

I-80 Best Estimate Profile - Deep Profile I

k = 0.05 (Note: This is the total kappa is for the upper 1.5 km of the profile)

$$\kappa = \frac{H}{Q_s V_s}$$

kappa equ:

layer	Depth (ft)	Thickness (ft)	Vs (ft/s)	H/V _s ² 6.85E-04	Qs	lamda	layer k
1	5.0	5.00	490.00	2.08E-05	27.292489	0.0183	0.0012639
2	13.0	8.00	530.00	2.85E-05	31.2881324	0.0160	0.0017285
3	26.5	13.50	530.00	4.81E-05	33.8283549	0.0148	0.0029169
4	40.0	13.50	540.00	4.63E-05	35.0926446	0.0142	0.0028098
5	53.5	13.50	560.00	4.30E-05	35.0926446	0.0142	0.0026127
6	69.4	15.90	720.00	3.07E-05	32.5563224	0.0154	0.0018615
7	85.4	16.00	880.00	2.07E-05	32.5563224	0.0154	0.0012540
8	106.4	21.00	875.00	2.74E-05	33.0652841	0.0151	0.0016647
9	122.4	16.00	870.00	2.11E-05	33.0652841	0.0151	0.0012830
10	135.4	13.00	870.00	1.72E-05	33.0652841	0.0151	0.0010424
11	147.4	12.00	800.00	1.88E-05	20.1612903	0.0248	0.0011380
12	163.4	16.00	920.00	1.89E-05	20.1612903	0.0248	0.0011473
13	180.4	17.00	900.00	2.10E-05	20.1612903	0.0248	0.0012738
14	199.4	19.00	890.00	2.40E-05	20.1612903	0.0248	0.0014558
15	226.2	26.80	1150.00	2.03E-05	121.915565	0.0041	0.0012299
16	254.7	28.50	1350.00	1.56E-05	127.999565	0.0039	0.0009491
17	283.2	28.50	1350.00	1.56E-05	133.739824	0.0037	0.0009491
18	311.7	28.50	1350.00	1.56E-05	139.043714	0.0036	0.0009491
19	340.2	28.50	1350.00	1.56E-05	143.986322	0.0035	0.0009491
20	374.2	34.00	1550.00	1.42E-05	144.211308	0.0035	0.0008589
21	408.2	34.00	1550.00	1.42E-05	144.211308	0.0035	0.0008589
22	442.2	34.00	1550.00	1.42E-05	144.211308	0.0035	0.0008589
23	476.2	34.00	1550.00	1.42E-05	144.211308	0.0035	0.0008589
24	516.2	40.00	1750.00	1.31E-05	144.211308	0.0035	0.0007927
25	556.2	40.00	1750.00	1.31E-05	144.211308	0.0035	0.0007927
26	596.2	40.00	1750.00	1.31E-05	144.211308	0.0035	0.0007927
27	649.5	53.30	1750.00	1.74E-05	144.211308	0.0035	0.0010563
28	695.1	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0006919

$$\lambda = \frac{1}{2Q_s}$$

lambda is i
low strain c

$$\kappa = \frac{1}{\gamma} \sum_i \frac{H_i}{V_{si}^2}$$

29	740.7	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0006919
30	786.3	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0006919
31	831.9	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0006919
32	877.5	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0006919
33	938.3	60.80	2000.00	1.52E-05	144.211308	0.0035	0.0009225
34	983.9	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0006919
35	1041.9	58.00	2000.00	1.45E-05	144.211308	0.0035	0.0008800
36	1072.9	31.00	2500.00	4.96E-06	144.211308	0.0035	0.0003010
k upper							4.16E-02
k remaining							8.40E-03

gamma 0.016477 8.40E-03

lower profile to a depth of 1.5 km

layer	depth (bottom	thickness	Vs	H/V _s ²	Qs	lamda	layer k
(ft)	(ft)	(ft/s)		1.38E-04			
37	1105.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
38	1138.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
39	1170.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
40	1203.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
41	1235.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
42	1268.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
43	1301.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
44	1333.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
45	1366.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
46	1398.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
47	1431.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
48	1464.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
49	1496.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
50	1529.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
51	1561.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
52	1594.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
53	1627.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
54	1659.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071

$$\kappa = \frac{1}{\gamma} \sum_i \frac{H_i}{V_{si}^2}$$

$$\alpha = \frac{H}{Q_s V_s}$$

$$\lambda = \frac{1}{2Q_s}$$

55	1692.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
56	1724.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
57	1757.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
58	1790.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
59	1822.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
60	1855.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
61	1887.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
62	1920.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
63	1953.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
64	1985.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
65	2018.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
66	2050.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
67	2083.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
68	2116.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
69	2148.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
70	2181.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
71	2213.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
72	2246.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
73	2279.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
74	2311.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
75	2344.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
76	2376.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
77	2409.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
78	2442.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
79	2474.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
80	2507.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
81	2539.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
82	2572.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
83	2605.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
84	2637.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
85	2670.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
86	2702.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
87	2735.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
88	2768.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
89	2800.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
90	2833.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
91	2865.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071

92	2898.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
93	2931.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
94	2963.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
95	2996.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
96	3028.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
97	3061.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
98	3094.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
99	3126.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
100	3159.30	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
101	3191.90	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
102	3224.50	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
103	3257.10	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
104	3289.70	32.60	4298.00	1.76E-06	70.8160077	0.0071	0.0001071
105	3303.90	14.20	4298.00	7.69E-07	70.8160077	0.0071	0.0000467
106	3375.70	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
107	3447.50	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
108	3519.30	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
109	3591.10	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
110	3662.90	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
111	3734.70	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
112	3806.50	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
113	3878.30	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
114	3950.10	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
115	4021.90	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
116	4093.70	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
117	4165.50	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
118	4237.30	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
119	4309.10	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
120	4380.90	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
121	4452.70	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
122	4524.50	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
123	4596.30	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
124	4668.10	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
125	4739.90	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
126	4811.70	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485
127	4883.50	71.80	9482.00	7.99E-07	156.230197	0.0032	0.0000485

I-80 Upper Bound Profile - Deep Profile I

k = 0.05 (Note: This is the total kappa is for the upper 1.5 km of the profile)

$$\kappa = \frac{H}{Q_s V_s}$$

kappa equ:

layer	Depth (ft)	Thickness (ft)	Vs (ft/s)	H/V _s ² 4.57E-04	Qs	lamda	layer k
1	5.0	5.00	600.25	1.39E-05	27.292489	0.0183	0.0011659
2	13.0	8.00	649.25	1.90E-05	31.2881324	0.0160	0.0015945
3	26.5	13.50	649.25	3.20E-05	33.8283549	0.0148	0.0026907
4	40.0	13.50	661.50	3.09E-05	35.0926446	0.0142	0.0025919
5	53.5	13.50	686.00	2.87E-05	35.0926446	0.0142	0.0024101
6	69.4	15.90	882.00	2.04E-05	32.5563224	0.0154	0.0017172
7	85.4	16.00	1078.00	1.38E-05	32.5563224	0.0154	0.0011567
8	106.4	21.00	1071.88	1.83E-05	33.0652841	0.0151	0.0015356
9	122.4	16.00	1065.75	1.41E-05	33.0652841	0.0151	0.0011835
10	135.4	13.00	1065.75	1.14E-05	33.0652841	0.0151	0.0009616
11	147.4	12.00	980.00	1.25E-05	20.1612903	0.0248	0.0010497
12	163.4	16.00	1127.00	1.26E-05	20.1612903	0.0248	0.0010583
13	180.4	17.00	1102.50	1.40E-05	20.1612903	0.0248	0.0011750
14	199.4	19.00	1090.25	1.60E-05	20.1612903	0.0248	0.0013429
15	226.2	26.80	1408.75	1.35E-05	121.915565	0.0041	0.0011345
16	254.7	28.50	1653.75	1.04E-05	127.999565	0.0039	0.0008755
17	283.2	28.50	1653.75	1.04E-05	133.739824	0.0037	0.0008755
18	311.7	28.50	1653.75	1.04E-05	139.043714	0.0036	0.0008755
19	340.2	28.50	1653.75	1.04E-05	143.986322	0.0035	0.0008755
20	374.2	34.00	1898.75	9.43E-06	144.211308	0.0035	0.0007923
21	408.2	34.00	1898.75	9.43E-06	144.211308	0.0035	0.0007923
22	442.2	34.00	1898.75	9.43E-06	144.211308	0.0035	0.0007923
23	476.2	34.00	1898.75	9.43E-06	144.211308	0.0035	0.0007923
24	516.2	40.00	2143.75	8.70E-06	144.211308	0.0035	0.0007312
25	556.2	40.00	2143.75	8.70E-06	144.211308	0.0035	0.0007312
26	596.2	40.00	2143.75	8.70E-06	144.211308	0.0035	0.0007312
27	649.5	53.30	2143.75	1.16E-05	144.211308	0.0035	0.0009744
28	695.1	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006382

$$\lambda = \frac{1}{2Q_s}$$

lambda is i
low strain c

$$\kappa = \frac{1}{\gamma} \sum_i \frac{H_i}{V_{si}^2}$$

29	740.7	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006382
30	786.3	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006382
31	831.9	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006382
32	877.5	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006382
33	938.3	60.80	2450.00	1.01E-05	144.211308	0.0035	0.0008510
34	983.9	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006382
35	1041.9	58.00	2450.00	9.66E-06	144.211308	0.0035	0.0008118
36	1072.9	31.00	3062.50	3.31E-06	144.211308	0.0035	0.0002777
k upper							3.84E-02
k remaining							1.16E-02

gamma 0.011903 1.16E-02

lower profile to a depth of 1.5 km

layer	depth (bottom	thickness	Vs	H/V _s ²	Qs	lamda	layer k
(ft)	(ft)	(ft/s)		1.38E-04			
37	1105.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
38	1138.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
39	1170.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
40	1203.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
41	1235.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
42	1268.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
43	1301.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
44	1333.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
45	1366.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
46	1398.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
47	1431.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
48	1464.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
49	1496.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
50	1529.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
51	1561.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
52	1594.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
53	1627.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
54	1659.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483

$$\kappa = \frac{1}{\gamma} \sum_i \frac{H_i}{V_{si}^2}$$

$$\kappa = \frac{H}{Q_s V_s}$$

$$\lambda = \frac{1}{2Q_s}$$

55	1692.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
56	1724.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
57	1757.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
58	1790.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
59	1822.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
60	1855.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
61	1887.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
62	1920.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
63	1953.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
64	1985.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
65	2018.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
66	2050.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
67	2083.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
68	2116.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
69	2148.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
70	2181.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
71	2213.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
72	2246.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
73	2279.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
74	2311.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
75	2344.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
76	2376.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
77	2409.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
78	2442.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
79	2474.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
80	2507.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
81	2539.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
82	2572.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
83	2605.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
84	2637.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
85	2670.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
86	2702.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
87	2735.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
88	2768.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
89	2800.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
90	2833.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
91	2865.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483

92	2898.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
93	2931.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
94	2963.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
95	2996.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
96	3028.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
97	3061.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
98	3094.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
99	3126.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
100	3159.30	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
101	3191.90	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
102	3224.50	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
103	3257.10	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
104	3289.70	32.60	4298.00	1.76E-06	51.1582457	0.0098	0.0001483
105	3303.90	14.20	4298.00	7.69E-07	51.1582457	0.0098	0.0000646
106	3375.70	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
107	3447.50	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
108	3519.30	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
109	3591.10	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
110	3662.90	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
111	3734.70	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
112	3806.50	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
113	3878.30	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
114	3950.10	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
115	4021.90	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
116	4093.70	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
117	4165.50	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
118	4237.30	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
119	4309.10	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
120	4380.90	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
121	4452.70	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
122	4524.50	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
123	4596.30	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
124	4668.10	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
125	4739.90	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
126	4811.70	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671
127	4883.50	71.80	9482.00	7.99E-07	112.862374	0.0044	0.0000671

I-80 Best Estimate Profile - Deep Profile II

k = 0.05 (Note: This is the total kappa is for the upper 1.5 km of the profile)

$$\kappa = \frac{H}{Q_s V_s}$$

kappa equ:

layer	Depth (ft)	Thickness (ft)	Vs (ft/s)	H/V _s ² 6.72E-04	Qs	lamda	layer k
1	5.0	5.00	490.00	2.08E-05	27.292489	0.0183	0.0013355
2	13.0	8.00	530.00	2.85E-05	31.2881324	0.0160	0.0018265
3	26.5	13.50	530.00	4.81E-05	33.8283549	0.0148	0.0030822
4	40.0	13.50	540.00	4.63E-05	35.0926446	0.0142	0.0029691
5	53.5	13.50	560.00	4.30E-05	35.0926446	0.0142	0.0027608
6	69.4	15.90	720.00	3.07E-05	32.5563224	0.0154	0.0019670
7	85.4	16.00	880.00	2.07E-05	32.5563224	0.0154	0.0013250
8	106.4	21.00	875.00	2.74E-05	33.0652841	0.0151	0.0017590
9	122.4	16.00	870.00	2.11E-05	33.0652841	0.0151	0.0013557
10	135.4	13.00	870.00	1.72E-05	33.0652841	0.0151	0.0011015
11	147.4	12.00	800.00	1.88E-05	20.1612903	0.0248	0.0012025
12	163.4	16.00	920.00	1.89E-05	20.1612903	0.0248	0.0012123
13	180.4	17.00	900.00	2.10E-05	20.1612903	0.0248	0.0013460
14	199.4	19.00	890.00	2.40E-05	20.1612903	0.0248	0.0015383
15	226.2	26.80	1150.00	2.03E-05	121.915565	0.0041	0.0012996
16	254.7	28.50	1350.00	1.56E-05	127.999565	0.0039	0.0010029
17	283.2	28.50	1350.00	1.56E-05	133.739824	0.0037	0.0010029
18	311.7	28.50	1350.00	1.56E-05	139.043714	0.0036	0.0010029
19	340.2	28.50	1350.00	1.56E-05	143.986322	0.0035	0.0010029
20	374.2	34.00	1550.00	1.42E-05	144.211308	0.0035	0.0009076
21	408.2	34.00	1550.00	1.42E-05	144.211308	0.0035	0.0009076
22	442.2	34.00	1550.00	1.42E-05	144.211308	0.0035	0.0009076
23	476.2	34.00	1550.00	1.42E-05	144.211308	0.0035	0.0009076
24	516.2	40.00	1750.00	1.31E-05	144.211308	0.0035	0.0008376
25	556.2	40.00	1750.00	1.31E-05	144.211308	0.0035	0.0008376
26	596.2	40.00	1750.00	1.31E-05	144.211308	0.0035	0.0008376
27	649.5	53.30	2000.00	1.33E-05	144.211308	0.0035	0.0008546
28	695.1	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0007311

$$\lambda = \frac{1}{2Q_s}$$

lambda is i
low strain c

$$\kappa = \frac{1}{\gamma} \sum_i \frac{H_i}{V_{si}^2}$$

29	740.7	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0007311
30	786.3	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0007311
31	831.9	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0007311
32	877.5	45.60	2000.00	1.14E-05	144.211308	0.0035	0.0007311
33	938.3	60.80	2000.00	1.52E-05	144.211308	0.0035	0.0009748
34	983.9	45.60	2500.00	7.30E-06	144.211308	0.0035	0.0004679
35	1041.9	58.00	2500.00	9.28E-06	144.211308	0.0035	0.0005951
36	1072.9	31.00	2500.00	4.96E-06	144.211308	0.0035	0.0003181
k upper							4.31E-02
k remaining							6.90E-03

gamma 0.015593 6.90E-03

lower profile to a depth of 1.5 km

layer	depth (bottom	thickness	Vs	H/V _s ²	Qs	lamda	layer k
(ft)	(ft)	(ft/s)		1.08E-04			
37	1105.50	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
38	1138.10	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
39	1170.70	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
40	1203.30	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
41	1235.90	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
42	1268.50	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
43	1301.10	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
44	1333.70	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
45	1366.30	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
46	1398.90	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
47	1431.50	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
48	1464.10	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
49	1496.70	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
50	1529.30	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
51	1561.90	32.60	4298.00	1.76E-06	67.0183698	0.0075	0.0001132
52	1594.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
53	1627.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
54	1659.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510

$$\kappa = \frac{1}{\gamma} \sum_i \frac{H_i}{V_{si}^2}$$

$$\kappa = \frac{H}{Q_s V_s}$$

$$\lambda = \frac{1}{2Q_s}$$

55	1692.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
56	1724.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
57	1757.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
58	1790.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
59	1822.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
60	1855.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
61	1887.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
62	1920.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
63	1953.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
64	1985.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
65	2018.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
66	2050.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
67	2083.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
68	2116.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
69	2148.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
70	2181.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
71	2213.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
72	2246.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
73	2279.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
74	2311.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
75	2344.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
76	2376.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
77	2409.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
78	2442.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
79	2474.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
80	2507.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
81	2539.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
82	2572.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
83	2605.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
84	2637.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
85	2670.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
86	2702.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
87	2735.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
88	2768.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
89	2800.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
90	2833.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
91	2865.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510

92	2898.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
93	2931.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
94	2963.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
95	2996.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
96	3028.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
97	3061.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
98	3094.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
99	3126.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
100	3159.30	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
101	3191.90	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
102	3224.50	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
103	3257.10	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
104	3289.70	32.60	6400.00	7.96E-07	99.7946874	0.0050	0.0000510
105	3303.90	14.20	6400.00	3.47E-07	99.7946874	0.0050	0.0000222
106	3375.70	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
107	3447.50	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
108	3519.30	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
109	3591.10	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
110	3662.90	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
111	3734.70	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
112	3806.50	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
113	3878.30	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
114	3950.10	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
115	4021.90	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
116	4093.70	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
117	4165.50	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
118	4237.30	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
119	4309.10	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
120	4380.90	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
121	4452.70	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
122	4524.50	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
123	4596.30	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
124	4668.10	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
125	4739.90	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
126	4811.70	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124
127	4883.50	71.80	6400.00	1.75E-06	99.7946874	0.0050	0.0001124

I-80 Upper Bound Profile - Deep Profile II

k = 0.05 (Note: This is the total kappa is for the upper 1.5 km of the profile)

$$\kappa = \frac{H}{Q_s V_s}$$

kappa equ:

layer	Depth (ft)	Thickness (ft)	Vs (ft/s)	H/V _s ² 4.48E-04	Qs	lamda	layer k
1	5.0	5.00	600.25	1.39E-05	27.292489	0.0183	0.0012492
2	13.0	8.00	649.25	1.90E-05	31.2881324	0.0160	0.0017085
3	26.5	13.50	649.25	3.20E-05	33.8283549	0.0148	0.0028830
4	40.0	13.50	661.50	3.09E-05	35.0926446	0.0142	0.0027772
5	53.5	13.50	686.00	2.87E-05	35.0926446	0.0142	0.0025824
6	69.4	15.90	882.00	2.04E-05	32.5563224	0.0154	0.0018399
7	85.4	16.00	1078.00	1.38E-05	32.5563224	0.0154	0.0012394
8	106.4	21.00	1071.88	1.83E-05	33.0652841	0.0151	0.0016454
9	122.4	16.00	1065.75	1.41E-05	33.0652841	0.0151	0.0012681
10	135.4	13.00	1065.75	1.14E-05	33.0652841	0.0151	0.0010303
11	147.4	12.00	980.00	1.25E-05	20.1612903	0.0248	0.0011248
12	163.4	16.00	1127.00	1.26E-05	20.1612903	0.0248	0.0011340
13	180.4	17.00	1102.50	1.40E-05	20.1612903	0.0248	0.0012590
14	199.4	19.00	1090.25	1.60E-05	20.1612903	0.0248	0.0014389
15	226.2	26.80	1408.75	1.35E-05	121.915565	0.0041	0.0012156
16	254.7	28.50	1653.75	1.04E-05	127.999565	0.0039	0.0009381
17	283.2	28.50	1653.75	1.04E-05	133.739824	0.0037	0.0009381
18	311.7	28.50	1653.75	1.04E-05	139.043714	0.0036	0.0009381
19	340.2	28.50	1653.75	1.04E-05	143.986322	0.0035	0.0009381
20	374.2	34.00	1898.75	9.43E-06	144.211308	0.0035	0.0008490
21	408.2	34.00	1898.75	9.43E-06	144.211308	0.0035	0.0008490
22	442.2	34.00	1898.75	9.43E-06	144.211308	0.0035	0.0008490
23	476.2	34.00	1898.75	9.43E-06	144.211308	0.0035	0.0008490
24	516.2	40.00	2143.75	8.70E-06	144.211308	0.0035	0.0007835
25	556.2	40.00	2143.75	8.70E-06	144.211308	0.0035	0.0007835
26	596.2	40.00	2143.75	8.70E-06	144.211308	0.0035	0.0007835
27	649.5	53.30	2450.00	8.88E-06	144.211308	0.0035	0.0007993
28	695.1	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006839

$$\lambda = \frac{1}{2Q_s}$$

lambda is i
low strain c

$$\kappa = \frac{1}{\gamma} \sum_i \frac{H_i}{V_{si}^2}$$

29	740.7	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006839
30	786.3	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006839
31	831.9	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006839
32	877.5	45.60	2450.00	7.60E-06	144.211308	0.0035	0.0006839
33	938.3	60.80	2450.00	1.01E-05	144.211308	0.0035	0.0009118
34	983.9	45.60	3062.50	4.86E-06	144.211308	0.0035	0.0004377
35	1041.9	58.00	3062.50	6.18E-06	144.211308	0.0035	0.0005567
36	1072.9	31.00	3062.50	3.31E-06	144.211308	0.0035	0.0002975
k upper							4.03E-02
k remaining							9.68E-03

gamma 0.011109 9.68E-03

lower profile to a depth of 1.5 km

layer	depth (bottom	thickness	Vs	H/V _s ²	Qs	lamda	layer k
(ft)	(ft)	(ft/s)		1.08E-04			
37	1105.50	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
38	1138.10	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
39	1170.70	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
40	1203.30	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
41	1235.90	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
42	1268.50	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
43	1301.10	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
44	1333.70	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
45	1366.30	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
46	1398.90	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
47	1431.50	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
48	1464.10	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
49	1496.70	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
50	1529.30	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
51	1561.90	32.60	4298.00	1.76E-06	47.7449706	0.0105	0.0001589
52	1594.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
53	1627.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
54	1659.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716

$$\kappa = \frac{1}{\gamma} \sum_i \frac{H_i}{V_{si}^2}$$

$$\alpha = \frac{H}{Q_s V_s}$$

$$\lambda = \frac{1}{2Q_s}$$

55	1692.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
56	1724.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
57	1757.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
58	1790.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
59	1822.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
60	1855.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
61	1887.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
62	1920.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
63	1953.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
64	1985.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
65	2018.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
66	2050.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
67	2083.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
68	2116.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
69	2148.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
70	2181.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
71	2213.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
72	2246.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
73	2279.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
74	2311.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
75	2344.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
76	2376.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
77	2409.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
78	2442.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
79	2474.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
80	2507.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
81	2539.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
82	2572.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
83	2605.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
84	2637.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
85	2670.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
86	2702.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
87	2735.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
88	2768.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
89	2800.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
90	2833.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
91	2865.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716

92	2898.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
93	2931.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
94	2963.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
95	2996.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
96	3028.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
97	3061.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
98	3094.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
99	3126.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
100	3159.30	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
101	3191.90	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
102	3224.50	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
103	3257.10	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
104	3289.70	32.60	6400.00	7.96E-07	71.0953495	0.0070	0.0000716
105	3303.90	14.20	6400.00	3.47E-07	71.0953495	0.0070	0.0000312
106	3375.70	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
107	3447.50	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
108	3519.30	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
109	3591.10	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
110	3662.90	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
111	3734.70	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
112	3806.50	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
113	3878.30	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
114	3950.10	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
115	4021.90	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
116	4093.70	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
117	4165.50	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
118	4237.30	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
119	4309.10	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
120	4380.90	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
121	4452.70	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
122	4524.50	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
123	4596.30	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
124	4668.10	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
125	4739.90	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
126	4811.70	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578
127	4883.50	71.80	6400.00	1.75E-06	71.0953495	0.0070	0.0001578