

ALLEGATO 4 VERIFICHE DI STABILITÀ INTERFERENZA 10 SEZIONE A-A' - RELAZIONI DI CALCOLO

VERIFICA DI STABILITÀ PRE-OPERAM IN ASSENZA DI FALDA ACQUIFERA

Analisi di stabilità dei pendii con BISHOP

Numero di strati	2.0
Numero dei conci	50.0
Coefficiente di sicurezza [R2]	1.1
Superficie di forma circolare	

Maglia dei Centri

Ascissa vertice sinistro inferiore xi	101.38 m
Ordinata vertice sinistro inferiore yi	439.45 m
Ascissa vertice destro superiore xs	171.34 m
Ordinata vertice destro superiore ys	485.36 m
Passo di ricerca	10.0
Numero di celle lungo x	10.0
Numero di celle lungo y	10.0

Coefficienti sismici [N.T.C.] 2018

Dati generali

Descrizione:	
Latitudine:	41.92
Longitudine:	14.8
Tipo di costruzione:	2 - Opere ordinarie
Classe d'uso:	Classe IV
Vita nominale:	50.0 [anni]
Vita di riferimento:	100.0 [anni]

Parametri sismici su sito di riferimento

Categoria sottosuolo:	C
Categoria topografica:	T1

S.L. Stato limite	TR Tempo ritorno [anni]	ag [m/s ²]	F0 [-]	TC* [sec]
S.L.O.	60.0	0.6	2.49	0.34
S.L.D.	101.0	0.76	2.5	0.35
S.L.V.	949.0	1.71	2.57	0.41
S.L.C.	1950.0	2.17	2.55	0.42

Coefficienti sismici orizzontali e verticali

Opera: Stabilità dei pendii

S.L. Stato limite	amax [m/s ²]	beta [-]	kh [-]	kv [sec]
S.L.O.	0.9	0.2	0.0184	0.0092
S.L.D.	1.14	0.2	0.0233	0.0116
S.L.V.	2.4472	0.24	0.0599	0.0299
S.L.C.	2.9543	0.28	0.0844	0.0422

Coefficiente azione sismica orizzontale 0.0599
 Coefficiente azione sismica verticale 0.0299

Vertici profilo

N	X m	y m
1	0.0	183.5
2	2.75	183.0
3	5.58	182.5
4	9.16	182.0
5	25.05	182.0
6	32.21	182.5
7	49.72	183.0
8	62.74	183.5
9	69.83	184.0
10	74.87	184.5
11	79.09	185.0
12	82.96	185.5
13	86.69	186.0
14	90.8	186.5
15	95.81	187.0
16	102.47	187.5
17	112.0	188.0
18	122.79	188.5
19	132.99	189.0
20	140.28	189.5
21	146.07	190.0
22	150.72	190.5
23	154.5	191.0
24	157.76	191.5
25	160.55	192.0
26	163.11	192.5
27	165.5	193.0
28	167.79	193.5
29	170.02	194.0
30	172.29	194.5
31	174.52	195.0
32	176.83	195.5
33	179.2	196.0
34	181.65	196.5
35	184.13	197.0
36	186.66	197.5
37	189.25	198.0
38	191.79	198.5
39	194.29	199.0
40	196.77	199.5
41	199.15	200.0
42	201.68	200.5
43	204.15	201.0
44	206.66	201.5
45	209.21	202.0
46	211.82	202.5
47	214.39	203.0
48	216.88	203.5
49	219.26	204.0
50	221.54	204.5
51	223.74	205.0

52	225.85	205.5
53	227.89	206.0
54	229.95	206.5
55	232.04	207.0
56	234.2	207.5
57	236.42	208.0
58	238.9	208.5
59	241.64	209.0
60	244.79	209.5
61	248.38	210.0
62	252.36	210.5
63	256.25	211.0
64	260.08	211.5
65	263.7	212.0
66	267.26	212.5
67	270.71	213.0
68	274.14	213.5
69	277.55	214.0
70	281.02	214.5
71	284.6	215.0
72	288.29	215.5
73	292.03	216.0
74	295.66	216.5
75	299.07	217.0
76	302.29	217.5
77	305.22	218.0
78	307.97	218.5
79	310.57	219.0
80	313.09	219.5
81	315.56	220.0
82	318.01	220.5
83	320.46	221.0
84	322.97	221.5
85	325.48	222.0
86	328.03	222.5
87	330.59	223.0
88	333.22	223.5
89	335.82	224.0
90	338.45	224.5
91	341.22	225.0
92	344.15	225.5
93	347.23	226.0
94	350.58	226.5
95	354.34	227.0
96	358.8	227.5
97	364.5	228.0
98	370.66	228.5

Vertici strato1

N	X m	y m
1	0.0	177.5
2	40.0	176.5
3	100.0	183.0
4	126.72	183.75
5	150.52	185.24
6	167.0	187.0
7	174.32	190.08
8	182.87	192.68

9	212.0	198.5
10	239.45	201.68
11	278.45	207.18
12	340.55	217.59
13	370.66	224.27

Stratigrafia

c: coesione; Fi: Angolo di attrito; G: Peso Specifico; Gs: Peso Specifico Saturo

Strato	c (kg/cm ²)	Fi (°)	G (Kg/m ³)	Gs (Kg/m ³)	Litologia
1	0	30	1800	1900	
2	0.21	21.2	2000	2090	

Risultati analisi pendio [A2+M2+R2]

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Fs minimo individuato          1.75
Ascissa centro superficie      139.86 m
Ordinata centro superficie     441.75 m
Raggio superficie              252.64 m
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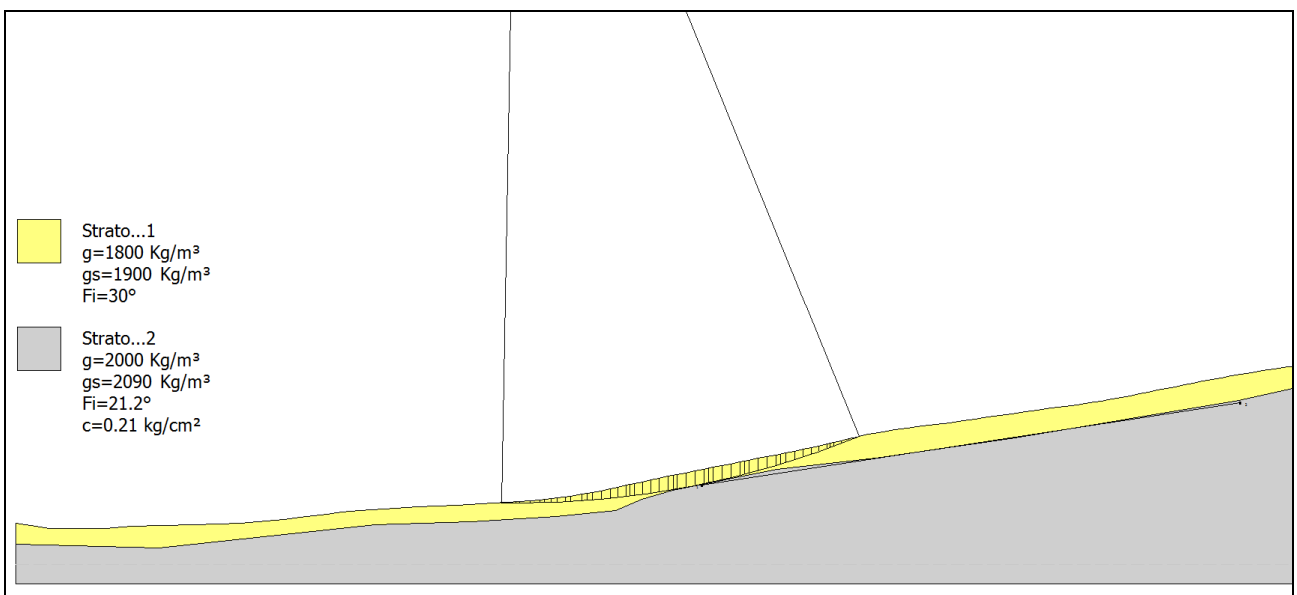
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B: Larghezza del concio; Alfa: Angolo di inclinazione della base del concio; Li: Lunghezza della base del concio; Wi: Peso del concio ; Ui: Forze derivanti dalle pressioni neutre; Ni: forze agenti normalmente alla direzione di scivolamento; Ti: forze agenti parallelamente alla superficie di scivolamento; Fi: Angolo di attrito; c: coesione.

Analisi dei concii. Superficie...xc = 139.857 yc = 441.746 Rc = 252.635 Fs=1.7457

Nr.	B m	Alfa (°)	Li m	Wi (Kg)	Kh•Wi (Kg)	Kv•Wi (Kg)	c (kg/cm ²)	Fi (°)	Ui (Kg)	N'i (Kg)	Ti (Kg)
1	1.99	-0.8	1.99	303.4	18.17	9.07	0.0	24.8	0.0	304.6	80.6
2	1.99	-0.4	1.99	868.01	51.99	25.95	0.0	24.8	0.0	869.5	230.1
3	1.07	0.0	1.07	680.31	40.75	20.34	0.0	24.8	0.0	680.4	180.0
4	2.91	0.4	2.91	2662.98	159.51	79.62	0.0	24.8	0.0	2657.8	703.2
5	2.88	1.1	2.88	3729.47	223.4	111.51	0.0	24.8	0.0	3711.6	982.0
6	1.11	1.5	1.11	1708.87	102.36	51.1	0.0	24.8	0.0	1697.4	449.1
7	1.99	1.9	1.99	3508.73	210.17	104.91	0.0	24.8	0.0	3480.3	920.8
8	1.55	2.3	1.55	3084.49	184.76	92.23	0.0	24.8	0.0	3054.7	808.2
9	2.43	2.7	2.44	5522.84	330.82	165.13	0.0	24.8	0.0	5460.0	1444.6
10	1.35	3.2	1.35	3428.46	205.37	102.51	0.0	24.8	0.0	3384.1	895.4
11	3.26	3.7	3.27	9474.78	567.54	283.3	0.0	24.8	0.0	9335.1	2469.9
12	1.37	4.2	1.37	4503.02	269.73	134.64	0.0	24.8	0.0	4428.8	1171.8
13	1.42	4.5	1.43	5039.83	301.89	150.69	0.0	24.8	0.0	4951.7	1310.1
14	2.56	5.0	2.57	10054.33	602.25	300.62	0.0	24.8	0.0	9864.7	2610.0
15	2.39	5.6	2.4	10555.31	632.26	315.6	0.0	24.8	0.0	10339.1	2735.6
16	2.29	6.1	2.3	11191.37	670.36	334.62	0.0	24.8	0.0	10946.0	2896.1
17	2.23	6.6	2.24	11896.65	712.61	355.71	0.0	24.8	0.0	11620.2	3074.5
18	1.06	7.0	1.07	5991.57	358.89	179.15	0.0	24.8	0.0	5846.9	1547.0
19	1.21	7.2	1.22	7052.79	422.46	210.88	0.0	24.8	0.0	6878.3	1819.9
20	2.23	7.6	2.25	13655.48	817.96	408.3	0.0	24.8	0.0	13305.8	3520.5
21	2.31	8.2	2.33	14916.09	893.47	445.99	0.0	24.8	0.0	14518.2	3841.3
22	2.37	8.7	2.4	15959.06	955.95	477.18	0.0	24.8	0.0	15517.0	4105.5
23	2.45	9.2	2.48	17026.35	1019.88	509.09	0.0	24.8	0.0	16538.3	4375.8
24	1.38	9.7	1.4	9797.31	586.86	292.94	0.0	24.8	0.0	9509.6	2516.1
25	1.1	10.0	1.11	7820.04	468.42	233.82	0.0	24.8	0.0	7587.1	2007.4
26	2.53	10.4	2.57	18221.76	1091.48	544.83	0.0	24.8	0.0	17668.5	4674.8
27	2.59	11.0	2.64	18734.19	1122.18	560.15	0.0	24.8	0.0	18151.8	4802.7
28	2.54	11.6	2.59	18321.16	1097.44	547.8	0.0	24.8	0.0	17740.2	4693.8

29	1.21	12.0	1.23	8650.06	518.14	258.64	0.0	24.8	0.0	8372.4	2215.2
30	1.29	12.3	1.33	9247.37	553.92	276.5	0.0	24.8	0.0	8948.5	2367.6
31	2.48	12.7	2.54	17537.71	1050.51	524.38	0.0	24.8	0.0	16965.6	4488.8
32	2.38	13.3	2.45	16566.44	992.33	495.34	0.0	24.8	0.0	16021.0	4238.9
33	2.53	13.9	2.61	17186.45	1029.47	513.87	0.0	24.8	0.0	16617.0	4396.6
34	1.28	14.3	1.32	8441.26	505.63	252.39	0.0	24.8	0.0	8160.8	2159.2
35	1.19	14.6	1.23	7752.25	464.36	231.79	0.0	24.8	0.0	7494.4	1982.9
36	2.51	15.0	2.6	15757.63	943.88	471.15	0.0	24.8	0.0	15233.6	4030.5
37	2.55	15.6	2.65	15119.16	905.64	452.06	0.0	24.8	0.0	14617.7	3867.6
38	2.61	16.2	2.72	14362.68	860.32	429.44	0.0	24.8	0.0	13889.2	3674.8
39	1.1	16.7	1.14	5657.65	338.89	169.16	0.0	24.8	0.0	5472.3	1447.9
40	1.47	17.0	1.54	7233.82	433.31	216.29	0.0	24.8	0.0	6998.2	1851.6
41	2.49	17.5	2.61	11235.05	672.98	335.93	0.0	24.8	0.0	10872.8	2876.8
42	2.38	18.0	2.5	9542.67	571.61	285.33	0.0	24.8	0.0	9239.8	2444.7
43	2.28	18.6	2.41	8028.9	480.93	240.06	0.0	24.8	0.0	7778.7	2058.1
44	2.2	19.1	2.33	6697.22	401.16	200.25	0.0	24.8	0.0	6492.8	1717.9
45	2.11	19.6	2.24	5442.01	325.98	162.72	0.0	24.8	0.0	5279.7	1396.9
46	1.01	20.0	1.08	2264.72	135.66	67.72	0.0	24.8	0.0	2198.4	581.7
47	1.03	20.3	1.1	2072.83	124.16	61.98	0.0	24.8	0.0	2013.0	532.6
48	2.06	20.6	2.2	3410.27	204.28	101.97	0.0	24.8	0.0	3313.9	876.8
49	2.09	21.1	2.24	2361.0	141.42	70.59	0.0	24.8	0.0	2296.5	607.6
50	2.79	21.7	3.0	1216.05	72.84	36.36	0.0	24.8	0.0	1184.2	313.3



VERIFICA DI STABILITÀ PRE-OPERAM IN PRESENZA DI FALDA ACQUIFERA

Analisi di stabilità dei pendii con BISHOP

Numero di strati	2.0
Numero dei conci	50.0
Coefficiente di sicurezza [R2]	1.1

Superficie di forma circolare

Maglia dei Centri

Ascissa vertice sinistro inferiore xi	100.47 m
Ordinata vertice sinistro inferiore yi	444.07 m
Ascissa vertice destro superiore xs	167.0 m
Ordinata vertice destro superiore ys	490.17 m
Passo di ricerca	10.0
Numero di celle lungo x	10.0
Numero di celle lungo y	10.0

Coefficienti sismici [N.T.C.] 2018

Dati generali

Descrizione:	
Latitudine:	41.92
Longitudine:	14.8
Tipo di costruzione:	2 - Opere ordinarie
Classe d'uso:	Classe IV
Vita nominale:	50.0 [anni]
Vita di riferimento:	100.0 [anni]

Parametri sismici su sito di riferimento

Categoria sottosuolo:	C
Categoria topografica:	T1

S.L. Stato limite	TR Tempo ritorno [anni]	ag [m/s ²]	F0 [-]	TC* [sec]
S.L.O.	60.0	0.6	2.49	0.34
S.L.D.	101.0	0.76	2.5	0.35
S.L.V.	949.0	1.71	2.57	0.41
S.L.C.	1950.0	2.17	2.55	0.42

Coefficienti sismici orizzontali e verticali

Opera: Stabilità dei pendii

S.L. Stato limite	amax [m/s ²]	beta [-]	kh [-]	kv [sec]
S.L.O.	0.9	0.2	0.0184	0.0092
S.L.D.	1.14	0.2	0.0233	0.0116
S.L.V.	2.4472	0.24	0.0599	0.0299
S.L.C.	2.9543	0.28	0.0844	0.0422

Coefficiente azione sismica orizzontale	0.0599
Coefficiente azione sismica verticale	0.0299

Vertici profilo

N	X m	y m
1	0.0	183.5
2	2.75	183.0
3	5.58	182.5
4	9.16	182.0
5	25.05	182.0
6	32.21	182.5
7	49.72	183.0
8	62.74	183.5
9	69.83	184.0
10	74.87	184.5
11	79.09	185.0
12	82.96	185.5
13	86.69	186.0
14	90.8	186.5
15	95.81	187.0
16	102.47	187.5
17	112.0	188.0
18	122.79	188.5
19	132.99	189.0
20	140.28	189.5
21	146.07	190.0
22	150.72	190.5
23	154.5	191.0
24	157.76	191.5
25	160.55	192.0
26	163.11	192.5
27	165.5	193.0
28	167.79	193.5
29	170.02	194.0
30	172.29	194.5
31	174.52	195.0
32	176.83	195.5
33	179.2	196.0
34	181.65	196.5
35	184.13	197.0
36	186.66	197.5
37	189.25	198.0
38	191.79	198.5
39	194.29	199.0
40	196.77	199.5
41	199.15	200.0
42	201.68	200.5
43	204.15	201.0
44	206.66	201.5
45	209.21	202.0
46	211.82	202.5
47	214.39	203.0
48	216.88	203.5
49	219.26	204.0
50	221.54	204.5
51	223.74	205.0
52	225.85	205.5
53	227.89	206.0
54	229.95	206.5
55	232.04	207.0
56	234.2	207.5

57	236.42	208.0
58	238.9	208.5
59	241.64	209.0
60	244.79	209.5
61	248.38	210.0
62	252.36	210.5
63	256.25	211.0
64	260.08	211.5
65	263.7	212.0
66	267.26	212.5
67	270.71	213.0
68	274.14	213.5
69	277.55	214.0
70	281.02	214.5
71	284.6	215.0
72	288.29	215.5
73	292.03	216.0
74	295.66	216.5
75	299.07	217.0
76	302.29	217.5
77	305.22	218.0
78	307.97	218.5
79	310.57	219.0
80	313.09	219.5
81	315.56	220.0
82	318.01	220.5
83	320.46	221.0
84	322.97	221.5
85	325.48	222.0
86	328.03	222.5
87	330.59	223.0
88	333.22	223.5
89	335.82	224.0
90	338.45	224.5
91	341.22	225.0
92	344.15	225.5
93	347.23	226.0
94	350.58	226.5
95	354.34	227.0
96	358.8	227.5
97	364.5	228.0
98	370.66	228.5

Falda

Nr.	X m	y m
1	0.0	183.0
2	2.75	182.5
3	5.58	182.0
4	9.16	181.5
5	25.05	181.5
6	32.21	182.0
7	49.72	182.5
8	62.74	183.0
9	69.83	183.5
10	74.87	184.0
11	79.09	184.5
12	82.96	185.0
13	86.69	185.5

14	90.8	186.0
15	95.81	186.5
16	102.47	187.0
17	112.0	187.5
18	122.79	188.0
19	132.99	188.5
20	140.28	189.0
21	146.07	189.5
22	150.72	190.0
23	154.5	190.5
24	157.76	191.0
25	160.55	191.5
26	163.11	192.0
27	165.5	192.5
28	167.79	193.0
29	170.02	193.5
30	172.29	194.0
31	174.52	194.5
32	176.83	195.0
33	179.2	195.5
34	181.65	196.0
35	184.13	196.5
36	186.66	197.0
37	189.25	197.5
38	191.79	198.0
39	194.29	198.5
40	196.77	199.0
41	199.15	199.5
42	201.68	200.0
43	204.15	200.5
44	206.66	201.0
45	209.21	201.5
46	211.82	202.0
47	214.39	202.5
48	216.88	203.0
49	219.26	203.5
50	221.54	204.0
51	223.74	204.5
52	225.85	205.0
53	227.89	205.5
54	229.95	206.0
55	232.04	206.5
56	234.2	207.0
57	236.42	207.5
58	238.9	208.0
59	241.64	208.5
60	244.79	209.0
61	248.38	209.5
62	252.36	210.0
63	256.25	210.5
64	260.08	211.0
65	263.7	211.5
66	267.26	212.0
67	270.71	212.5
68	274.14	213.0
69	277.55	213.5
70	281.02	214.0
71	284.6	214.5
72	288.29	215.0

73	292.03	215.5
74	295.66	216.0
75	299.07	216.5
76	302.29	217.0
77	305.22	217.5
78	307.97	218.0
79	310.57	218.5
80	313.09	219.0
81	315.56	219.5
82	318.01	220.0
83	320.46	220.5
84	322.97	221.0
85	325.48	221.5
86	328.03	222.0
87	330.59	222.5
88	333.22	223.0
89	335.82	223.5
90	338.45	224.0
91	341.22	224.5
92	344.15	225.0
93	347.23	225.5
94	350.58	226.0
95	354.34	226.5
96	358.8	227.0
97	364.5	227.5
98	370.66	228.0

Vertici strato1

N	X m	y m
1	0.0	177.5
2	40.0	176.5
3	100.0	183.0
4	126.72	183.75
5	150.52	185.24
6	167.0	187.0
7	174.32	190.08
8	182.87	192.68
9	212.0	198.5
10	239.45	201.68
11	278.45	207.18
12	340.55	217.59
13	370.66	224.27

Stratigrafia

c: coesione; Fi: Angolo di attrito; G: Peso Specifico; Gs: Peso Specifico Saturo

Strato	c (kg/cm ²)	Fi (°)	G (Kg/m ³)	Gs (Kg/m ³)	Litologia
1	0	30	1800	1900	
2	0.21	21.2	2000	2090	

Risultati analisi pendio [A2+M2+R2]

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Fs minimo individuato                0.97
Ascissa centro superficie              137.06 m
Ordinata centro superficie             460.21 m
Raggio superficie                      271.31 m
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B: Larghezza del concio; Alfa: Angolo di inclinazione della base del concio; Li: Lunghezza della base del concio; Wi: Peso del concio ; Ui: Forze derivanti dalle pressioni neutre; Ni: forze agenti normalmente alla direzione di scivolamento; Ti: forze agenti parallelamente alla superficie di scivolamento; Fi: Angolo di attrito; c: coesione.

Analisi dei concii. Superficie...xc = 137.058 yc = 460.207 Rc = 271.307 Fs=0.967

Nr.	B m	Alfa (°)	Li m	Wi (Kg)	Kh•Wi (Kg)	Kv•Wi (Kg)	c (kg/cm ²)	Fi (°)	Ui (Kg)	N'i (Kg)	Ti (Kg)
1	1.06	-1.0	1.06	67.27	4.03	2.01	0.0	24.8	0.0	67.8	32.4
2	3.17	-0.5	3.17	1130.0	67.69	33.79	0.0	24.8	0.0	1135.0	542.1
3	2.12	0.0	2.12	1486.72	89.05	44.45	0.0	24.8	0.0	1486.3	709.9
4	2.0	0.5	2.0	1885.39	112.93	56.37	0.0	24.8	22.5	1833.2	875.6
5	2.23	0.9	2.23	2694.21	161.38	80.56	0.0	24.8	161.9	2315.7	1106.1
6	2.12	1.4	2.12	3134.17	187.74	93.71	0.0	24.8	306.1	2459.2	1174.6
7	1.44	1.8	1.44	2426.92	145.37	72.56	0.0	24.8	411.2	1807.8	863.5
8	2.79	2.2	2.79	5424.01	324.9	162.18	0.0	24.8	550.5	3822.5	1825.7
9	1.86	2.7	1.86	4158.0	249.06	124.32	0.0	24.8	701.2	2792.4	1333.7
10	2.37	3.1	2.37	5957.91	356.88	178.14	0.0	24.8	850.4	3849.2	1838.5
11	1.41	3.5	1.41	3926.48	235.2	117.4	0.0	24.8	990.2	2460.8	1175.4
12	3.26	4.0	3.27	10237.09	613.2	306.09	0.0	24.8	1179.1	6200.5	2961.6
13	1.67	4.6	1.68	5942.31	355.94	177.67	0.0	24.8	1393.9	3486.8	1665.4
14	1.12	4.8	1.12	4244.65	254.25	126.92	0.0	24.8	1529.2	2448.9	1169.7
15	2.56	5.2	2.57	10655.31	638.25	318.59	0.0	24.8	1717.0	6022.4	2876.5
16	2.39	5.8	2.4	11135.78	667.03	332.96	0.0	24.8	1978.6	6143.3	2934.3
17	2.29	6.3	2.3	11772.97	705.2	352.01	0.0	24.8	2232.1	6367.7	3041.4
18	2.23	6.7	2.25	12492.05	748.27	373.51	0.0	24.8	2474.6	6646.9	3174.8
19	2.27	7.2	2.29	13684.33	819.69	409.16	0.0	24.8	2699.1	7183.1	3430.9
20	2.23	7.7	2.25	14313.61	857.39	427.98	0.0	24.8	2904.5	7428.1	3547.9
21	2.31	8.2	2.33	15631.67	936.34	467.39	0.0	24.8	3087.9	8034.3	3837.5
22	2.37	8.7	2.4	16727.11	1001.95	500.14	0.0	24.8	3241.0	8528.8	4073.6
23	1.39	9.1	1.41	10061.85	602.7	300.85	0.0	24.8	3338.9	5103.2	2437.5
24	1.06	9.3	1.08	7789.26	466.58	232.9	0.0	24.8	3390.2	3939.0	1881.4
25	2.48	9.7	2.52	18493.43	1107.76	552.95	0.0	24.8	3451.1	9316.9	4450.1
26	2.53	10.3	2.57	19147.63	1146.94	572.51	0.0	24.8	3509.6	9604.7	4587.5
27	2.59	10.8	2.64	19718.84	1181.16	589.59	0.0	24.8	3533.4	9859.0	4709.0
28	2.54	11.4	2.59	19325.04	1157.57	577.82	0.0	24.8	3530.7	9638.9	4603.9
29	2.5	11.9	2.55	18930.88	1133.96	566.03	0.0	24.8	3511.8	9425.4	4501.9
30	1.11	12.3	1.13	8330.21	498.98	249.07	0.0	24.8	3486.6	4143.8	1979.2
31	1.37	12.6	1.41	10269.85	615.16	307.07	0.0	24.8	3463.3	5106.7	2439.1
32	2.38	13.0	2.44	17636.13	1056.41	527.32	0.0	24.8	3426.4	8765.2	4186.6
33	2.53	13.5	2.6	18375.04	1100.67	549.41	0.0	24.8	3348.9	9136.0	4363.6
34	2.47	14.0	2.55	17409.09	1042.81	520.53	0.0	24.8	3235.9	8670.5	4141.3
35	2.51	14.6	2.59	17044.38	1020.96	509.63	0.0	24.8	3100.3	8512.9	4066.0
36	1.43	15.0	1.48	9353.97	560.3	279.68	0.0	24.8	2969.8	4687.9	2239.1
37	1.12	15.3	1.16	7126.45	426.87	213.08	0.0	24.8	2874.3	3581.9	1710.8
38	2.61	15.7	2.71	15821.3	947.7	473.06	0.0	24.8	2716.7	7995.3	3818.8
39	2.57	16.3	2.68	14395.36	862.28	430.42	0.0	24.8	2474.4	7347.1	3509.2
40	2.49	16.8	2.6	12754.47	763.99	381.36	0.0	24.8	2222.2	6591.7	3148.4
41	2.38	17.4	2.49	11063.54	662.71	330.8	0.0	24.8	1972.9	5804.9	2772.6
42	2.28	17.9	2.4	9556.78	572.45	285.75	0.0	24.8	1732.4	5104.7	2438.2
43	2.2	18.4	2.32	8244.11	493.82	246.5	0.0	24.8	1498.6	4499.1	2148.9
44	2.11	18.9	2.23	6999.2	419.25	209.28	0.0	24.8	1272.2	3920.0	1872.3
45	2.04	19.3	2.16	5919.99	354.61	177.01	0.0	24.8	1053.7	3422.4	1634.6
46	2.06	19.8	2.19	5084.05	304.53	152.01	0.0	24.8	825.3	3069.0	1465.8
47	2.09	20.3	2.23	4140.61	248.02	123.8	0.0	24.8	569.0	2674.5	1277.4
48	2.16	20.7	2.31	3071.2	183.97	91.83	0.0	24.8	274.7	2243.8	1071.7
49	1.39	21.1	1.49	1256.69	75.28	37.58	0.0	24.8	2.0	1134.8	542.0

50 2.12 21.5 2.27 787.11 47.15 23.53 0.0 24.8 0.0 712.0 340.1

