.35	232.73
5	290.27	269.46
6	317.10	296.44

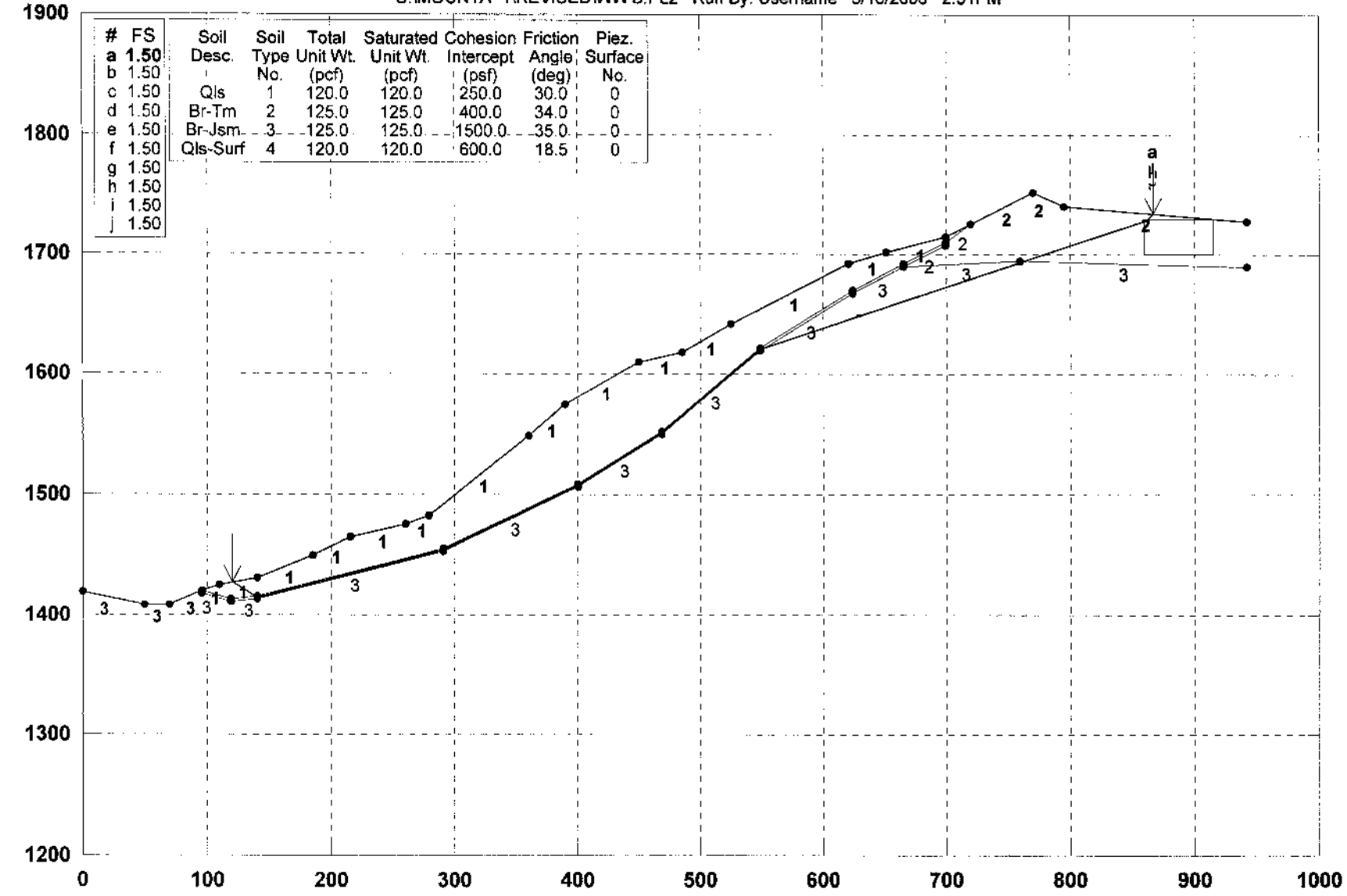
*** 1.627 ***

1



Mountain Gate/Section: W-W' , Static

S:\MOUNTA~1\REVISED\WW'B.PL2 Run By: Username 3/10/2003 2:31PM



#	FS
a	1.50
b	1.50
c	1.50
d	1.50
e	1.50
f	1.50
g	1.50
h	1.50
i	1.50
j	1.50

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=1.50

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

GSTABL7

Figure E-104

*** 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:	2:31PM
Run By:	Username
Input Data Filename:	S:ww'b.
Output Filename:	S:ww'b.OUT
Unit System:	English

Plotted Output Filename: S:ww'b.PLT

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

BOUNDARY COORDINATES

21 Top Boundaries
42 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	219.00	50.00	208.00	3
2	50.00	208.00	70.00	209.00	3
3	70.00	209.00	95.00	220.00	3
4	95.00	220.00	110.00	225.00	1
5	110.00	225.00	140.00	231.00	1
6	140.00	231.00	185.00	250.00	1
7	185.00	250.00	215.00	265.00	1
8	215.00	265.00	260.00	275.00	1
9	260.00	275.00	279.00	283.00	1
10	279.00	283.00	360.00	348.00	1
11	360.00	348.00	390.00	375.00	1
12	390.00	375.00	450.00	410.00	1
13	450.00	410.00	485.00	418.00	1
14	485.00	418.00	525.00	441.00	1
15	525.00	441.00	621.00	492.00	1
16	621.00	492.00	651.00	502.00	1
17	651.00	502.00	700.00	515.00	1
18	700.00	515.00	720.00	525.00	1
19	720.00	525.00	770.00	552.00	2
20	770.00	552.00	795.00	541.00	2
21	795.00	541.00	942.00	528.00	2
22	95.00	220.00	119.00	213.00	4
23	119.00	213.00	140.00	215.00	4
24	140.00	215.00	291.00	255.00	4
25	291.00	255.00	400.00	308.00	4
26	400.00	308.00	469.00	352.00	4
27	469.00	352.00	549.00	421.00	4
28	549.00	421.00	624.00	470.00	4
29	624.00	470.00	665.00	492.00	4
30	95.00	218.00	119.00	211.00	3
31	119.00	211.00	140.00	213.00	3
32	140.00	213.00	291.00	253.00	3
33	291.00	253.00	400.00	306.00	3
34	400.00	306.00	469.00	350.00	3
35	469.00	350.00	549.00	419.00	3
36	549.00	419.00	624.00	468.00	3
37	624.00	468.00	665.00	490.00	3
38	665.00	492.00	700.00	510.00	4
39	700.00	510.00	720.00	525.00	2
40	665.00	490.00	700.00	508.00	2
41	665.00	490.00	759.00	495.00	3
42	759.00	495.00	942.00	490.00	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

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.

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	140.00	214.00	140.10	214.00	0.00
2	291.00	254.00	291.10	254.00	0.00
3	400.00	307.00	400.10	307.00	0.00
4	469.00	351.00	469.10	351.00	0.00

5	549.00	420.00	549.18	420.00	0.00
6	860.00	515.00	915.00	515.00	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 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	120.29	227.06
2	140.02	214.00
3	291.03	254.00
4	400.05	307.00
5	469.06	351.00
6	549.01	420.00
7	861.41	528.43
8	866.14	534.71

*** 1.498 ***

Individual data on the 33 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	18.4	17518.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.3	2573.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	45.0	110906.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	30.0	99402.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	45.0	162965.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	15.0	70001.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	12.0	50992.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	132.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	69.0	410201.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	30.0	240044.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	10.0	98047.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.1	470.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	49.9	436594.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	19.0	153372.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.1	480.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	15.9	111495.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	40.0	227914.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	24.0	138685.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	23.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	3.3	13293.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	68.7	339199.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	3.0	17239.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	27.0	154893.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	14.0	79313.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	35.0	190612.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	20.0	110051.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	39.0	240881.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	5.6	37901.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	5.4	36670.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	25.0	142052.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	66.4	175623.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	4.7	1979.6	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	120.29	227.06
2	140.02	214.00
3	291.03	254.00
4	400.05	307.00
5	469.06	351.00
6	549.01	420.00
7	861.41	528.43
8	866.14	534.71

*** 1.498 ***

1

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	120.29	227.06
2	140.02	214.00
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Point	X-Surf	Y-Surf

No.	(ft)	(ft)
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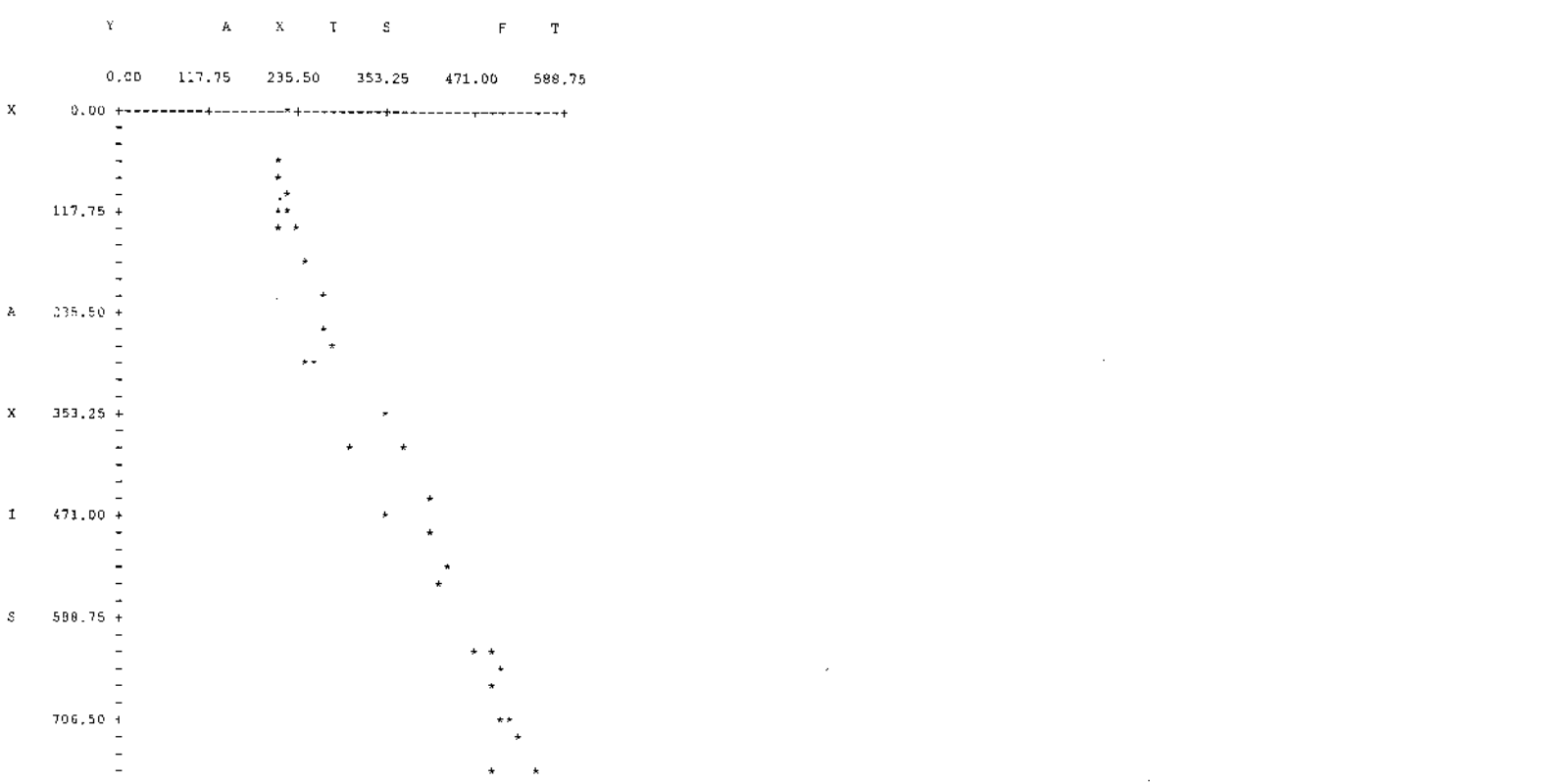
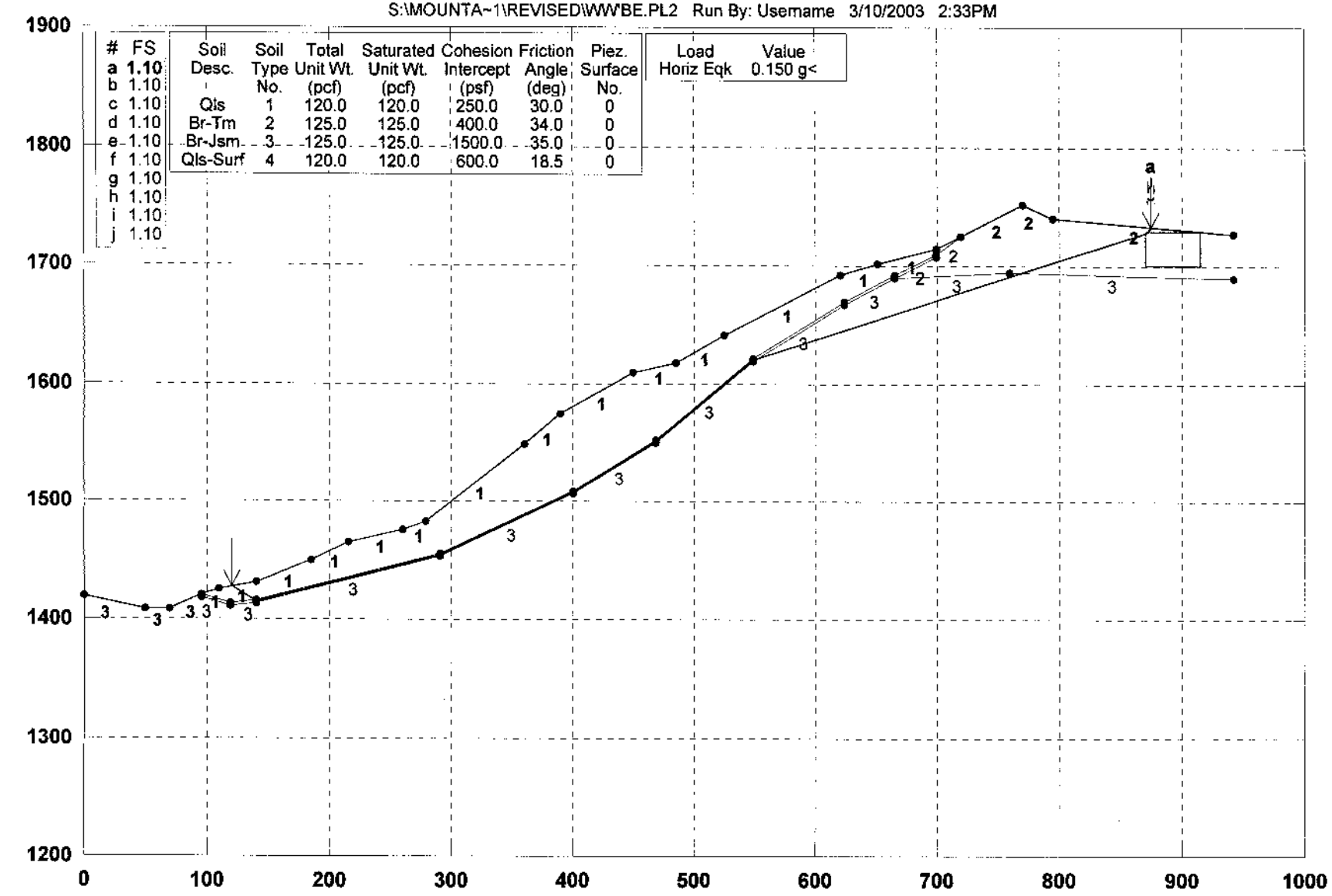
4	400.05	307.00
5	469.06	351.00
6	549.01	420.00
7	861.41	528.43
8	866.14	534.71

*** 1,458 ***



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

S:\MOUNTA~1\REVISED\WW'BE.PL2 Run By: Username 3/10/2003 2:33PM



#	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-105

*** 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:	2:33PM
Run By:	Username
Input Data Filename:	S:ww'be.
Output Filename:	S:ww'be.OUT
Unit System:	English

Plotted Output Filename: S:ww'be.PLT

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

BOUNDARY COORDINATES

21 Top Boundaries
42 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	219.00	50.00	208.00	3
2	50.00	208.00	70.00	209.00	3
3	70.00	209.00	95.00	220.00	3
4	95.00	220.00	110.00	225.00	1
5	110.00	225.00	140.00	231.00	1
6	140.00	231.00	185.00	250.00	1
7	185.00	250.00	215.00	265.00	1
8	215.00	265.00	260.00	275.00	1
9	260.00	275.00	279.00	283.00	1
10	279.00	283.00	360.00	348.00	1
11	360.00	348.00	390.00	375.00	1
12	390.00	375.00	450.00	410.00	1
13	450.00	410.00	485.00	418.00	1
14	485.00	418.00	525.00	441.00	1
15	525.00	441.00	621.00	492.00	1
16	621.00	492.00	651.00	502.00	1
17	651.00	502.00	700.00	515.00	1
18	700.00	515.00	720.00	525.00	1
19	720.00	525.00	770.00	552.00	2
20	770.00	552.00	795.00	541.00	2
21	795.00	541.00	942.00	528.00	2
22	95.00	220.00	119.00	213.00	4
23	119.00	213.00	140.00	215.00	4
24	140.00	215.00	291.00	255.00	4
25	291.00	255.00	400.00	308.00	4
26	400.00	308.00	469.00	352.00	4
27	469.00	352.00	549.00	421.00	4
28	549.00	421.00	624.00	470.00	4
29	624.00	470.00	665.00	492.00	4
30	95.00	218.00	119.00	211.00	3
31	119.00	211.00	140.00	213.00	3
32	140.00	213.00	291.00	253.00	3
33	291.00	253.00	400.00	306.00	3
34	400.00	306.00	469.00	350.00	3
35	469.00	350.00	549.00	419.00	3
36	549.00	419.00	624.00	468.00	3
37	624.00	468.00	665.00	490.00	3
38	665.00	492.00	700.00	510.00	4
39	700.00	510.00	720.00	525.00	2
40	665.00	490.00	700.00	508.00	2
41	665.00	490.00	759.00	495.00	3
42	759.00	495.00	942.00	490.00	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	38.5	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.

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	140.00	214.00	140.10	214.00	0.00
2	291.00	254.00	291.10	254.00	0.00
3	400.00	307.00	400.10	307.00	0.00
4	469.00	351.00	469.10	351.00	0.00
5	549.00	420.00	549.10	420.00	0.00
6	870.00	515.00	915.00	515.00	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 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	120.29	227.06
2	140.02	214.00
3	291.03	254.00
4	400.05	307.00
5	469.06	351.00
6	549.01	420.00
7	871.15	528.43
8	875.27	533.90

*** 1.100 ***

Individual data on the 33 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	18.4	17518.7	0.0	0.0	0.0	0.0	2627.8	0.0	0.0
2	1.3	2573.1	0.0	0.0	0.0	0.0	386.0	0.0	0.0
3	0.0	36.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
4	45.0	110906.1	0.0	0.0	0.0	0.0	16635.9	0.0	0.0
5	30.0	99402.4	0.0	0.0	0.0	0.0	14910.4	0.0	0.0
6	45.0	162965.1	0.0	0.0	0.0	0.0	24444.8	0.0	0.0
7	19.0	70001.7	0.0	0.0	0.0	0.0	10500.3	0.0	0.0
8	12.0	50992.8	0.0	0.0	0.0	0.0	7648.9	0.0	0.0
9	0.0	132.3	0.0	0.0	0.0	0.0	19.8	0.0	0.0
10	69.0	413201.5	0.0	0.0	0.0	0.0	61530.2	0.0	0.0
11	30.0	240044.6	0.0	0.0	0.0	0.0	36006.7	0.0	0.0
12	10.0	88047.7	0.0	0.0	0.0	0.0	13207.2	0.0	0.0
13	0.1	470.7	0.0	0.0	0.0	0.0	70.6	0.0	0.0
14	49.9	434594.4	0.0	0.0	0.0	0.0	65189.2	0.0	0.0
15	19.0	153372.9	0.0	0.0	0.0	0.0	23005.9	0.0	0.0
16	0.1	480.6	0.0	0.0	0.0	0.0	72.1	0.0	0.0
17	15.9	111495.7	0.0	0.0	0.0	0.0	16724.4	0.0	0.0
18	40.0	227914.8	0.0	0.0	0.0	0.0	34187.2	0.0	0.0
19	24.0	108683.7	0.0	0.0	0.0	0.0	16302.6	0.0	0.0
20	0.0	23.2	0.0	0.0	0.0	0.0	3.5	0.0	0.0
21	3.1	12855.3	0.0	0.0	0.0	0.0	1928.3	0.0	0.0
22	68.8	343038.7	0.0	0.0	0.0	0.0	51455.8	0.0	0.0
23	3.0	17526.8	0.0	0.0	0.0	0.0	2629.3	0.0	0.0
24	27.0	158029.2	0.0	0.0	0.0	0.0	23704.4	0.0	0.0
25	14.0	81315.9	0.0	0.0	0.0	0.0	12197.4	0.0	0.0
26	35.0	196743.9	0.0	0.0	0.0	0.0	29511.6	0.0	0.0
27	20.0	114277.4	0.0	0.0	0.0	0.0	17141.6	0.0	0.0
28	39.0	250631.5	0.0	0.0	0.0	0.0	37594.7	0.0	0.0
29	11.0	77683.1	0.0	0.0	0.0	0.0	11652.5	0.0	0.0
30	0.9	6197.6	0.0	0.0	0.0	0.0	929.6	0.0	0.0
31	24.1	143515.5	0.0	0.0	0.0	0.0	21527.3	0.0	0.0
32	76.2	209584.4	0.0	0.0	0.0	0.0	31437.7	0.0	0.0
33	4.1	1502.8	0.0	0.0	0.0	0.0	225.4	0.0	0.0

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	120.29	227.06
2	140.02	214.00
3	291.03	254.00
4	400.05	307.00
5	469.06	351.00
6	549.01	420.00
7	871.15	528.43
8	875.27	533.90

*** 1.100 ***

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Point No.	X-Surf (ft)	Y-Surf (ft)
1	120.29	227.06
2	140.02	214.00
3	291.03	254.00
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*** 1.100 ***

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Point No.	X-Surf (ft)	Y-Surf (ft)
1	120.29	227.06
2	140.02	214.00
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4	400.05	307.00
5	469.06	351.00
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*** 1.100 ***

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8	875.27	533.90

*** 1.100 ***

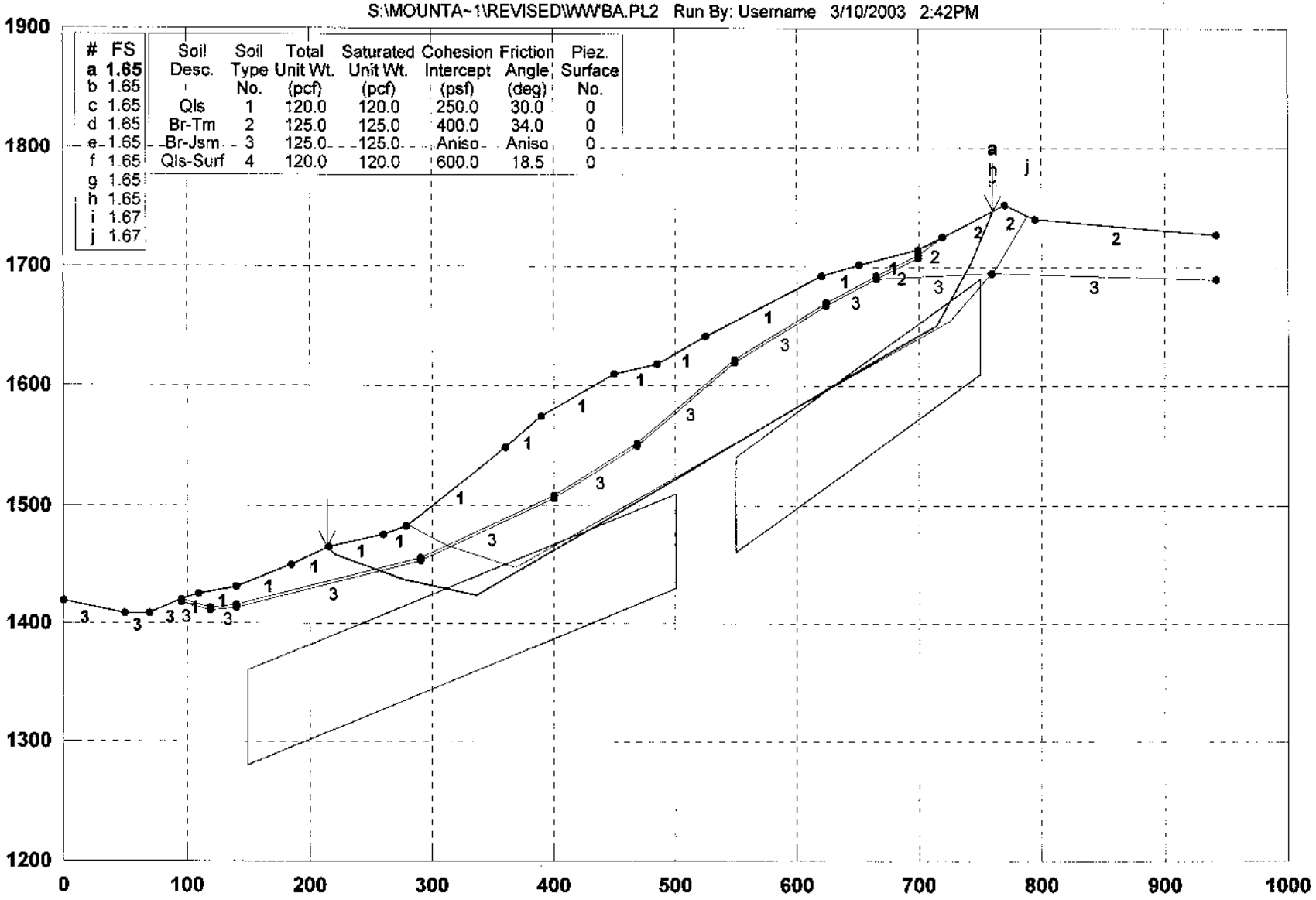
Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	120.29	227.06
2	140.32	214.00
3	291.03	254.00
4	400.05	307.00
5	469.06	351.00
6	549.81	420.00
7	871.15	528.43
8	675.27	533.90

*** 1.100 ***

Mountain Gate/Section: W-W' , Static

S:\MOUNTA~1\REVISED\WW'BA.PL2 Run By: Username 3/10/2003 2:42PM



#	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	1.67
j	1.67

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-106.

*** 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: 2:42PM
Run By: Username
Input Data Filename: S:ww'ba.
Output Filename: S:ww'ba.OUT
Unit System: English

Plotted Output Filename: S:ww'ba.PLT

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

BOUNDARY COORDINATES

21 Top Boundaries
42 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	219.00	50.00	208.00	3
2	50.00	208.00	70.00	209.00	3
3	70.00	209.00	95.00	220.00	3
4	95.00	220.00	110.00	225.00	1
5	110.00	225.00	140.00	231.00	1
6	140.00	231.00	185.00	250.00	1
7	185.00	250.00	215.00	265.00	1
8	215.00	265.00	260.00	275.00	1
9	260.00	275.00	279.00	283.00	1
10	279.00	283.00	360.00	348.00	1
11	360.00	348.00	390.00	375.00	1
12	390.00	375.00	450.00	410.00	1
13	450.00	410.00	485.00	418.00	1
14	485.00	418.00	525.00	441.00	1
15	525.00	441.00	621.00	492.00	1
16	621.00	492.00	651.00	502.00	1
17	651.00	502.00	700.00	515.00	1
18	700.00	515.00	720.00	525.00	1
19	720.00	525.00	770.00	552.00	2
20	770.00	552.00	795.00	541.00	2
21	795.00	541.00	942.00	528.00	2
22	95.00	220.00	119.00	213.00	4
23	119.00	213.00	140.00	215.00	4
24	140.00	215.00	291.00	255.00	4
25	291.00	255.00	400.00	308.00	4
26	400.00	308.00	469.00	352.00	4
27	469.00	352.00	549.00	421.00	4
28	549.00	421.00	624.00	470.00	4
29	624.00	470.00	665.00	492.00	4
30	95.00	218.00	119.00	211.00	3
31	119.00	211.00	140.00	213.00	3
32	140.00	213.00	291.00	253.00	3
33	291.00	253.00	400.00	306.00	3
34	400.00	306.00	469.00	350.00	3
35	469.00	350.00	549.00	419.00	3
36	549.00	419.00	624.00	468.00	3
37	624.00	468.00	665.00	490.00	3
38	665.00	492.00	700.00	510.00	4
39	700.00	510.00	720.00	525.00	2
40	665.00	490.00	700.00	508.00	2
41	665.00	490.00	759.00	495.00	3
42	759.00	495.00	942.00	490.00	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	29.0	1500.0	35.0
2	35.0	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 60.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	150.00	120.00	500.00	270.00	80.00
2	550.00	300.00	750.00	450.00	80.00

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	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.648 ***

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	0.4	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	6.8	3856.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	33.2	74370.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	3.2	11161.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	1.8	5653.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	18.1	84319.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.9	4874.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	12.0	76317.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	45.7	457085.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	23.3	307175.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	30.0	419572.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	10.0	145062.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	50.0	722552.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	19.0	265761.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	16.0	211542.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	40.0	513771.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	24.0	305528.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	72.0	890231.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	3.0	36098.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	27.0	311863.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	14.0	151659.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	35.0	344450.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	15.2	137442.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	4.8	41306.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	18.0	119420.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	5.2	24430.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	17.7	37468.0	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	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.648 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
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*** 1.648 ***

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Point No.	X-Surf (ft)	Y-Surf (ft)
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3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.648 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.648 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.648 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.648 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.648 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	280.20	283.96
2	311.60	266.64
3	368.22	246.78
4	725.77	454.42
5	764.01	500.65
6	788.66	543.79

*** 1.674 ***

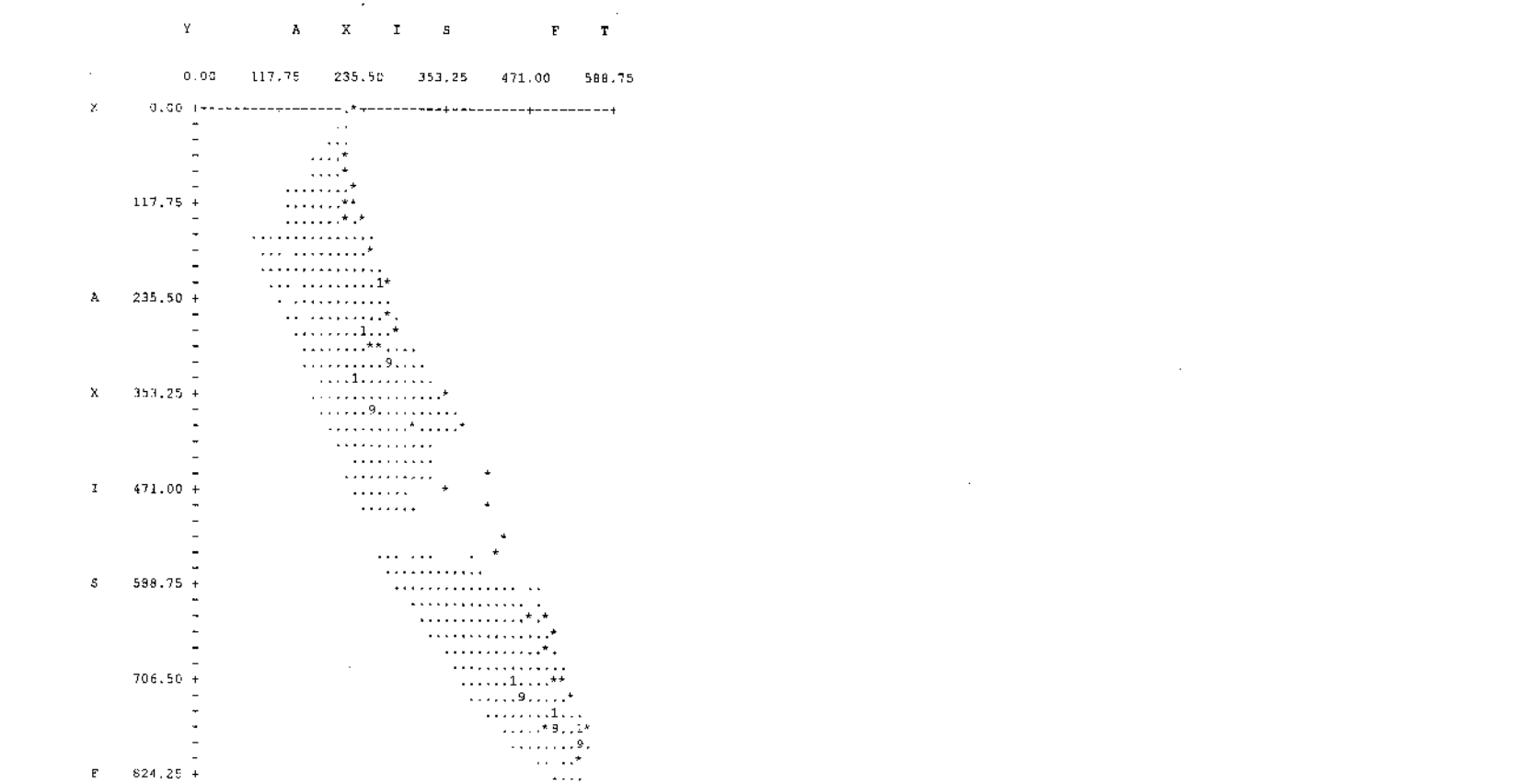
Failure Surface Specified By 6 Coordinate Points

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

1	280.20	283.96
2	311.60	266.64
3	368.22	246.76
4	725.77	454.42
5	764.01	500.65
6	788.66	543.79

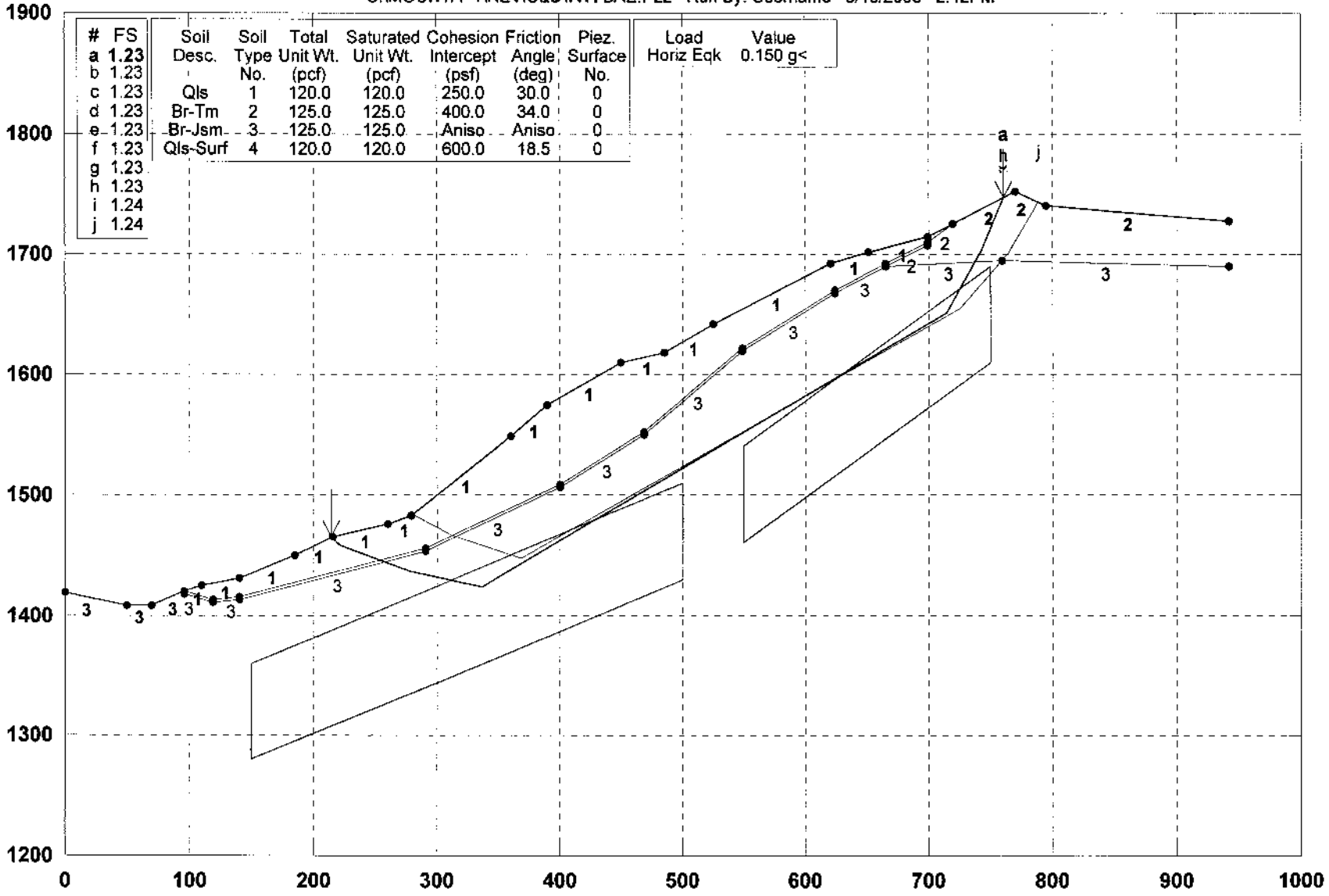
*** 1,674 ***

1



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

S:\MOUNTA~1\REVISED\WW'BAE.PL2 Run By: Username 3/10/2003 2:42PM



#	FS
a	1.23
b	1.23
c	1.23
d	1.23
e	1.23
f	1.23
g	1.23
h	1.23
i	1.24
j	1.24

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

Load	Value
Horiz Eqk	0.150 g<

GSTABL7 FSmin=1.23

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

GSTABL7

Figure E-107

*** 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:	2:42PM
Run By:	Username
Input Data Filename:	S:ww'bae.
Output Filename:	S:ww'bae.OUT
Unit System:	English

Plotted Output Filename: S:ww'bae.PLT

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

BOUNDARY COORDINATES

21 Top Boundaries
42 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	219.00	50.00	208.00	3
2	50.00	208.00	70.00	209.00	3
3	70.00	209.00	95.00	220.00	3
4	95.00	220.00	110.00	225.00	1
5	110.00	225.00	140.00	231.00	1
6	140.00	231.00	185.00	250.00	1
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13	450.00	410.00	485.00	418.00	1
14	485.00	418.00	525.00	441.00	1
15	525.00	441.00	621.00	492.00	1
16	621.00	492.00	651.00	502.00	1
17	651.00	502.00	700.00	515.00	1
18	700.00	515.00	720.00	525.00	1
19	720.00	525.00	770.00	552.00	2
20	770.00	552.00	795.00	541.00	2
21	795.00	541.00	942.00	528.00	2
22	95.00	220.00	119.00	213.00	4
23	119.00	213.00	140.00	215.00	4
24	140.00	215.00	291.00	255.00	4
25	291.00	255.00	400.00	308.00	4
26	400.00	308.00	469.00	352.00	4
27	469.00	352.00	549.00	421.00	4
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39	700.00	510.00	720.00	525.00	2
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41	665.00	490.00	759.00	495.00	3
42	759.00	495.00	942.00	490.00	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	29.0	1500.0	35.0
2	35.0	0.0	35.0
3	90.0	1500.0	35.0

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.

2 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 60.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	150.00	120.00	500.00	270.00	80.00
2	550.00	300.00	750.00	450.00	80.00

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	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.226 ***

Individual data on the 27 slices

Slice No.	Width (ft)	Weight (lbs)	Top (lbs)	Bot (lbs)	Norm (lbs)	Tan (lbs)	Hor (lbs)	Ver (lbs)	Load (lbs)	Water Force	Water Force	Tie Force	Tie Force	Earthquake Force	Surcharge
1	0.4	15.2	0.0	0.0	0.0	0.0	2.3	0.0	0.0						
2	6.8	3856.4	0.0	0.0	0.0	0.0	578.5	0.0	0.0						
3	33.2	74370.1	0.0	0.0	0.0	0.0	11155.5	0.0	0.0						
4	3.2	11161.8	0.0	0.0	0.0	0.0	1674.3	0.0	0.0						
5	1.8	6650.0	0.0	0.0	0.0	0.0	997.5	0.0	0.0						
6	18.1	84319.4	0.0	0.0	0.0	0.0	12647.9	0.0	0.0						
7	0.9	4874.5	0.0	0.0	0.0	0.0	731.2	0.0	0.0						
8	12.0	76317.1	0.0	0.0	0.0	0.0	11447.6	0.0	0.0						
9	45.7	457085.3	0.0	0.0	0.0	0.0	68562.8	0.0	0.0						
10	23.3	307175.5	0.0	0.0	0.0	0.0	46076.3	0.0	0.0						
11	30.0	419572.4	0.0	0.0	0.0	0.0	62935.9	0.0	0.0						
12	10.0	145062.9	0.0	0.0	0.0	0.0	21759.4	0.0	0.0						
13	50.0	722552.2	0.0	0.0	0.0	0.0	*******	0.0	0.0						
14	19.0	265761.2	0.0	0.0	0.0	0.0	39864.2	0.0	0.0						
15	16.0	211542.5	0.0	0.0	0.0	0.0	31731.4	0.0	0.0						
16	40.0	513771.0	0.0	0.0	0.0	0.0	77065.7	0.0	0.0						
17	24.0	305528.4	0.0	0.0	0.0	0.0	45829.3	0.0	0.0						
18	72.0	890231.0	0.0	0.0	0.0	0.0	*******	0.0	0.0						
19	3.0	36098.8	0.0	0.0	0.0	0.0	5414.8	0.0	0.0						
20	27.0	311863.1	0.0	0.0	0.0	0.0	46779.5	0.0	0.0						
21	14.0	151659.4	0.0	0.0	0.0	0.0	22748.9	0.0	0.0						
22	35.0	344450.8	0.0	0.0	0.0	0.0	51667.6	0.0	0.0						
23	15.2	137442.5	0.0	0.0	0.0	0.0	20616.4	0.0	0.0						
24	4.8	41306.7	0.0	0.0	0.0	0.0	6196.0	0.0	0.0						
25	18.0	119420.8	0.0	0.0	0.0	0.0	17913.1	0.0	0.0						
26	5.2	24430.7	0.0	0.0	0.0	0.0	3664.6	0.0	0.0						
27	17.7	37468.0	0.0	0.0	0.0	0.0	5620.2	0.0	0.0						

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.226 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75

6	743.26	503.77
7	761.00	547.14

*** 1.226 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.226 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.226 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.226 ***

*** 1.226 ***

1

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.226 ***

Failure Surface Specified By 7 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	214.59	264.79
2	221.79	257.65
3	278.13	237.01
4	336.69	223.95
5	715.17	450.75
6	743.26	503.77
7	761.00	547.14

*** 1.226 ***

1

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	280.20	283.96
2	311.60	266.64
3	368.22	246.78
4	725.77	454.42
5	764.01	500.65
6	788.66	543.79

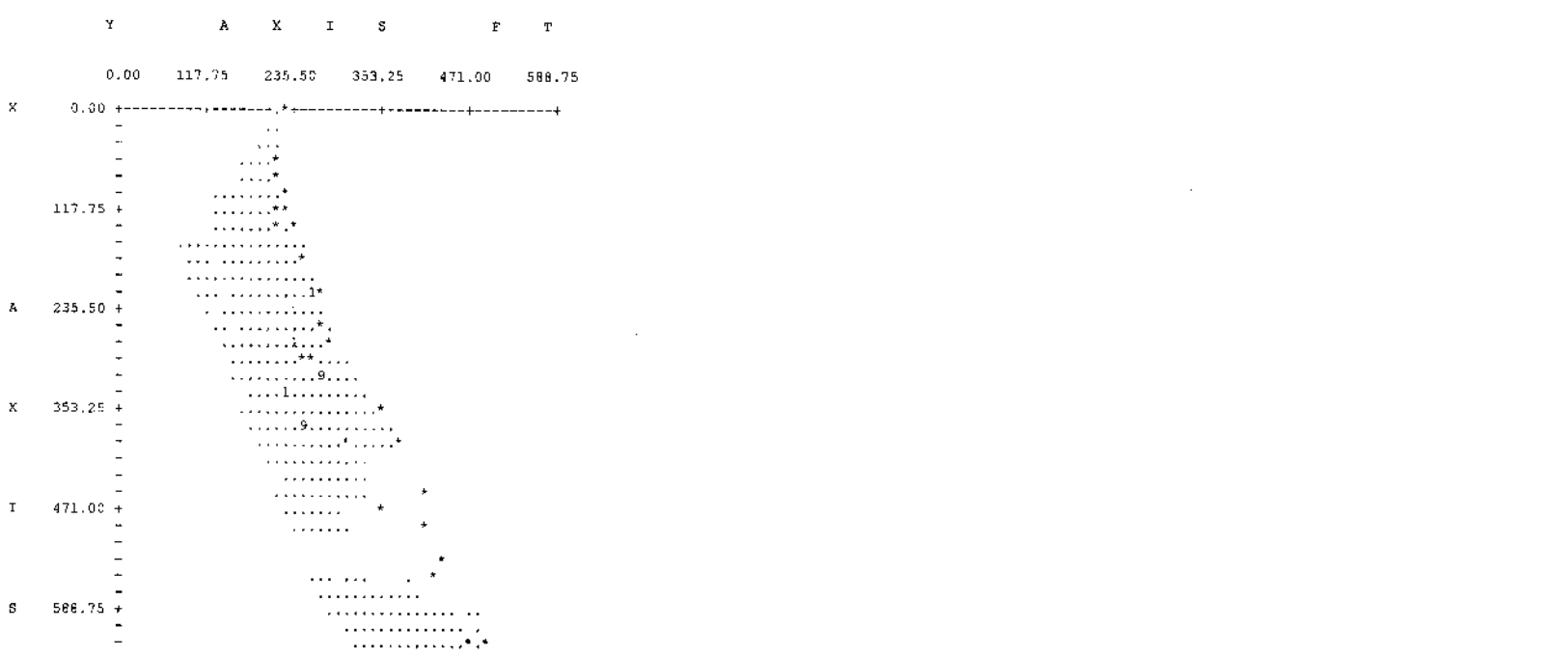
*** 1.244 ***

Failure Surface Specified By 6 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	280.20	383.96
2	311.60	266.64
3	368.22	246.78
4	725.77	454.42
5	764.01	500.65
6	788.66	543.79

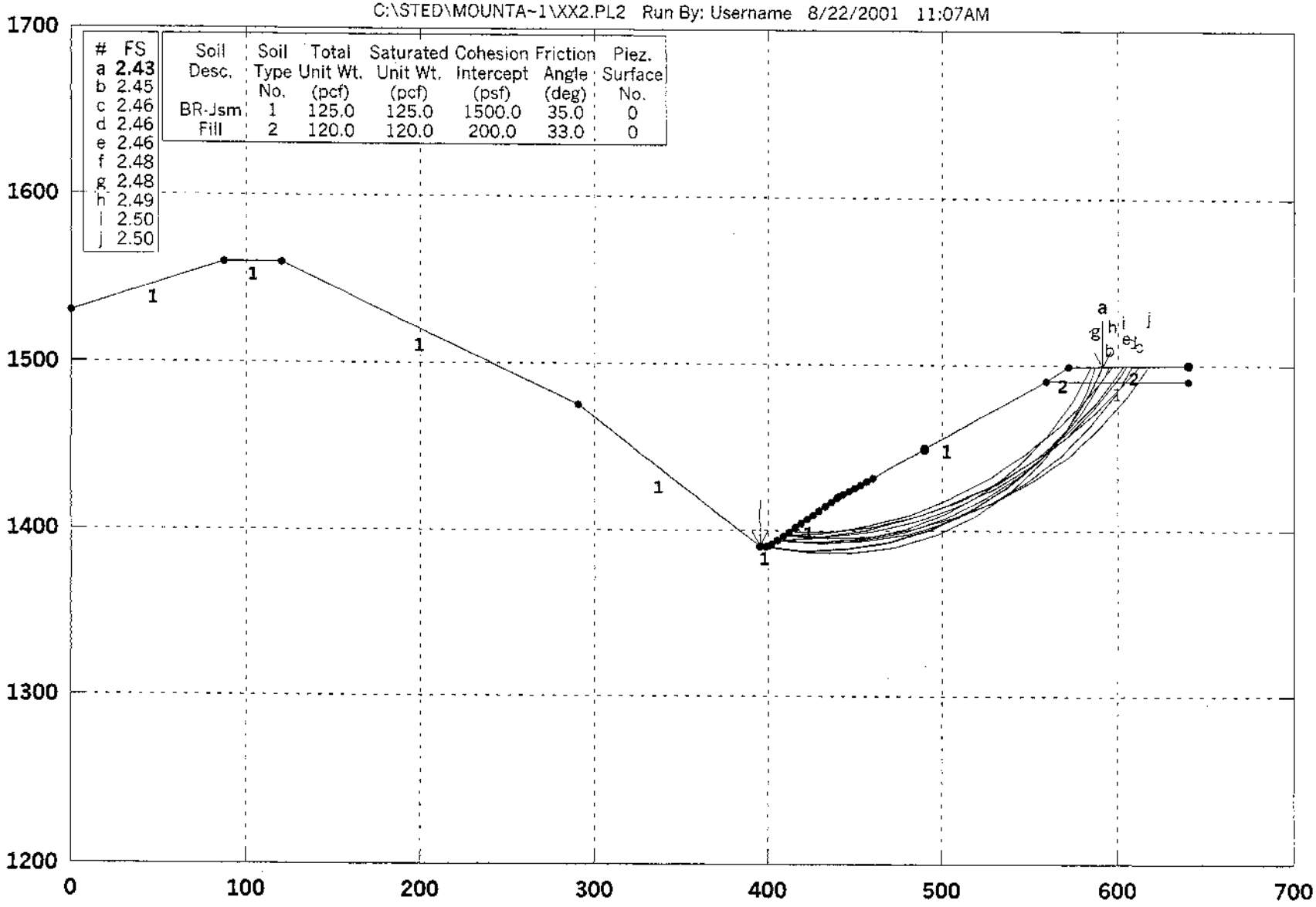
*** 1.244 ***

1



Mountaingate Section X-X'

C:\STED\MOUNTA~1\XX2.PL2 Run By: Username 8/22/2001 11:07AM



GSTABL7 FSmin=2.43

Safety Factors Are Calculated By The Modified Bishop Method

STED

Figure E-108

*** 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:	8/22/2001
Time of Run:	11:07AM
Run By:	Username
Input Data Filename:	C:xx2.DAT
Output Filename:	C:xx2.OUT
Unit System:	English
Plotted Output Filename:	C:xx2.PLT

PROBLEM DESCRIPTION Mountaingate Section X-X'

BOUNDARY COORDINATES

9 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	330.00	87.00	360.00	1
2	87.00	360.00	120.00	360.00	1
3	120.00	360.00	290.00	275.00	1
4	290.00	275.00	395.00	190.00	1
5	395.00	190.00	400.00	190.00	1
6	400.00	190.00	440.00	220.00	1
7	440.00	220.00	559.00	290.00	1
8	559.00	290.00	572.00	299.00	2
9	572.00	299.00	640.00	300.00	2
10	559.00	290.00	640.00	290.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	0.00	0.0	0

1

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

800 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 20 Points Equally Spaced Along The Ground Surface Between X = 395.00(ft)
and X = 460.00(ft)

Each Surface Terminates Between X = 490.00(ft)
and X = 640.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00(ft)

25.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	395.00	190.00
2	419.88	187.52
3	444.86	188.51
4	469.46	192.96
5	493.20	200.78
6	515.64	211.81

7	536.32	225.85
8	554.86	242.63
9	570.90	261.81
10	584.12	283.03
11	591.34	299.28

Circle Center At X = 425.2 ; Y = 367.3 and Radius, 179.8

*** 2.433 ***

Individual data on the 15 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	5.0	155.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	19.9	22220.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	20.1	61710.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	4.9	20043.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	24.6	121021.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	23.7	140821.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	22.4	144686.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	20.7	133793.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	18.5	110941.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	4.1	22592.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	11.9	58384.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	1.1	4908.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	12.1	38501.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	3.1	4770.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	4.1	2282.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 11 Coordinate Points

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

No.	(ft)	(ft)
1	405.26	193.95
2	430.22	192.39
3	455.15	194.26
4	479.59	199.50
5	503.09	208.03
6	525.21	219.69
7	545.53	234.25
8	563.67	251.45
9	579.30	270.96
10	592.12	292.42
11	595.06	299.34

Circle Center At X = 429.1 ; Y = 375.3 and Radius, 182.9

*** 2.450 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.26	193.95
2	430.19	195.80
3	454.85	199.94
4	479.02	206.34
5	502.49	214.94
6	525.07	225.67
7	546.57	238.43
8	566.80	253.12
9	585.58	269.62
10	602.77	287.77
11	612.05	299.59

Circle Center At X = 397.7 ; Y = 464.7 and Radius, 270.9

*** 2.456 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.26	193.95
2	430.19	192.06

3	455.16	193.33
4	479.77	197.75
5	503.61	205.25
6	526.32	215.70
7	547.53	228.94
8	566.89	244.76
9	584.10	262.90
10	598.87	283.06
11	607.99	299.53

Circle Center At X = 432.6 ; Y = 389.4 and Radius, 197.3

*** 2.458 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.68	196.51
2	433.68	196.36
3	458.53	199.14
4	482.88	204.81
5	506.39	213.31
6	528.74	224.51
7	549.62	238.26
8	568.74	254.36
9	585.84	272.60
10	600.68	292.72
11	604.53	299.48

Circle Center At X = 422.5 ; Y = 408.6 and Radius, 212.5

*** 2.465 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.26	193.95
2	430.23	192.66
3	455.12	195.04
4	479.39	201.03
5	502.52	210.50
6	524.02	223.26

7	543.42	239.03
8	560.31	257.46
9	574.32	278.17
10	584.43	299.18

Circle Center At X = 426.6 ; Y = 362.8 and Radius, 170.2

*** 2.481 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	398.42	190.00
2	423.11	186.06
3	448.11	186.05
4	472.80	189.97
5	496.57	197.72
6	518.82	209.12
7	539.01	223.87
8	556.62	241.60
9	571.23	261.89
10	582.47	284.22
11	587.26	299.22

Circle Center At X = 435.7 ; Y = 344.1 and Radius, 158.6

*** 2.485 ***

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.68	196.51
2	433.62	198.34
3	458.21	202.85
4	482.17	209.97
5	505.23	219.63
6	527.11	231.72
7	547.57	246.09
8	566.36	262.58
9	583.27	281.00
10	596.79	299.36

Circle Center At X = 404.3 ; Y = 428.0 and Radius, 231.5

*** 2.486 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	412.11	199.08
2	437.10	199.30
3	461.91	202.45
4	486.16	208.49
5	509.55	217.34
6	531.73	228.87
7	552.41	242.92
8	571.30	259.29
9	588.13	277.78
10	602.69	298.10
11	603.43	299.46

Circle Center At X = 422.7 ; Y = 411.6 and Radius, 212.7

*** 2.496 ***

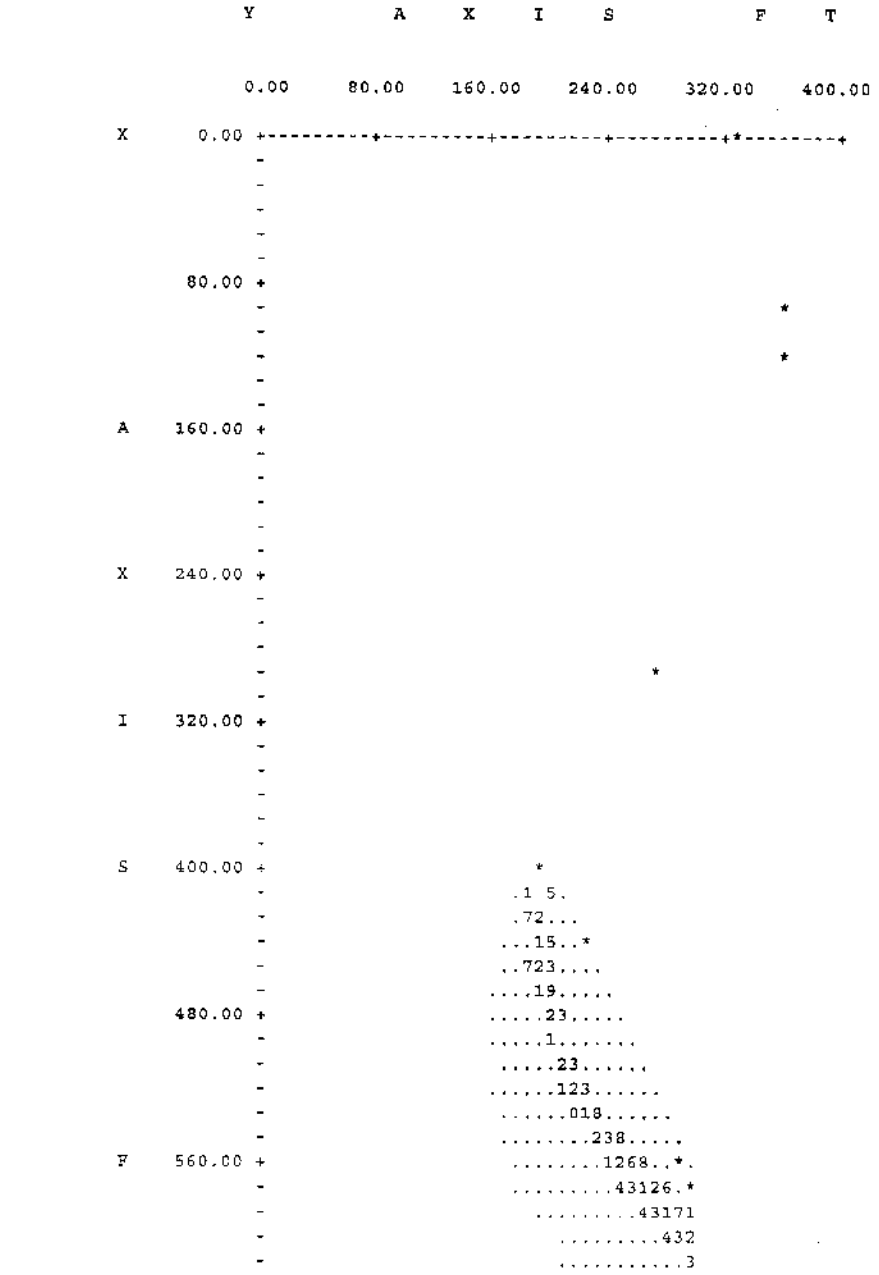
Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.68	196.51
2	433.63	194.93
3	458.60	196.28
4	483.23	200.55
5	507.19	207.68
6	530.15	217.57
7	551.79	230.09
8	571.81	245.06
9	589.94	262.28
10	605.92	281.51
11	617.71	299.67

Circle Center At X = 434.6 ; Y = 407.6 and Radius, 212.7

*** 2.504 ***

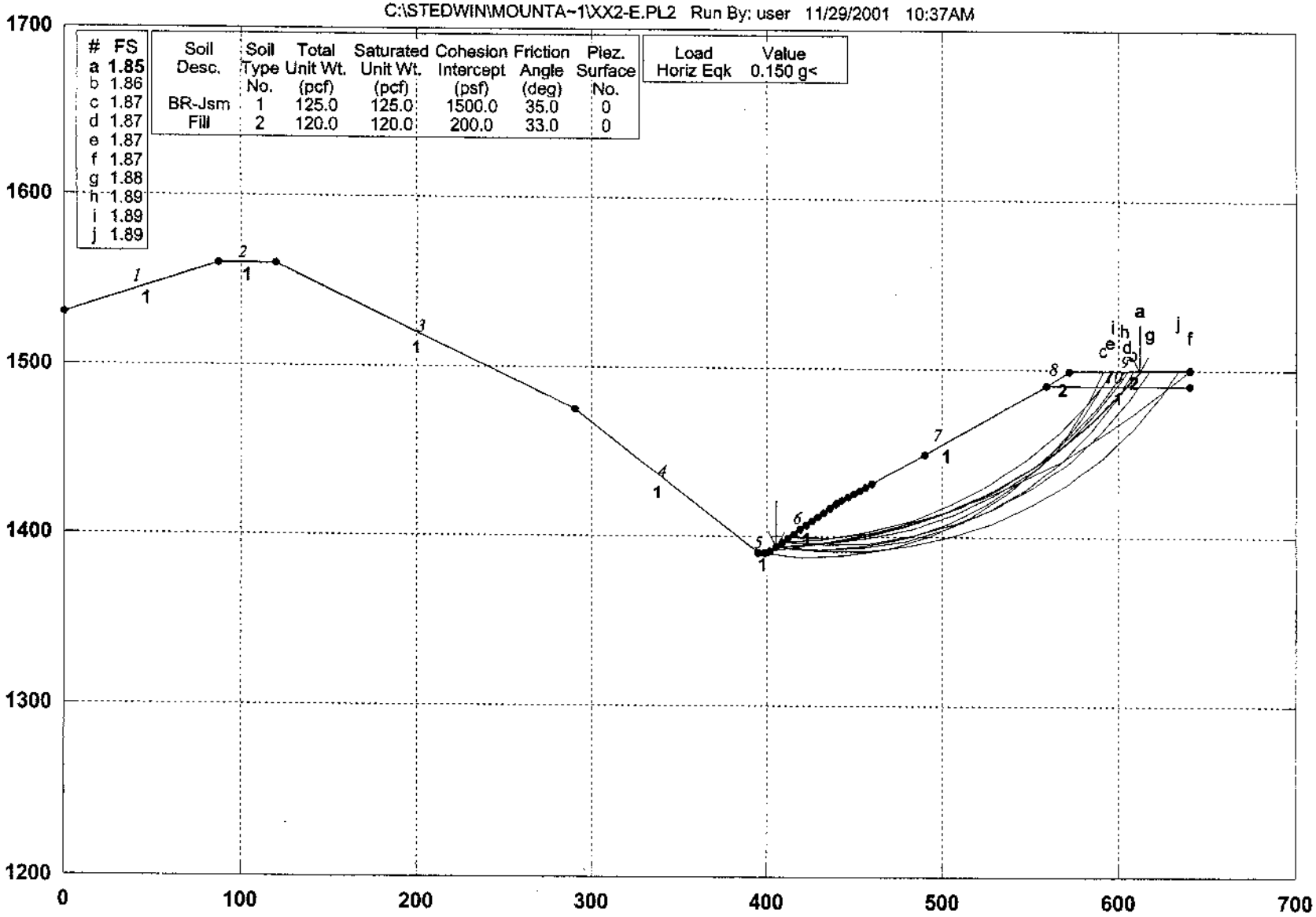
1




T
640.00 +

Mountaingate Section X-X' Pseudo Static

C:\STEDWIN\MOUNTA~1\XX2-E.PL2 Run By: user 11/29/2001 10:37AM



GSTABL7 FSmin=1.85

Safety Factors Are Calculated By The Modified Bishop Method

STED

Figure E-109

*** 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: 11/29/2001
Time of Run: 10:37AM
Run By: user
Input Data Filename: C:xx2-e.dat
Output Filename: C:xx2-e.OUT
Unit System: English

Plotted Output Filename: C:xx2-e.PLT

PROBLEM DESCRIPTION Mountaingate Section X-X'
Pseudo Static

BOUNDARY COORDINATES

9 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	330.00	87.00	360.00	1
2	87.00	360.00	120.00	360.00	1
3	120.00	360.00	290.00	275.00	1
4	290.00	275.00	395.00	190.00	1
5	395.00	190.00	400.00	190.00	1
6	400.00	190.00	440.00	220.00	1
7	440.00	220.00	559.00	290.00	1
8	559.00	290.00	572.00	299.00	2
9	572.00	299.00	640.00	300.00	2
10	559.00	290.00	640.00	290.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	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)

1

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

800 Trial Surfaces Have Been Generated.

40 Surfaces Initiate From Each Of 20 Points Equally Spaced
Along The Ground Surface Between X = 395.00(ft)
and X = 460.00(ft)

Each Surface Terminates Between X = 490.00(ft)
and X = 640.00(ft)

Unless Further Limitations Were Imposed, The Minimum Elevation
At Which A Surface Extends Is Y = 0.00(ft)

25.00(ft) Line Segments Define Each Trial Failure Surface.

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 Modified Bishop Method * *

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.26	193.95
2	430.19	195.80
3	454.85	199.94
4	479.02	206.34
5	502.49	214.94
6	525.07	225.67
7	546.57	238.43
8	566.80	253.12
9	585.58	269.62
10	602.77	287.77
11	612.05	299.59

Circle Center At X = 397.7 ; Y = 464.7 and Radius, 270.9

*** 1.847 ***

Individual data on the 14 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	24.9	26250.5	0.0	0.0	0.0	0.0	3937.6	0.0	0.0
2	9.8	24144.5	0.0	0.0	0.0	0.0	3621.7	0.0	0.0
3	14.8	47652.6	0.0	0.0	0.0	0.0	7147.9	0.0	0.0
4	24.2	98788.2	0.0	0.0	0.0	0.0	14818.2	0.0	0.0
5	23.5	115068.6	0.0	0.0	0.0	0.0	17260.3	0.0	0.0
6	22.6	121651.4	0.0	0.0	0.0	0.0	18247.7	0.0	0.0
7	21.5	119079.7	0.0	0.0	0.0	0.0	17862.0	0.0	0.0
8	12.4	67436.1	0.0	0.0	0.0	0.0	10115.4	0.0	0.0
9	7.8	41227.5	0.0	0.0	0.0	0.0	6184.1	0.0	0.0
10	5.2	26993.7	0.0	0.0	0.0	0.0	4049.1	0.0	0.0
11	13.6	59572.8	0.0	0.0	0.0	0.0	8935.9	0.0	0.0
12	17.2	43524.0	0.0	0.0	0.0	0.0	6528.6	0.0	0.0
13	1.8	2231.6	0.0	0.0	0.0	0.0	334.7	0.0	0.0

14	7.5	4281.8	0.0	0.0	0.0	0.0	642.3	0.0	0.0

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.26	193.95
2	430.19	192.06
3	455.16	193.33
4	479.77	197.75
5	503.61	205.25
6	526.32	215.70
7	547.53	228.94
8	566.89	244.76
9	584.10	262.90
10	598.87	283.06
11	607.99	299.53

Circle Center At X = 432.6 ; Y = 389.4 and Radius, 197.3

*** 1.860 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	395.00	190.00
2	419.88	187.52
3	444.86	188.51
4	469.46	192.96
5	493.20	200.78
6	515.64	211.81
7	536.32	225.85
8	554.86	242.63
9	570.90	261.81
10	584.12	283.03
11	591.34	299.28

Circle Center At X = 425.2 ; Y = 367.3 and Radius, 179.8

*** 1.866 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.68	196.51
2	433.68	196.36
3	458.53	199.14
4	482.88	204.81
5	506.39	213.31
6	528.74	224.51
7	549.62	238.26
8	568.74	254.36
9	585.84	272.60
10	600.68	292.72
11	604.53	299.48

Circle Center At X = 422.5 ; Y = 408.6 and Radius, 212.5

*** 1.866 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.26	193.95
2	430.22	192.39
3	455.15	194.26
4	479.59	199.50
5	503.09	208.03
6	525.21	219.69
7	545.53	234.25
8	563.67	251.45
9	579.30	270.96
10	592.12	292.42
11	595.06	299.34

Circle Center At X = 429.1 ; Y = 375.3 and Radius, 182.9

*** 1.871 ***

Failure Surface Specified By 12 Coordinate Points

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

No.	(ft)	(ft)
1	401.84	191.38
2	426.60	194.87
3	451.10	199.83
4	475.27	206.24
5	499.00	214.08
6	522.23	223.33
7	544.86	233.95
8	566.82	245.91
9	588.02	259.15
10	608.40	273.64
11	627.87	289.31
12	639.63	299.99

Circle Center At X = 356.3 ; Y = 605.6 and Radius, 416.7

*** 1.873 ***

1

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.68	196.51
2	433.63	194.93
3	458.60	196.28
4	483.23	200.55
5	507.19	207.68
6	530.15	217.57
7	551.79	230.09
8	571.81	245.06
9	589.94	262.28
10	605.92	281.51
11	617.71	299.67

Circle Center At X = 434.6 ; Y = 407.6 and Radius, 212.7

*** 1.876 ***

Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	412.11	199.08

2	437.10	199.30
3	461.91	202.45
4	486.16	208.49
5	509.55	217.34
6	531.73	228.87
7	552.41	242.92
8	571.30	259.29
9	588.13	277.78
10	602.69	298.10
11	603.43	299.46

Circle Center At X = 422.7 ; Y = 411.6 and Radius, 212.7

*** 1.889 ***

1

Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.68	196.51
2	433.62	198.34
3	458.21	202.85
4	482.17	209.97
5	505.23	219.63
6	527.11	231.72
7	547.57	246.09
8	566.36	262.58
9	583.27	281.00
10	596.79	299.36

Circle Center At X = 404.3 ; Y = 428.0 and Radius, 231.5

*** 1.890 ***

Failure Surface Specified By 12 Coordinate Points

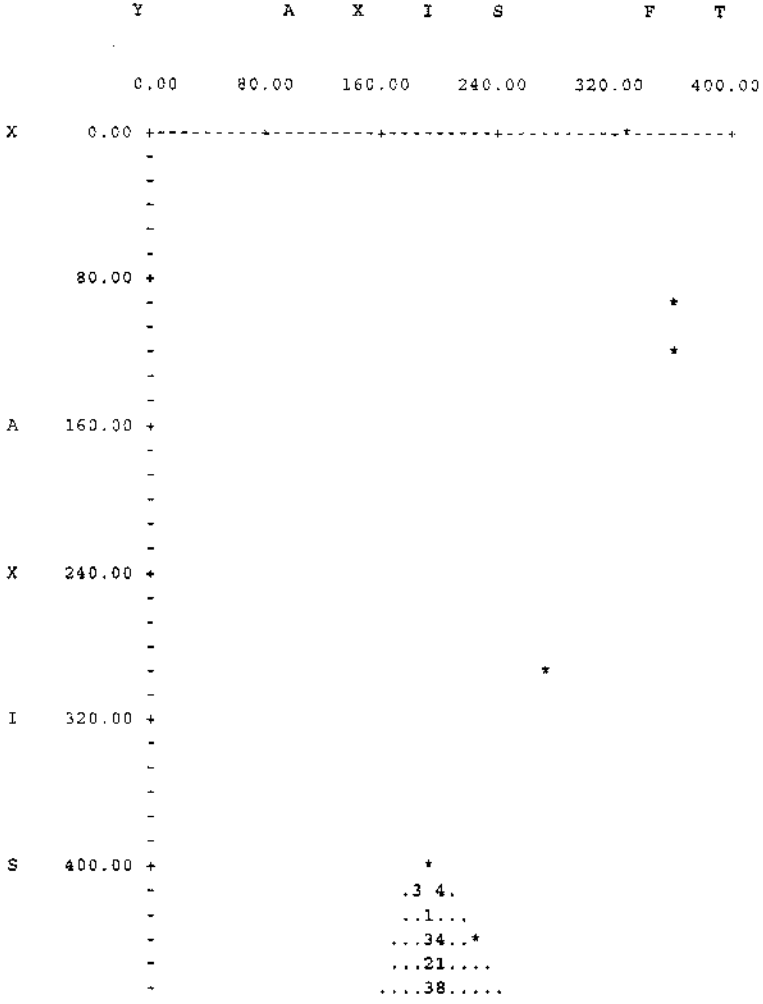
Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.26	193.95
2	430.11	191.16
3	455.11	191.18
4	479.95	194.01
5	504.31	199.61
6	527.89	207.91

7	550.39	218.81
8	571.53	232.16
9	591.03	247.80
10	608.65	265.54
11	624.17	285.14
12	633.37	299.90

Circle Center At X = 442.5 ; Y = 412.3 and Radius, 221.5

*** 1.895 ***

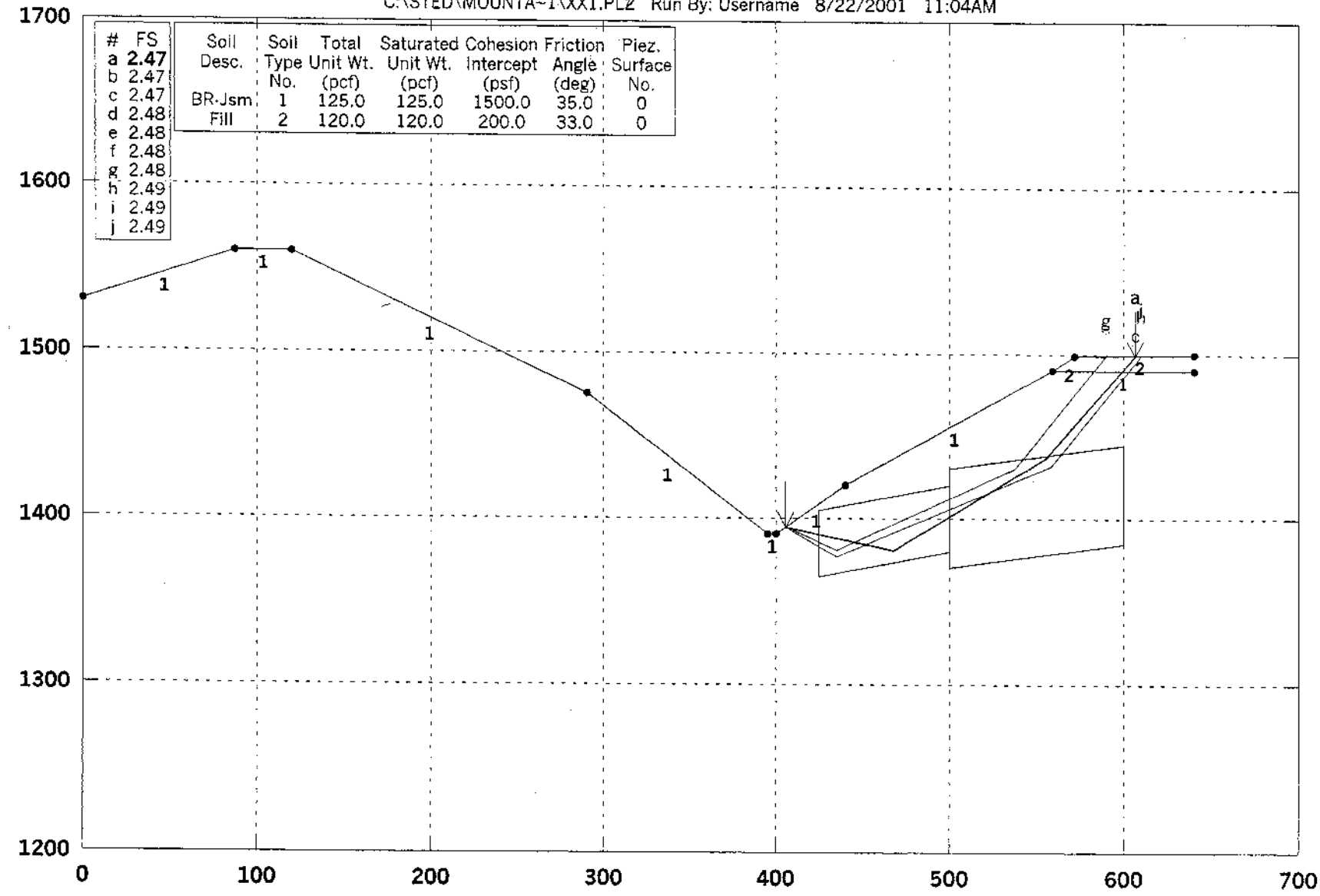
1



```
      480.00 +                    ....021.....
             -                    .....3.6.....
             -                     ....021......
             -                    ......321......
             -                     .....0738,.....
             -                     .....0.219,....,
F     560.00 +                      ,.......35.9,.*.
             -                      ,.......0.2135,.*
             -                        .......06213.3
             -                           .........214
             -                           .......06..1
             -                              .......6.
T     640.00 +                                   ,.*6*
```

Mountaingate Section X-X'

C:\STED\MOUNTA~1\XX1.PL2 Run By: Username 8/22/2001 11:04AM



GSTABL7 FSmin=2.47

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

STED

Figure E-110

*** 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:	8/22/2001
Time of Run:	11:04AM
Run By:	Username
Input Data Filename:	C:xx1.DAT
Output Filename:	C:xx1.OUT
Unit System:	English
Plotted Output Filename:	C:xx1.PLT

PROBLEM DESCRIPTION Mountaingate Section X-X'

BOUNDARY COORDINATES

9 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	330.00	87.00	360.00	1
2	87.00	360.00	120.00	360.00	1
3	120.00	360.00	290.00	275.00	1
4	290.00	275.00	395.00	190.00	1
5	395.00	190.00	400.00	190.00	1
6	400.00	190.00	440.00	220.00	1
7	440.00	220.00	559.00	290.00	1
8	559.00	290.00	572.00	299.00	2
9	572.00	299.00	640.00	300.00	2
10	559.00	290.00	640.00	290.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	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.

2000 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 100.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	425.00	185.00	500.00	200.00	40.00
2	500.10	200.00	600.00	215.00	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 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.54	194.16
2	468.34	180.62
3	555.43	236.63
4	606.64	299.51

*** 2.468 ***

Individual data on the 7 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	34.5	71658.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	28.3	158194.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	87.1	584196.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	3.6	22344.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	13.0	73652.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	26.9	85189.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	7.7	4365.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.54	194.16
2	468.34	180.62
3	555.43	236.63
4	606.64	299.51

*** 2.468 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.54	194.16
2	468.34	180.62
3	555.43	236.63
4	606.64	299.51

*** 2.468 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	406.19	194.64
2	435.49	180.67
3	537.82	230.56
4	589.40	299.26

*** 2.484 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	406.19	194.64
2	435.49	180.67
3	537.82	230.56
4	589.40	299.26

*** 2.484 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	406.19	194.64
2	435.49	180.67
3	537.82	230.56
4	589.40	299.26

*** 2.484 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	406.19	194.64
2	435.49	180.67
3	537.82	230.56
4	589.40	299.26

*** 2.484 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.75	194.31
2	435.21	176.52
3	558.73	232.37
4	609.95	299.56

*** 2.492 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.75	194.31
2	435.21	176.52
3	558.73	232.37
4	609.95	299.56

*** 2.492 ***

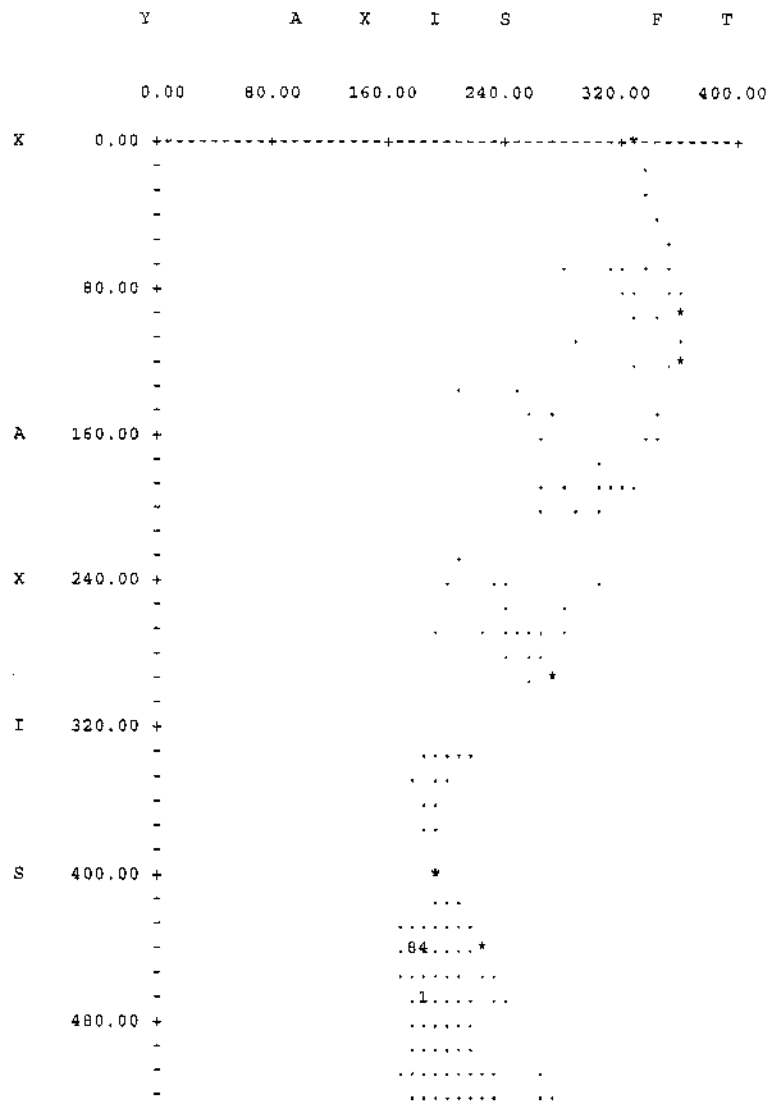
Failure Surface Specified By 4 Coordinate Points

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

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.75	194.31
2	435.21	176.52
3	558.73	232.37
4	609.95	299.56

*** 2.492 ***

1




F 560.00
T 640.00

Mountaingate Section X-X' Pseudo Static

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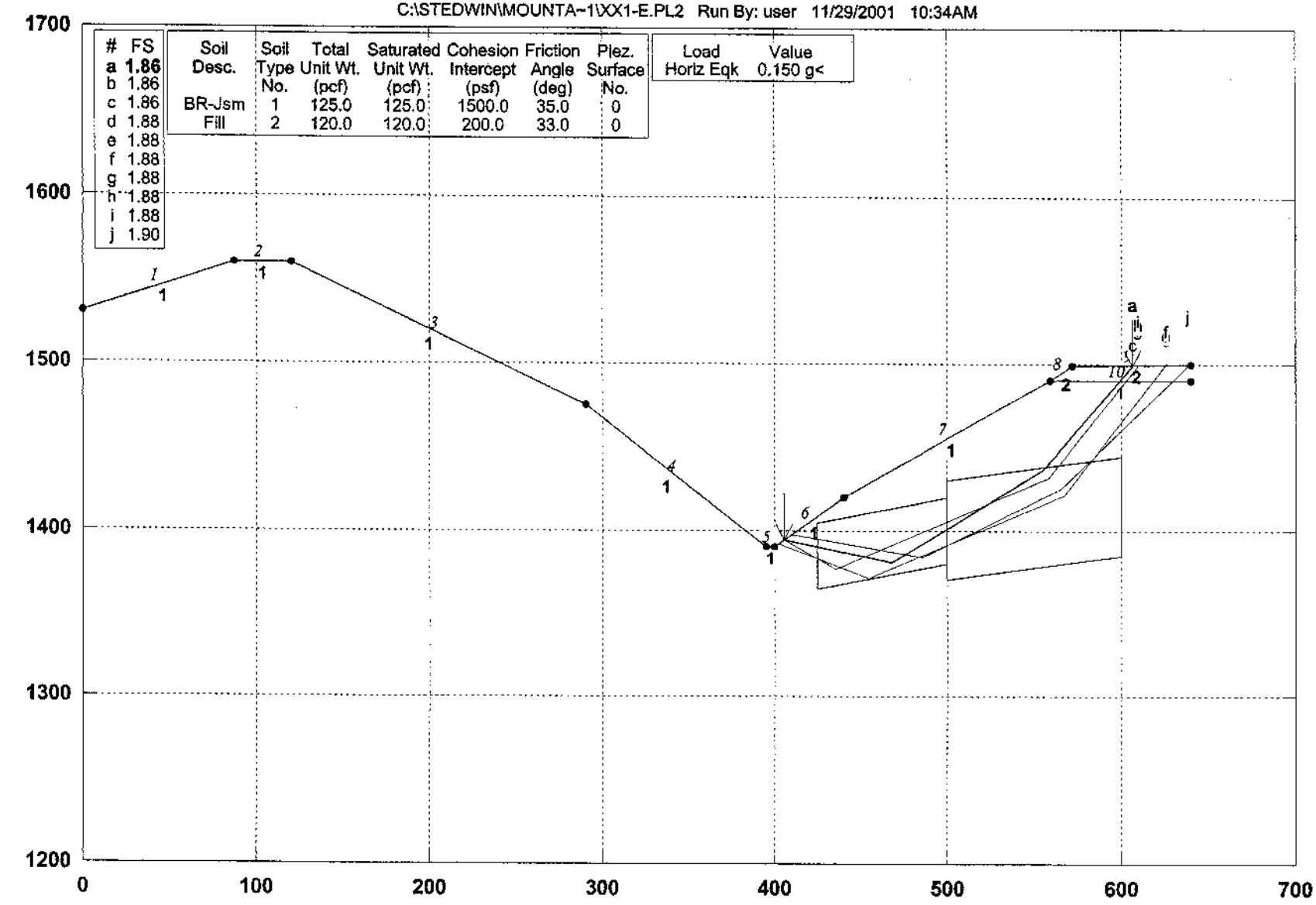


GSTABL7 FSmin=1.86

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

STED

Figure E-111

*** 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: 11/29/2001
Time of Run: 10:34AM
Run By: user
Input Data Filename: C:xx1-e.dat
Output Filename: C:xx1-e.OUT
Unit System: English

Plotted Output Filename: C:xx1-e.PLT

PROBLEM DESCRIPTION Mountaingate Section X-X'
Pseudo Static

BOUNDARY COORDINATES

9 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	330.00	87.00	360.00	1
2	87.00	360.00	120.00	360.00	1
3	120.00	360.00	290.00	275.00	1
4	290.00	275.00	395.00	190.00	1
5	395.00	190.00	400.00	190.00	1
6	400.00	190.00	440.00	220.00	1
7	440.00	220.00	559.00	290.00	1
8	559.00	290.00	572.00	299.00	2
9	572.00	299.00	640.00	300.00	2
10	559.00	290.00	640.00	290.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	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.

2000 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 100.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	425.00	185.00	500.00	200.00	40.00
2	500.10	200.00	600.00	215.00	60.00

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 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.54	194.16
2	468.34	180.62
3	555.43	236.63
4	606.64	299.51

*** 1.858 ***

Individual data on the 7 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	34.5	71658.2	0.0	0.0	0.0	0.0	10748.7	0.0	0.0
2	28.3	158194.5	0.0	0.0	0.0	0.0	23729.2	0.0	0.0
3	87.1	584196.1	0.0	0.0	0.0	0.0	87629.4	0.0	0.0
4	3.6	22344.0	0.0	0.0	0.0	0.0	3351.6	0.0	0.0
5	13.0	73652.9	0.0	0.0	0.0	0.0	11047.9	0.0	0.0
6	26.9	85189.9	0.0	0.0	0.0	0.0	12778.5	0.0	0.0
7	7.7	4365.6	0.0	0.0	0.0	0.0	654.8	0.0	0.0

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.54	194.16
2	468.34	180.62
3	555.43	236.63
4	606.64	299.51

*** 1.858 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.54	194.16
2	468.34	180.62
3	555.43	236.63
4	606.64	299.51

*** 1.858 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	402.17	191.63
2	454.09	170.87
3	567.29	221.28
4	625.90	299.79

*** 1.878 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	402.17	191.63
2	454.09	170.87
3	567.29	221.28
4	625.90	299.79

*** 1.878 ***

Failure Surface Specified By 4 Coordinate Points

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

1	402.17	191.63
2	454.09	170.87
3	567.29	221.28
4	625.90	299.79

*** 1.878 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.75	194.31
2	435.21	176.52
3	558.73	232.37
4	609.95	299.56

*** 1.879 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.75	194.31
2	435.21	176.52
3	558.73	232.37
4	609.95	299.56

*** 1.879 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	405.75	194.31
2	435.21	176.52
3	558.73	232.37
4	609.95	299.56

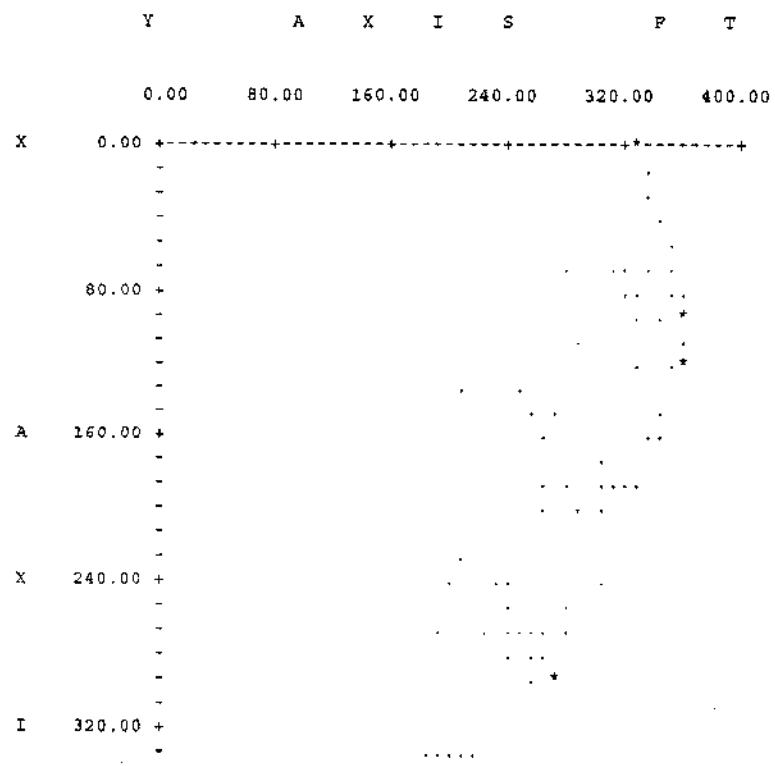
*** 1.879 ***

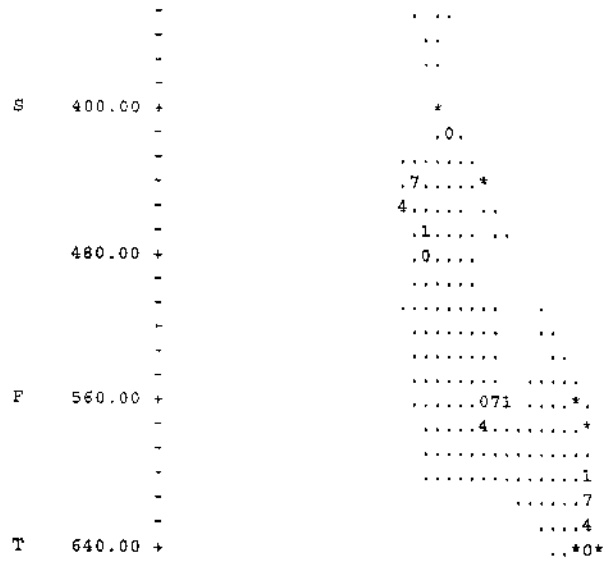
Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	410.66	197.99
2	485.53	184.20
3	565.65	225.62
4	636.24	296.45
5	638.34	299.98

*** 1.899 ***

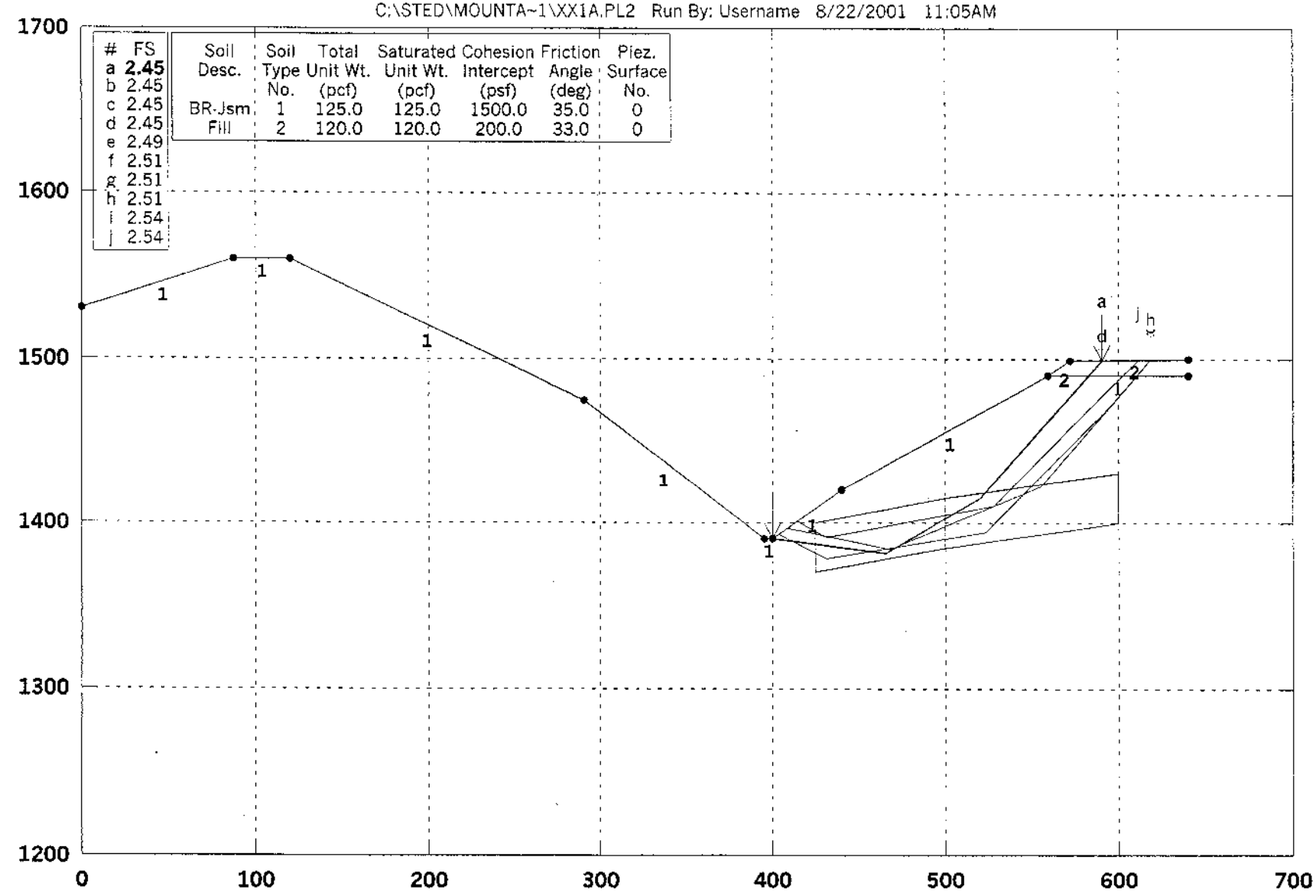
1




S
400.00
480.00
560.00
F
640.00
T

Mountaingate Section X-X'

C:\STED\MOUNTA~1\XX1A.PL2 Run By: Username 8/22/2001 11:05AM



GSTABL7 FSmin=2.45

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

STED

Figure E-112

Figure E-112a

*** 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:	8/22/2001
Time of Run:	11:05AM
Run By:	Username
Input Data Filename:	C:xx1a.DAT
Output Filename:	C:xx1a.OUT
Unit System:	English
Plotted Output Filename:	C:xx1a.PLT

PROBLEM DESCRIPTION Mountaingate Section X-X'

BOUNDARY COORDINATES

9 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	330.00	87.00	360.00	1
2	87.00	360.00	120.00	360.00	1
3	120.00	360.00	290.00	275.00	1
4	290.00	275.00	395.00	190.00	1
5	395.00	190.00	400.00	190.00	1
6	400.00	190.00	440.00	220.00	1
7	440.00	220.00	559.00	290.00	1
8	559.00	290.00	572.00	299.00	2
9	572.00	299.00	640.00	300.00	2
10	559.00	290.00	640.00	290.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	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.

2000 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 100.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	425.00	185.00	500.00	200.00	30.00
2	500.10	200.00	600.00	215.00	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 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	400.27	190.20
2	465.83	181.35
3	519.90	215.05
4	584.08	291.73
5	590.78	299.28

*** 2.453 ***

Individual data on the 8 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	39.7	87324.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	25.8	143679.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	54.1	357518.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	39.1	195967.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	13.0	40287.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	10.6	20033.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	1.4	1443.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	6.7	2992.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	400.27	190.20
2	465.83	181.35
3	519.90	215.05
4	584.08	291.73
5	590.78	299.28

*** 2.453 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	400.27	190.20
2	465.83	181.35

3	519.90	215.05
4	584.08	291.73
5	590.78	299.28

*** 2.453 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	400.27	190.20
2	465.83	181.35
3	519.90	215.05
4	584.08	291.73
5	590.78	299.28

*** 2.453 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	403.96	192.97
2	431.48	178.67
3	523.31	194.20
4	591.54	267.31
5	618.02	299.68

*** 2.491 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.92	196.69
2	468.34	183.88
3	555.43	222.47
4	618.31	299.68

*** 2.510 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.92	196.69
2	468.34	183.88
3	555.43	222.47
4	618.31	299.68

*** 2.510 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.92	196.69
2	468.34	183.88
3	555.43	222.47
4	618.31	299.68

*** 2.510 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	414.17	200.62
2	431.33	191.00
3	527.80	210.52
4	595.89	283.76
5	611.35	299.58

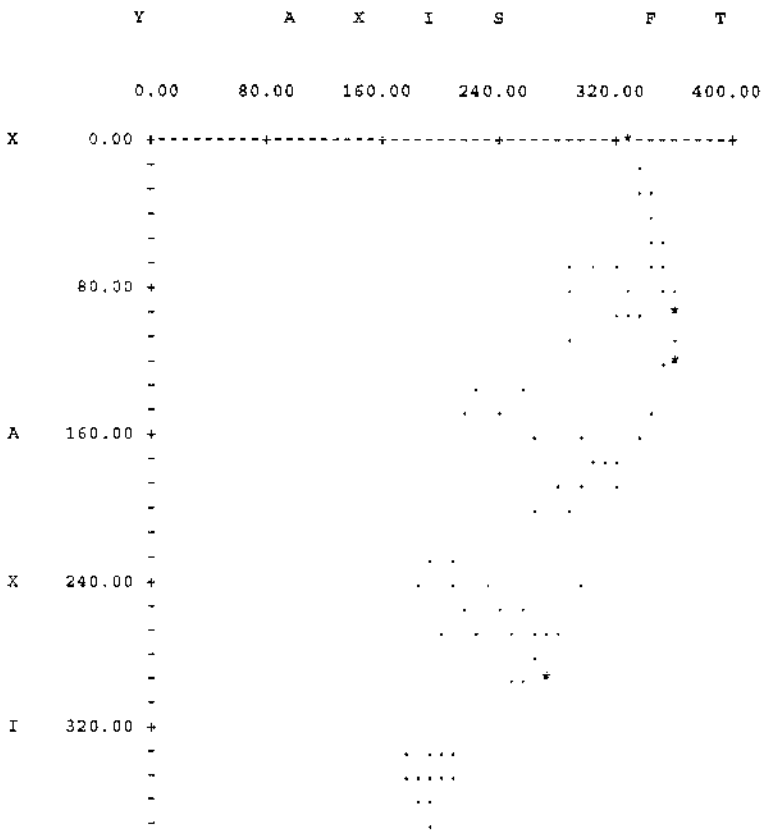
*** 2.541 ***

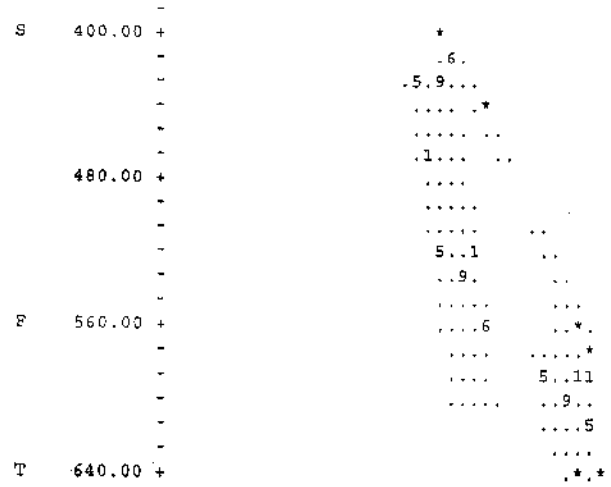
Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	414.17	200.62
2	431.33	191.00
3	527.80	210.52
4	595.89	283.76
5	611.35	299.58

*** 2.541 ***

1




S
400.00
480.00
560.00
F
640.00
T

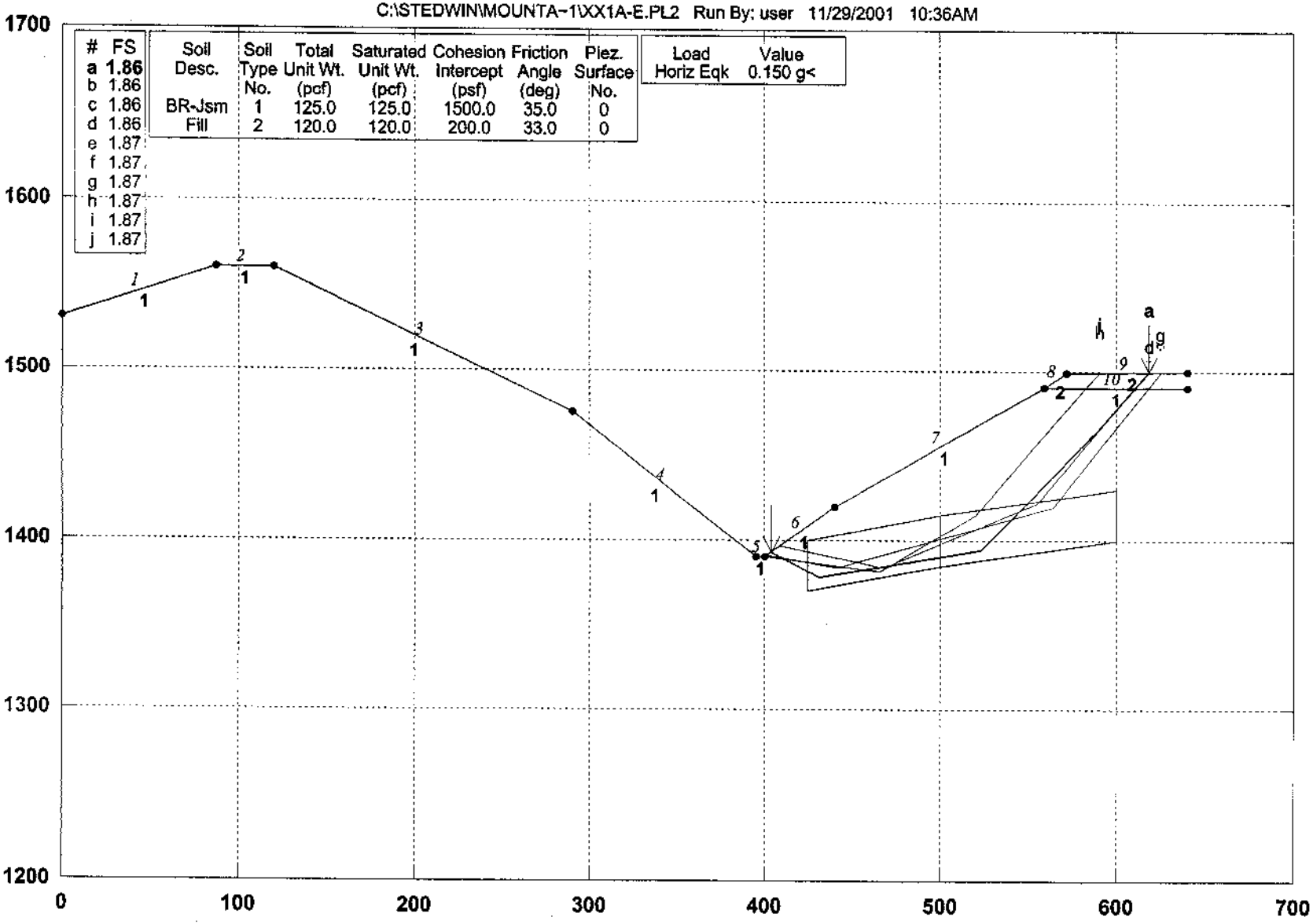
Mountaingate Section X-X' Pseudo Static

C:\STEDWIN\MOUNTA~1\XX1A-E.PL2 Run By: user 11/29/2001 10:36AM

#	FS
a	1.86
b	1.86
c	1.86
d	1.86
e	1.87
f	1.87
g	1.87
h	1.87
i	1.87
j	1.87

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
BR-Jsm	1	125.0	125.0	1500.0	35.0	0
Fill	2	120.0	120.0	200.0	33.0	0

Load	Value
Horiz Eqk	0.150 g<



GSTABL7 FSmin=1.86

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

STED

Figure E-113

Figure E-114

*** 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 STABL6-1985, by Purdue University)

Run Date: 11/29/2001
Time of Run: 10:36AM
Run By: user
Input Data Filename: C:xx1a-e.dat
Output Filename: C:xx1a-e.OUT
Unit System: English

Plotted Output Filename: C:xx1a-e.PLT

PROBLEM DESCRIPTION Mountaingate Section X-X'
Pseudo Static

BOUNDARY COORDINATES

9 Top Boundaries
10 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	0.00	330.00	87.00	360.00	1
2	87.00	360.00	120.00	360.00	1
3	120.00	360.00	290.00	275.00	1
4	290.00	275.00	395.00	190.00	1
5	395.00	190.00	400.00	190.00	1
6	400.00	190.00	440.00	220.00	1
7	440.00	220.00	559.00	290.00	1
8	559.00	290.00	572.00	299.00	2
9	572.00	299.00	640.00	300.00	2
10	559.00	290.00	640.00	290.00	1

1

ISOTROPIC SOIL PARAMETERS

2 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	1500.0	35.0	0.00	0.0	0
2	120.0	120.0	200.0	33.0	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.

2000 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 100.0

Box No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Height (ft)
1	425.00	185.00	500.00	200.00	30.00
2	500.10	200.00	600.00	215.00	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 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	403.96	192.97
2	431.48	178.67
3	523.31	194.20
4	591.54	267.31
5	618.02	299.68

*** 1.862 ***

Individual data on the 8 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	27.5	60097.8	0.0	0.0	0.0	0.0	9014.7	0.0	0.0
2	8.5	39858.3	0.0	0.0	0.0	0.0	5978.7	0.0	0.0
3	83.3	597212.4	0.0	0.0	0.0	0.0	89581.9	0.0	0.0
4	35.7	295221.0	0.0	0.0	0.0	0.0	44283.2	0.0	0.0
5	13.0	89230.2	0.0	0.0	0.0	0.0	13384.5	0.0	0.0
6	19.5	102428.7	0.0	0.0	0.0	0.0	15364.3	0.0	0.0
7	18.6	47303.0	0.0	0.0	0.0	0.0	7095.5	0.0	0.0
8	7.9	4540.8	0.0	0.0	0.0	0.0	681.1	0.0	0.0

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.92	196.69
2	468.34	183.88
3	555.43	222.47
4	618.31	299.68

*** 1.862 ***

1

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.92	196.69
2	468.34	183.88
3	555.43	222.47
4	618.31	299.68

*** 1.862 ***

Failure Surface Specified By 4 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	408.92	196.69
2	468.34	183.88
3	555.43	222.47
4	618.31	299.68

*** 1.862 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	401.77	191.33
2	441.97	184.00
3	564.02	219.78
4	624.55	299.38
5	624.94	299.78

*** 1.866 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	401.77	191.33
2	441.97	184.00
3	564.02	219.78
4	624.55	299.38
5	624.94	299.78

*** 1.866 ***

1

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	401.77	191.33
2	441.97	184.00
3	564.02	219.78
4	624.55	299.38
5	624.94	299.78

*** 1.866 ***

Failure Surface Specified By 5 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	400.27	190.20
2	465.83	181.35
3	519.90	215.05
4	584.08	291.73
5	590.78	299.28

*** 1.866 ***

1

Failure Surface Specified By 5 Coordinate Points

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

No.	(ft)	(ft)
1	400.27	190.20
2	465.83	181.35
3	519.90	215.05
4	584.08	291.73
5	590.78	299.28

*** 1.866 ***

Failure Surface Specified By 5 Coordinate Points

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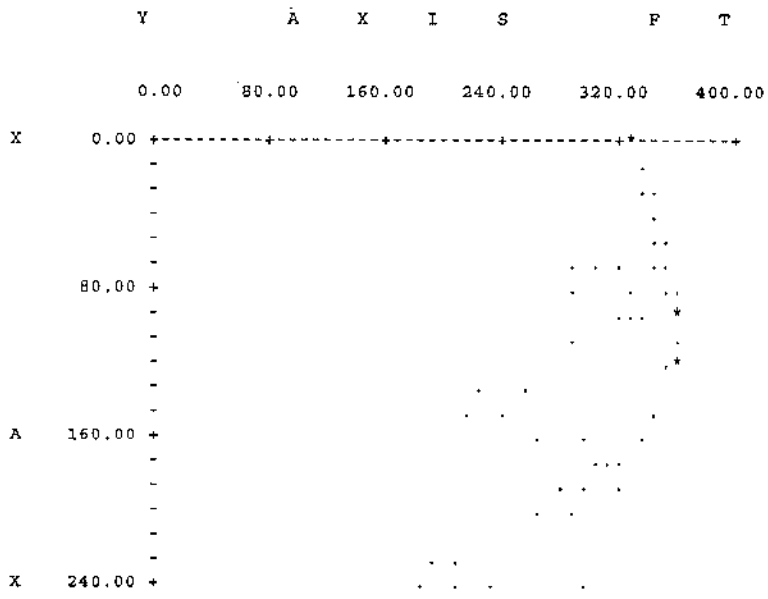
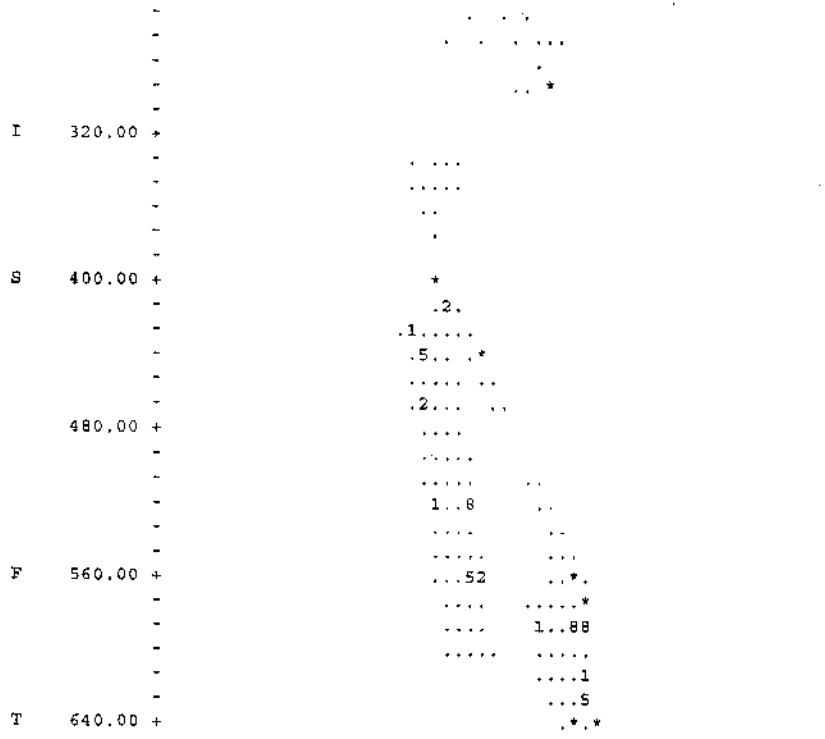
4	584.08	291.73
5	590.78	299.28

*** 1.866 ***

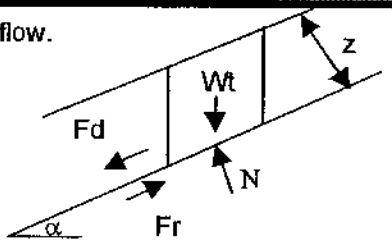
1




I 320.00
S 400.00
480.00
F 560.00
T 640.00

Surficial Slope Stability Calculation

Analyze a 1-foot-thick strip of a saturated infinite slope with parallel flow.



Artificial Fill - Manufactured slope at a maximum gradient of 2:1

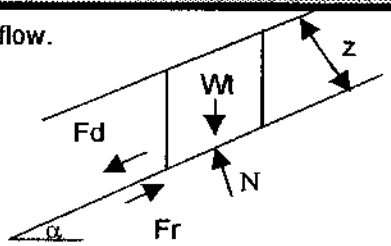
Perpendicular Depth of Saturation, Z =	4 ft.	
Total Unit Weight of Soil, γt =	120 lbs./ft^2	
Buoyant Unit Weight of Soil, γb =	57.6 lbs./ft^2	
Slope Angle, α=	26.60 degrees	2.00 : 1 (H : V)
Angle of Internal Friction, Φ =	33.0 degrees	
Cohesion, c =	200 lbs./ft^2	
Slice Width, W=	1.00 ft.	
Slice Height, H= Z / cos α=	4.00 ft.	
Slice Bottom Surface Length, Lb = W / cos α =	1.12 ft.	
Weight of Submerged Slice, Ws = W x H x 1 x γb =	230.4 lbs.	
Total Weight of Slice, Wt = W x H x 1 x γt =	480.0 lbs.	
Normal Force, N = Ws x cos α =	206.0 lbs.	
Resisting Force, Fr = N x tan Φ + c x Lb =	357.5 lbs.	
Driving Force, Fd = Wt x sin α =	214.9 lbs.	
Factor of Safety, Fr/Fd =	1.66	Satisfies 1.5

Project No.	030381-001
Project Name	Mountain Gate
Engineer	BIH
Date	11/30/2001

Figure No. Figure E-14

Surficial Slope Stability Calculation

Analyze a 1-foot-thick strip of a saturated infinite slope with parallel flow.



Bedrock(Tm) - Natural slope at a maximum gradient of 2:1

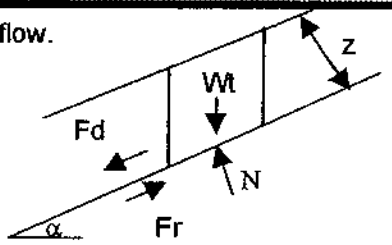
Perpendicular Depth of Saturation, Z =	4 ft.	
Total Unit Weight of Soil, γt =	120 lbs./ft^2	
Buoyant Unit Weight of Soil, γb =	57.6 lbs./ft^2	
Slope Angle, α=	26.60 degrees	2.00 : 1 (H : V)
Angle of Internal Friction, Φ =	34.0 degrees	
Cohesion, c =	400 lbs./ft^2	
Slice Width, W=	1.00 ft.	
Slice Height, H= Z / cos α=	4.00 ft.	
Slice Bottom Surface Length, Lb = W / cos α =	1.12 ft.	
Weight of Submerged Slice, Ws = W x H x 1 x γb =	230.4 lbs.	
Total Weight of Slice, Wt = W x H x 1 x γt =	480.0 lbs.	
Normal Force, N = Ws x cos α =	206.0 lbs.	
Resisting Force, Fr = N x tan Φ + c x Lb =	586.3 lbs.	
Driving Force, Fd = Wt x sin α =	214.9 lbs.	
Factor of Safety, Fr/Fd =	2.73	Satisfies 1.5

Project No.	030381-001
Project Name	Mountain Gate
Engineer	BIH
Date	11/30/2001

Figure No. Figure E-115

Surficial Slope Stability Calculation

Analyze a 1-foot-thick strip of a saturated infinite slope with parallel flow.



Bedrock(Jsm) - Natural slope at a maximum gradient of 1.2:1

Perpendicular Depth of Saturation, Z =	4 ft.	
Total Unit Weight of Soil, γt =	120 lbs./ft^2	
Buoyant Unit Weight of Soil, γb =	57.6 lbs./ft^2	
Slope Angle, α=	39.50 degrees	1.21 : 1 (H : V)
Angle of Internal Friction, Φ =	35.0 degrees	
Cohesion, c =	1500 lbs./ft^2	
Slice Width, W=	1.00 ft.	
Slice Height, H= Z / cos α=	4.00 ft.	
Slice Bottom Surface Length, Lb = W / cos α =	1.30 ft.	
Weight of Submerged Slice, Ws = W x H x 1 x γb =	230.4 lbs.	
Total Weight of Slice, Wt = W x H x 1 x γt =	480.0 lbs.	
Normal Force, N = Ws x cos α =	177.8 lbs.	
Resisting Force, Fr = N x tan Φ + c x Lb =	2068.4 lbs.	
Driving Force, Fd = Wt x sin α =	305.3 lbs.	
Factor of Safety, Fr/Fd =	6.77	Satisfies 1.5

Project No.	030381-001
Project Name	Mountain Gate
Engineer	BIH
Date	11/30/2001

Figure No. Figure E-126