

Project Summary

File Name: Section.A.slim
Slide Modeler Version: 6.032
Project Title: SLIDE - An Interactive Slope Stability Program

General Settings

Units of Measurement: Metric Units
Time Units: seconds
Permeability Units: meters/second
Failure Direction: Left to Right
Data Output: Standard
Maximum Material Properties: 20
Maximum Support Properties: 20

Analysis Options

Analysis Methods Used

Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50
Check malpha < 0.2: Yes
Initial trial value of FS: 1
Steffensen Iteration: Yes

Groundwater Analysis

Groundwater Method: Water Surfaces
Pore Fluid Unit Weight: 9.81 kN/m3
Advanced Groundwater Method: None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius Increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Invalid Surfaces
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Material Properties

Property	Resíduos	Solo Residual
Color	<div></div>	<div></div>

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [degrees]
1	80.7706	869.419	0	0	0
2	82.2362	867.893	-4.64483	0	0
3	83.7019	866.521	3.55261	0	0
4	85.1675	865.281	20.536	0	0
5	86.6331	864.159	43.1956	0	0
6	88.0987	863.142	69.0925	0	0
7	89.5644	862.22	95.997	0	0
8	91.03	861.386	119.836	0	0
9	92.4956	860.633	139.521	0	0
10	93.9612	859.956	154.908	0	0
11	95.4269	859.351	165.945	0	0
12	96.8925	858.814	172.768	0	0
13	98.3581	858.343	175.606	0	0
14	99.8237	857.935	174.776	0	0
15	101.289	857.588	170.701	0	0
16	102.755	857.3	163.818	0	0
17	104.221	857.07	154.417	0	0
18	105.686	856.897	142.656	0	0
19	107.152	856.78	128.795	0	0
20	108.617	856.718	113.412	0	0
21	110.083	856.712	97.1042	0	0
22	111.549	856.762	80.3613	0	0
23	113.014	856.866	63.8389	0	0
24	114.48	857.027	48.4911	0	0
25	115.946	857.245	35.4188	0	0
26	117.411	857.52	0	0	0

List Of Coordinates

External Boundary

X	Y
119.02	857
115.927	858
112.921	859
109.487	860
106.536	861
102.384	862
102.375	862
100.147	863
98.291	864
96.4423	865
94.5991	866
92.7709	867
92.7581	867
90.8865	868
89.0145	869
69.3429	870
66.356	871
64.052	872
61.7672	873
59.5086	874
57.2876	875

55.1231	876
53.0657	877
50.891	878
46.455	879
41.0988	880
41.0985	880
31.8607	881
27.9001	882
25.5167	883
22.8347	884
22.8329	884
18.9359	885
12.1083	886
0	887.773
0	875.773
0	855
122.258	855
122.258	856

Material Boundary

X	Y
0	875.773
24.8831	870.917
40.6185	867.114
51.5282	864.477
79.1162	859.7
122.258	855

Project Summary

File Name: Section.B.slim
Slide Modeler Version: 6.032
Project Title: SLIDE - An Interactive Slope Stability Program
Date Created: 01/08/2018, 12:02:49

General Settings

Units of Measurement: Metric Units
Time Units: days
Permeability Units: meters/second
Failure Direction: Right to Left
Data Output: Standard
Maximum Material Properties: 20
Maximum Support Properties: 20

Analysis Options

Analysis Methods Used

Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50
Check malpha < 0.2: Yes
Initial trial value of FS: 1
Steffensen Iteration: Yes

Groundwater Analysis

Groundwater Method: Water Surfaces
Pore Fluid Unit Weight: 9.81 kN/m3
Advanced Groundwater Method: None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius Increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Create Tension Crack
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Material Properties

Property	Resíduos	Solo Residual

Color	<div></div>	<div></div>
Strength Type	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [kN/m3]	10	22.5
Cohesion [kPa]	12.61	20
Friction Angle [deg]	27.2	30.5
Water Surface	None	None
Ru Value	0	0

Global Minimums

Method: bishop simplified

FS: 2.250990
Center: 26.418, 955.531
Radius: 96.913
Left Slip Surface Endpoint: 21.260, 858.755
Right Slip Surface Endpoint: 90.859, 883.146
Resisting Moment=315666 kN-m
Driving Moment=140234 kN-m
Total Slice Area=463.485 m2

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.25099

Slice Number	Width [m]	Weight [kN]	Base Material	Base Cohesion [kPa]	Base Friction Angle [degrees]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]
1	2.78398	27.5373	Resíduos	12.61	27.2	7.9307	17.8519	10.1997	0	10.1997
2	2.78398	80.7038	Resíduos	12.61	27.2	12.2488	27.572	29.1129	0	29.1129
3	2.78398	128.827	Resíduos	12.61	27.2	16.0987	36.238	45.9751	0	45.9751
4	2.78398	166.711	Resíduos	12.61	27.2	19.0677	42.9213	58.9795	0	58.9795
5	2.78398	187.589	Resíduos	12.61	27.2	20.6271	46.4314	65.8094	0	65.8094
6	2.78398	196.357	Resíduos	12.61	27.2	21.1956	47.711	68.2992	0	68.2992
7	2.78398	197.809	Resíduos	12.61	27.2	21.1733	47.6609	68.2016	0	68.2016
8	2.78398	198.855	Resíduos	12.61	27.2	21.1177	47.5358	67.9581	0	67.9581
9	2.78398	210.619	Resíduos	12.61	27.2	21.9025	49.3022	71.3951	0	71.3951
10	2.78398	222.86	Resíduos	12.61	27.2	22.7115	51.1233	74.9389	0	74.9389
11	2.78398	232.855	Resíduos	12.61	27.2	23.3328	52.5218	77.66	0	77.66
12	2.78398	240.534	Resíduos	12.61	27.2	23.7639	53.4922	79.5482	0	79.5482
13	2.78398	245.954	Resíduos	12.61	27.2	24.0121	54.0509	80.6354	0	80.6354
14	2.78398	249.388	Resíduos	12.61	27.2	24.1013	54.2517	81.0259	0	81.0259
15	2.78398	250.693	Resíduos	12.61	27.2	24.0232	54.076	80.6841	0	80.6841
16	2.78398	249.759	Resíduos	12.61	27.2	23.7726	53.5118	79.5863	0	79.5863
17	2.78398	246.003	Resíduos	12.61	27.2	23.3091	52.4686	77.5567	0	77.5567
18	2.78398	239.099	Resíduos	12.61	27.2	22.6134	50.9025	74.5092	0	74.5092
19	2.78398	229.088	Resíduos	12.61	27.2	21.6934	48.8317	70.4799	0	70.4799
20	2.78398	215.428	Resíduos	12.61	27.2	20.5154	46.1799	65.3199	0	65.3199
21	2.78398	199.195	Resíduos	12.61	27.2	19.1633	43.1364	59.3979	0	59.3979
22	2.78398	176.54	Resíduos	12.61	27.2	17.3695	39.0985	51.541	0	51.541
23	2.78398	133.047	Resíduos	12.61	27.2	14.1361	31.8202	37.379	0	37.379
24	2.78398	82.2861	Resíduos	12.61	27.2	10.4553	23.5347	21.2572	0	21.2572
25	2.78398	27.1144	Resíduos	12.61	27.2	6.54568	14.7342	4.13333	0	4.13333

Interslice Data

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [degrees]
1	21.2595	858.755	0	0	0
2	24.0435	858.647	23.1724	0	0
3	26.8275	858.619	58.0778	0	0
4	29.6115	858.67	100.494	0	0
5	32.3954	858.802	145.774	0	0
6	35.1794	859.015	189.198	0	0
7	37.9634	859.308	228.143	0	0
8	40.7474	859.683	261.482	0	0
9	43.5314	860.141	289.138	0	0
10	46.3153	860.682	311.415	0	0
11	49.0993	861.309	327.629	0	0
12	51.8833	862.023	337.106	0	0
13	54.6673	862.826	339.35	0	0
14	57.4513	863.721	334.041	0	0
15	60.2352	864.709	321.007	0	0
16	63.0192	865.795	300.251	0	0
17	65.8032	866.981	271.968	0	0
18	68.5872	868.273	236.668	0	0
19	71.3712	869.674	195.2	0	0
20	74.1551	871.19	148.706	0	0
21	76.9391	872.828	98.8262	0	0
22	79.7231	874.594	47.2316	0	0
23	82.5071	876.498	-2.5593	0	0
24	85.2911	878.549	-39.904	0	0
25	88.075	880.76	-57.8146	0	0
26	90.859	883.146	0	0	0

List Of Coordinates

External Boundary

X	Y
123.58	838.759
123.58	870.9
123.58	886
106.581	886
100.335	885
94.6913	884
90.2041	883
81.1644	882
78.6541	881
76.2073	880
73.6199	879
71.0906	878
68.5543	877
66.0206	876
63.5083	875
60.9795	874
58.3996	873
55.7813	872
53.1037	871
50.4112	870

47.7064	869
44.9924	868
42.2335	867
35.0266	866
31.5142	865
29.4511	864
27.7427	863
26.1544	862
24.6107	861
23.1139	860
21.6194	859
20.1494	858
13.9223	857
0	856.232
0	838.759

Material Boundary

X	Y
20.1494	858
49.0589	859.7
90.2041	870.9
123.58	870.9

Project Summary

File Name: Section.C.slim
Slide Modeler Version: 6.032
Project Title: SLIDE - An Interactive Slope Stability Program
Date Created: 01/08/2018, 12:08:05

General Settings

Units of Measurement: Metric Units
Time Units: days
Permeability Units: meters/second
Failure Direction: Right to Left
Data Output: Standard
Maximum Material Properties: 20
Maximum Support Properties: 20

Analysis Options

Analysis Methods Used

Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50
Check malpha < 0.2: Yes
Initial trial value of FS: 1
Steffensen Iteration: Yes

Groundwater Analysis

Groundwater Method: Water Surfaces
Pore Fluid Unit Weight: 9.81 kN/m3
Advanced Groundwater Method: None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius Increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Create Tension Crack
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Material Properties

Property	Resíduos	Solo Residual

Color	<div></div>	<div></div>
Strength Type	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [kN/m3]	10	22.5
Cohesion [kPa]	12.61	20
Friction Angle [deg]	27.2	30.5
Water Surface	None	None
Ru Value	0	0

Global Minimums

Method: bishop simplified

FS: 2.104050
Center: 21.853, 894.986
Radius: 37.647
Left Slip Surface Endpoint: 22.630, 857.347
Right Slip Surface Endpoint: 50.291, 870.316
Resisting Moment=35548.5 kN-m
Driving Moment=16895.3 kN-m
Total Slice Area=113.895 m2

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.10405

Slice Number	Width [m]	Weight [kN]	Base Material	Base Cohesion [kPa]	Base Friction Angle [degrees]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]
1	1.10644	6.95051	Resíduos	12.61	27.2	7.46322	15.703	6.01828	0	6.01828
2	1.10644	20.6717	Resíduos	12.61	27.2	10.3922	21.8657	18.0097	0	18.0097
3	1.10644	33.9481	Resíduos	12.61	27.2	13.1835	27.7387	29.4372	0	29.4372
4	1.10644	41.1494	Resíduos	12.61	27.2	14.633	30.7885	35.3714	0	35.3714
5	1.10644	45.0366	Resíduos	12.61	27.2	15.3558	32.3093	38.3306	0	38.3306
6	1.10644	47.4945	Resíduos	12.61	27.2	15.7649	33.1701	40.0057	0	40.0057
7	1.10644	49.1017	Resíduos	12.61	27.2	15.9879	33.6393	40.9187	0	40.9187
8	1.10644	50.3931	Resíduos	12.61	27.2	16.1397	33.9587	41.5401	0	41.5401
9	1.10644	51.7035	Resíduos	12.61	27.2	16.2905	34.276	42.1575	0	42.1575
10	1.10644	52.6914	Resíduos	12.61	27.2	16.3698	34.4428	42.4821	0	42.4821
11	1.10644	54.6241	Resíduos	12.61	27.2	16.6365	35.004	43.5739	0	43.5739
12	1.10644	57.0354	Resíduos	12.61	27.2	16.9913	35.7506	45.0269	0	45.0269
13	1.10644	59.005	Resíduos	12.61	27.2	17.2472	36.289	46.0743	0	46.0743
14	1.10644	60.5017	Resíduos	12.61	27.2	17.3992	36.6088	46.6966	0	46.6966
15	1.10644	61.4986	Resíduos	12.61	27.2	17.4436	36.7023	46.8786	0	46.8786
16	1.10644	61.9773	Resíduos	12.61	27.2	17.3786	36.5655	46.6124	0	46.6124
17	1.10644	61.9175	Resíduos	12.61	27.2	17.2021	36.194	45.8896	0	45.8896
18	1.10644	61.2851	Resíduos	12.61	27.2	16.9095	35.5784	44.6916	0	44.6916
19	1.10644	59.7503	Resíduos	12.61	27.2	16.4407	34.592	42.7723	0	42.7723
20	1.10644	57.0884	Resíduos	12.61	27.2	15.7581	33.1559	39.978	0	39.978
21	1.10644	49.7639	Resíduos	12.61	27.2	14.2149	29.9088	33.6599	0	33.6599
22	1.10644	40.2741	Resíduos	12.61	27.2	12.2991	25.8779	25.8166	0	25.8166
23	1.10644	29.9538	Resíduos	12.61	27.2	10.2689	21.6064	17.505	0	17.505
24	1.10644	18.7091	Resíduos	12.61	27.2	8.11801	17.0807	8.69903	0	8.69903
25	1.10644	6.4213	Resíduos	12.61	27.2	5.83917	12.2859	-0.630633	0	-0.630633

Interslice Data

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [degrees]
1	22.6297	857.347	0	0	0
2	23.7361	857.386	8.01369	0	0
3	24.8426	857.458	18.2077	0	0
4	25.949	857.562	29.7003	0	0
5	27.0555	857.7	41.003	0	0
6	28.1619	857.871	51.4138	0	0
7	29.2683	858.076	60.6321	0	0
8	30.3748	858.316	68.4971	0	0
9	31.4812	858.591	74.9189	0	0
10	32.5877	858.902	79.82	0	0
11	33.6941	859.249	83.1384	0	0
12	34.8005	859.635	84.7146	0	0
13	35.907	860.06	84.3533	0	0
14	37.0134	860.526	81.9521	0	0
15	38.1198	861.034	77.448	0	0
16	39.2263	861.587	70.8209	0	0
17	40.3327	862.186	62.0968	0	0
18	41.4392	862.835	51.3525	0	0
19	42.5456	863.536	38.7264	0	0
20	43.652	864.292	24.539	0	0
21	44.7585	865.109	9.30962	0	0
22	45.8649	865.99	-4.65882	0	0
23	46.9714	866.944	-15.6693	0	0
24	48.0778	867.975	-22.3824	0	0
25	49.1842	869.096	-23.1539	0	0
26	50.2907	870.316	0	0	0

List Of Coordinates

External Boundary

X	Y
0	855
169.727	855
169.727	870.4
169.727	885
144.793	885
125.243	885
119.162	884
114.88	883
109.718	882
102.227	881
93.9594	880
85.8989	879
80.2309	878
78.0207	877
76.0709	876
73.8544	875
71.3372	874
68.6373	873
65.8263	872
62.9601	871

44.436	870
42.4866	869
40.6946	868
38.9064	867
37.1236	866
35.3492	865
33.5743	864
30.9235	863
27.9141	862
25.7417	861
24.8938	860
24.0428	859
23.1874	858
22.3338	857
4.38743	856
0	856

Material Boundary

X	Y
22.3338	857
44.9237	860.226
112.299	870.4
169.727	870.4

Project Summary

File Name: Section.C.proj.slim
Slide Modeler Version: 6.032
Project Title: SLIDE - An Interactive Slope Stability Program
Date Created: 01/08/2018, 12:08:05

General Settings

Units of Measurement: Metric Units
Time Units: days
Permeability Units: meters/second
Failure Direction: Right to Left
Data Output: Standard
Maximum Material Properties: 20
Maximum Support Properties: 20

Analysis Options

Analysis Methods Used

Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50
Check malpha < 0.2: Yes
Initial trial value of FS: 1
Steffensen Iteration: Yes

Groundwater Analysis

Groundwater Method: Water Surfaces
Pore Fluid Unit Weight: 9.81 kN/m3
Advanced Groundwater Method: None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius Increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Create Tension Crack
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Material Properties

Property	Resíduos	Solo Residual

Color	<div></div>	<div></div>
Strength Type	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [kN/m3]	10	22.5
Cohesion [kPa]	12.61	20
Friction Angle [deg]	27.2	30.5
Water Surface	None	None
Ru Value	0	0

Global Minimums

Method: bishop simplified

FS: 2.104050
Center: 21.853, 894.986
Radius: 37.647
Left Slip Surface Endpoint: 22.630, 857.347
Right Slip Surface Endpoint: 50.291, 870.316
Resisting Moment=35548.5 kN-m
Driving Moment=16895.3 kN-m
Total Slice Area=113.895 m2

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.10405

Slice Number	Width [m]	Weight [kN]	Base Material	Base Cohesion [kPa]	Base Friction Angle [degrees]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]
1	1.10644	6.95051	Resíduos	12.61	27.2	7.46322	15.703	6.01828	0	6.01828
2	1.10644	20.6717	Resíduos	12.61	27.2	10.3922	21.8657	18.0097	0	18.0097
3	1.10644	33.9481	Resíduos	12.61	27.2	13.1835	27.7387	29.4372	0	29.4372
4	1.10644	41.1494	Resíduos	12.61	27.2	14.633	30.7885	35.3714	0	35.3714
5	1.10644	45.0366	Resíduos	12.61	27.2	15.3558	32.3093	38.3306	0	38.3306
6	1.10644	47.4945	Resíduos	12.61	27.2	15.7649	33.1701	40.0057	0	40.0057
7	1.10644	49.1017	Resíduos	12.61	27.2	15.9879	33.6393	40.9187	0	40.9187
8	1.10644	50.3931	Resíduos	12.61	27.2	16.1397	33.9587	41.5401	0	41.5401
9	1.10644	51.7035	Resíduos	12.61	27.2	16.2905	34.276	42.1575	0	42.1575
10	1.10644	52.6914	Resíduos	12.61	27.2	16.3698	34.4428	42.4821	0	42.4821
11	1.10644	54.6241	Resíduos	12.61	27.2	16.6365	35.004	43.5739	0	43.5739
12	1.10644	57.0354	Resíduos	12.61	27.2	16.9913	35.7506	45.0269	0	45.0269
13	1.10644	59.005	Resíduos	12.61	27.2	17.2472	36.289	46.0743	0	46.0743
14	1.10644	60.5017	Resíduos	12.61	27.2	17.3992	36.6088	46.6966	0	46.6966
15	1.10644	61.4986	Resíduos	12.61	27.2	17.4436	36.7023	46.8786	0	46.8786
16	1.10644	61.9773	Resíduos	12.61	27.2	17.3786	36.5655	46.6124	0	46.6124
17	1.10644	61.9175	Resíduos	12.61	27.2	17.2021	36.194	45.8896	0	45.8896
18	1.10644	61.2851	Resíduos	12.61	27.2	16.9095	35.5784	44.6916	0	44.6916
19	1.10644	59.7503	Resíduos	12.61	27.2	16.4407	34.592	42.7723	0	42.7723
20	1.10644	57.0884	Resíduos	12.61	27.2	15.7581	33.1559	39.978	0	39.978
21	1.10644	49.7639	Resíduos	12.61	27.2	14.2149	29.9088	33.6599	0	33.6599
22	1.10644	40.2741	Resíduos	12.61	27.2	12.2991	25.8779	25.8166	0	25.8166
23	1.10644	29.9538	Resíduos	12.61	27.2	10.2689	21.6064	17.505	0	17.505
24	1.10644	18.7091	Resíduos	12.61	27.2	8.11801	17.0807	8.69903	0	8.69903
25	1.10644	6.4213	Resíduos	12.61	27.2	5.83917	12.2859	-0.630633	0	-0.630633

Interslice Data

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [degrees]
1	22.6297	857.347	0	0	0
2	23.7361	857.386	8.01369	0	0
3	24.8426	857.458	18.2077	0	0
4	25.949	857.562	29.7003	0	0
5	27.0555	857.7	41.003	0	0
6	28.1619	857.871	51.4138	0	0
7	29.2683	858.076	60.6321	0	0
8	30.3748	858.316	68.4971	0	0
9	31.4812	858.591	74.9189	0	0
10	32.5877	858.902	79.82	0	0
11	33.6941	859.249	83.1384	0	0
12	34.8005	859.635	84.7146	0	0
13	35.907	860.06	84.3533	0	0
14	37.0134	860.526	81.9521	0	0
15	38.1198	861.034	77.448	0	0
16	39.2263	861.587	70.8209	0	0
17	40.3327	862.186	62.0968	0	0
18	41.4392	862.835	51.3525	0	0
19	42.5456	863.536	38.7264	0	0
20	43.652	864.292	24.539	0	0
21	44.7585	865.109	9.30962	0	0
22	45.8649	865.99	-4.65882	0	0
23	46.9714	866.944	-15.6693	0	0
24	48.0778	867.975	-22.3824	0	0
25	49.1842	869.096	-23.1539	0	0
26	50.2907	870.316	0	0	0

List Of Coordinates

External Boundary

X	Y
0	855
169.727	855
169.727	870.4
169.727	886
146.846	886
125.121	886
119.162	884
114.88	883
109.718	882
102.227	881
93.9594	880
85.8989	879
80.2309	878
78.0207	877
76.0709	876
73.8544	875
71.3372	874
68.6373	873
65.8263	872
62.9601	871

44.436	870
42.4866	869
40.6946	868
38.9064	867
37.1236	866
35.3492	865
33.5743	864
30.9235	863
27.9141	862
25.7417	861
24.8938	860
24.0428	859
23.1874	858
22.3338	857
4.38743	856
0	856

Material Boundary

X	Y
22.3338	857
44.9237	860.226
112.299	870.4
169.727	870.4

Project Summary

File Name: Section.D.slim
Slide Modeler Version: 6.032
Project Title: SLIDE - An Interactive Slope Stability Program
Date Created: 01/08/2018, 14:23:35

General Settings

Units of Measurement: Metric Units
Time Units: days
Permeability Units: meters/second
Failure Direction: Right to Left
Data Output: Standard
Maximum Material Properties: 20
Maximum Support Properties: 20

Analysis Options

Analysis Methods Used

Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50
Check malpha < 0.2: Yes
Initial trial value of FS: 1
Steffensen Iteration: Yes

Groundwater Analysis

Groundwater Method: Water Surfaces
Pore Fluid Unit Weight: 9.81 kN/m3
Advanced Groundwater Method: None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius Increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Create Tension Crack
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Material Properties

Property	Resíduos	Solo Residual

Color	<div></div>	<div></div>
Strength Type	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [kN/m3]	10	22.5
Cohesion [kPa]	12.61	20
Friction Angle [deg]	27.2	30.5
Water Surface	None	None
Ru Value	0	0

Global Minimums

Method: bishop simplified

FS: 2.574120
Center: 24.705, 886.300
Radius: 16.196
Left Slip Surface Endpoint: 20.232, 870.734
Right Slip Surface Endpoint: 39.063, 878.805
Resisting Moment=9486.65 kN-m
Driving Moment=3685.39 kN-m
Total Slice Area=61.3246 m2

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.57412

Slice Number	Width [m]	Weight [kN]	Base Material	Base Cohesion [kPa]	Base Friction Angle [degrees]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]
1	0.753239	1.46807	Resíduos	12.61	27.2	5.57891	14.3608	3.40664	0	3.40664
2	0.753239	4.44417	Resíduos	12.61	27.2	6.34377	16.3296	7.23761	0	7.23761
3	0.753239	7.84041	Resíduos	12.61	27.2	7.20999	18.5594	11.5763	0	11.5763
4	0.753239	11.031	Resíduos	12.61	27.2	8.00495	20.6057	15.5579	0	15.5579
5	0.753239	14.0475	Resíduos	12.61	27.2	8.73911	22.4955	19.2351	0	19.2351
6	0.753239	17.3935	Resíduos	12.61	27.2	9.54792	24.5775	23.2863	0	23.2863
7	0.753239	20.5818	Resíduos	12.61	27.2	10.3005	26.5147	27.0555	0	27.0555
8	0.753239	23.7285	Resíduos	12.61	27.2	11.028	28.3875	30.6996	0	30.6996
9	0.753239	26.7433	Resíduos	12.61	27.2	11.7071	30.1354	34.1009	0	34.1009
10	0.753239	29.479	Resíduos	12.61	27.2	12.3003	31.6624	37.0719	0	37.0719
11	0.753239	31.9309	Resíduos	12.61	27.2	12.8076	32.9683	39.613	0	39.613
12	0.753239	34.0838	Resíduos	12.61	27.2	13.2264	34.0463	41.7106	0	41.7106
13	0.753239	35.9203	Resíduos	12.61	27.2	13.5532	34.8876	43.3477	0	43.3477
14	0.753239	37.4089	Resíduos	12.61	27.2	13.7813	35.4748	44.4901	0	44.4901
15	0.753239	38.4728	Resíduos	12.61	27.2	13.893	35.7623	45.0495	0	45.0495
16	0.753239	39.1792	Resíduos	12.61	27.2	13.906	35.7956	45.1143	0	45.1143
17	0.753239	39.459	Resíduos	12.61	27.2	13.8044	35.5341	44.6054	0	44.6054
18	0.753239	39.2756	Resíduos	12.61	27.2	13.5807	34.9583	43.4852	0	43.4852
19	0.753239	37.0288	Resíduos	12.61	27.2	12.8653	33.1169	39.902	0	39.902
20	0.753239	33.5198	Resíduos	12.61	27.2	11.8595	30.5278	34.8643	0	34.8643
21	0.753239	29.4407	Resíduos	12.61	27.2	10.7305	27.6216	29.2094	0	29.2094
22	0.753239	24.6902	Resíduos	12.61	27.2	9.46156	24.3552	22.8537	0	22.8537
23	0.753239	19.1216	Resíduos	12.61	27.2	8.02968	20.6694	15.6817	0	15.6817
24	0.753239	12.5063	Resíduos	12.61	27.2	6.40181	16.479	7.5283	0	7.5283
25	0.753239	4.45091	Resíduos	12.61	27.2	4.52763	11.6547	-1.85888	0	-1.85888

Interslice Data

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [degrees]
1	20.2321	870.734	0	0	0
2	20.9854	870.537	4.86935	0	0
3	21.7386	870.378	10.7937	0	0
4	22.4919	870.256	17.6325	0	0
5	23.2451	870.17	24.9946	0	0
6	23.9983	870.119	32.5429	0	0
7	24.7516	870.104	40.086	0	0
8	25.5048	870.124	47.3051	0	0
9	26.258	870.178	53.92	0	0
10	27.0113	870.269	59.6474	0	0
11	27.7645	870.395	64.2126	0	0
12	28.5178	870.559	67.3717	0	0
13	29.271	870.761	68.91	0	0
14	30.0242	871.002	68.6433	0	0
15	30.7775	871.285	66.421	0	0
16	31.5307	871.612	62.1415	0	0
17	32.284	871.986	55.7285	0	0
18	33.0372	872.411	47.162	0	0
19	33.7904	872.892	36.4824	0	0
20	34.5437	873.434	24.5165	0	0
21	35.2969	874.047	12.0819	0	0
22	36.0502	874.741	-0.111868	0	0
23	36.8034	875.532	-11.0663	0	0
24	37.5566	876.443	-19.3125	0	0
25	38.3099	877.512	-22.541	0	0
26	39.0631	878.805	0	0	0

List Of Coordinates

External Boundary

X	Y
87.0961	886
82.5583	886
77.5543	885
73.4113	884
69.1837	883
62.7107	882
56.5099	881
48.8177	880
40.3757	879
33.6339	878
31.9039	877
30.2138	876
28.5953	875
26.9946	874
25.4017	873
23.6292	872
21.272	871
17.3654	870
7.54299	869
4.32985	868

	0	867
	0	860.728
87.0961	860.728	
87.0961	867	
87.0961	870	

Material Boundary

X	Y
17.3654	870
87.0961	870

Project Summary

File Name: Section.D.proj.slim
Slide Modeler Version: 6.032
Project Title: SLIDE - An Interactive Slope Stability Program
Date Created: 01/08/2018, 14:23:35

General Settings

Units of Measurement: Metric Units
Time Units: days
Permeability Units: meters/second
Failure Direction: Right to Left
Data Output: Standard
Maximum Material Properties: 20
Maximum Support Properties: 20

Analysis Options

Analysis Methods Used

Bishop simplified

Number of slices: 25
Tolerance: 0.005
Maximum number of iterations: 50
Check malpha < 0.2: Yes
Initial trial value of FS: 1
Steffensen Iteration: Yes

Groundwater Analysis

Groundwater Method: Water Surfaces
Pore Fluid Unit Weight: 9.81 kN/m3
Advanced Groundwater Method: None

Random Numbers

Pseudo-random Seed: 10116
Random Number Generation Method: Park and Miller v.3

Surface Options

Surface Type: Circular
Search Method: Grid Search
Radius Increment: 10
Composite Surfaces: Disabled
Reverse Curvature: Create Tension Crack
Minimum Elevation: Not Defined
Minimum Depth: Not Defined

Material Properties

Property	Resíduos	Solo Residual

Color	<div></div>	<div></div>
Strength Type	Mohr-Coulomb	Mohr-Coulomb
Unit Weight [kN/m3]	10	22.5
Cohesion [kPa]	12.61	20
Friction Angle [deg]	27.2	30.5
Water Surface	None	None
Ru Value	0	0

Global Minimums

Method: bishop simplified

FS: 2.574120
Center: 24.705, 886.300
Radius: 16.196
Left Slip Surface Endpoint: 20.232, 870.734
Right Slip Surface Endpoint: 39.063, 878.805
Resisting Moment=9486.65 kN-m
Driving Moment=3685.39 kN-m
Total Slice Area=61.3246 m2

Slice Data

Global Minimum Query (bishop simplified) - Safety Factor: 2.57412

Slice Number	Width [m]	Weight [kN]	Base Material	Base Cohesion [kPa]	Base Friction Angle [degrees]	Shear Stress [kPa]	Shear Strength [kPa]	Base Normal Stress [kPa]	Pore Pressure [kPa]	Effective Normal Stress [kPa]
1	0.753239	1.46807	Resíduos	12.61	27.2	5.57891	14.3608	3.40664	0	3.40664
2	0.753239	4.44417	Resíduos	12.61	27.2	6.34377	16.3296	7.23761	0	7.23761
3	0.753239	7.84041	Resíduos	12.61	27.2	7.20999	18.5594	11.5763	0	11.5763
4	0.753239	11.031	Resíduos	12.61	27.2	8.00495	20.6057	15.5579	0	15.5579
5	0.753239	14.0475	Resíduos	12.61	27.2	8.73911	22.4955	19.2351	0	19.2351
6	0.753239	17.3935	Resíduos	12.61	27.2	9.54792	24.5775	23.2863	0	23.2863
7	0.753239	20.5818	Resíduos	12.61	27.2	10.3005	26.5147	27.0555	0	27.0555
8	0.753239	23.7285	Resíduos	12.61	27.2	11.028	28.3875	30.6996	0	30.6996
9	0.753239	26.7433	Resíduos	12.61	27.2	11.7071	30.1354	34.1009	0	34.1009
10	0.753239	29.479	Resíduos	12.61	27.2	12.3003	31.6624	37.0719	0	37.0719
11	0.753239	31.9309	Resíduos	12.61	27.2	12.8076	32.9683	39.613	0	39.613
12	0.753239	34.0838	Resíduos	12.61	27.2	13.2264	34.0463	41.7106	0	41.7106
13	0.753239	35.9203	Resíduos	12.61	27.2	13.5532	34.8876	43.3477	0	43.3477
14	0.753239	37.4089	Resíduos	12.61	27.2	13.7813	35.4748	44.4901	0	44.4901
15	0.753239	38.4728	Resíduos	12.61	27.2	13.893	35.7623	45.0495	0	45.0495
16	0.753239	39.1792	Resíduos	12.61	27.2	13.906	35.7956	45.1143	0	45.1143
17	0.753239	39.459	Resíduos	12.61	27.2	13.8044	35.5341	44.6054	0	44.6054
18	0.753239	39.2756	Resíduos	12.61	27.2	13.5807	34.9583	43.4852	0	43.4852
19	0.753239	37.0288	Resíduos	12.61	27.2	12.8653	33.1169	39.902	0	39.902
20	0.753239	33.5198	Resíduos	12.61	27.2	11.8595	30.5278	34.8643	0	34.8643
21	0.753239	29.4407	Resíduos	12.61	27.2	10.7305	27.6216	29.2094	0	29.2094
22	0.753239	24.6902	Resíduos	12.61	27.2	9.46156	24.3552	22.8537	0	22.8537
23	0.753239	19.1216	Resíduos	12.61	27.2	8.02968	20.6694	15.6817	0	15.6817
24	0.753239	12.5063	Resíduos	12.61	27.2	6.40181	16.479	7.5283	0	7.5283
25	0.753239	4.45091	Resíduos	12.61	27.2	4.52763	11.6547	-1.85888	0	-1.85888

Interslice Data

Slice Number	X coordinate [m]	Y coordinate - Bottom [m]	Interslice Normal Force [kN]	Interslice Shear Force [kN]	Interslice Force Angle [degrees]
1	20.2321	870.734	0	0	0
2	20.9854	870.537	4.86935	0	0
3	21.7386	870.378	10.7937	0	0
4	22.4919	870.256	17.6325	0	0
5	23.2451	870.17	24.9946	0	0
6	23.9983	870.119	32.5429	0	0
7	24.7516	870.104	40.086	0	0
8	25.5048	870.124	47.3051	0	0
9	26.258	870.178	53.92	0	0
10	27.0113	870.269	59.6474	0	0
11	27.7645	870.395	64.2126	0	0
12	28.5178	870.559	67.3717	0	0
13	29.271	870.761	68.91	0	0
14	30.0242	871.002	68.6433	0	0
15	30.7775	871.285	66.421	0	0
16	31.5307	871.612	62.1415	0	0
17	32.284	871.986	55.7285	0	0
18	33.0372	872.411	47.162	0	0
19	33.7904	872.892	36.4824	0	0
20	34.5437	873.434	24.5165	0	0
21	35.2969	874.047	12.0819	0	0
22	36.0502	874.741	-0.111868	0	0
23	36.8034	875.532	-11.0663	0	0
24	37.5566	876.443	-19.3125	0	0
25	38.3099	877.512	-22.541	0	0
26	39.0631	878.805	0	0	0

List Of Coordinates

External Boundary

X	Y
87.0961	886
82.5583	886
75.187	886
69.1837	883
62.7107	882
56.5099	881
48.8177	880
40.3757	879
33.6339	878
31.9039	877
30.2138	876
28.5953	875
26.9946	874
25.4017	873
23.6292	872
21.272	871
17.3654	870
7.54299	869
4.32985	868
0	867

	0	860.728
87.0961		860.728
87.0961		867
87.0961		870

Material Boundary

X	Y
17.3654	870
87.0961	870

Material Boundary

X	Y
69.1837	883
82.5583	886