



**PRELIMINARY INFORMATION SUBMITTED
BY THE REPUBLIC OF SIERRA LEONE TO
THE UN COMMISSION ON THE LIMITS OF
THE CONTINENTAL SHELF**

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Preliminary Information

Submitted by the Republic of Sierra Leone to the UN Commission on the Limits of the Continental Shelf

1. The Republic of Sierra Leone is a State Party to the 1982 United Nations Convention on the Law of the Sea (the Convention) having ratified the Convention on 12th December 1994.
2. Sierra Leone is mindful of its obligations under the Convention and of the importance of the work of the Commission on the Limits of the Continental Shelf (the Commission) for coastal States and the international community as a whole.
3. Pursuant to the *Decision regarding the workload of the Commission on the Limits of the Continental shelf and the ability of States, particularly developing States, to fulfil the requirements of article 4 of annex II to the United Nations Convention on the Law of the Sea, as well as the decision contained in SPLOS/72, paragraph (a) (SPLOS/183)*, Sierra Leone has prepared the following preliminary information in order to provide an indication of the outer limits of the continental shelf beyond 200 nautical miles in respect of the continental shelf along the northern part of its continental margin.
4. The Republic of Sierra Leone recognises that the northern and southern parts of the continental margin of the Republic of Sierra Leone are maritime regions over which there might be overlapping claims made by other States and consultations among the States in the region are expected to take place soon for their delimitation. There are no disputes in the region relevant to this information relating to the outer limits of the continental shelf beyond 200 nautical miles which are determined without prejudice to the delimitation of continental shelf boundaries between States according to paragraph 10 of article 76.

5. The Republic of Sierra Leone also notes that maritime boundary delimitations remain outstanding between Sierra Leone and adjacent coastal States. Pursuant to Article 76, paragraph 10 and Article 9 of Annex II to the Convention, this preliminary information is submitted without prejudice to these delimitations and to any other future maritime delimitation between Sierra Leone and any other coastal State.
6. In accordance with operative paragraph 1 (a) of SPLOS/183 the indicative area of extended continental shelf is depicted in the attached figures and maps.
7. The Republic of Sierra Leone has commenced work on the preparation of the Submission in respect of this area. In this regard, the Republic of Sierra Leone has assembled legal, policy and technical expertise in the preparation of the Submission.
8. In addition to the resources that the Government of the Republic of Sierra Leone has committed to this work, it has also made an application for assistance to the UN Trust Fund for the purpose of facilitating the preparation of submissions to the Commission on the Limits of the Continental Shelf for developing States, in particular the least developed countries and small island developing States, and compliance with Article 76 of the United Nations on the Law of the Sea for the purpose of specialised software and technical training for this purpose.
9. The Republic of Sierra Leone intends to lodge its Submission in the northern area of its continental shelf by the end of 2010, mindful of the need to support the Commission in the performance of its functions under the Convention in an efficient and timely manner. In this regard, the Republic of Sierra Leone will continue to take advantage of all available data and opportunities for scientific and technical capacity building, advice and assistance in order to complete the preparation of its Submission.

10. The Republic of Sierra Leone notes that in accordance with operative paragraph 1 (b) of SPLOS/183, pending the receipt of its completed Submission concerning the northern area of its continental shelf, the preliminary information submitted by the Republic of Sierra Leone shall not be considered by the Commission.
11. The Republic of Sierra Leone also notes that in accordance with operative paragraph 1(c) of SPLOS/183, the preliminary information submitted is without prejudice to the future Submission concerning the northern area and its consideration by the Commission.
12. The Republic of Sierra Leone requests that the Secretary – General of the United Nations inform the Commission and notify member States of the receipt of this preliminary information in accordance with operative paragraph 1(d) of SPLOS/183.

Figure 1.

Composite nautical chart constructed with UKHO charts used to display data and information.

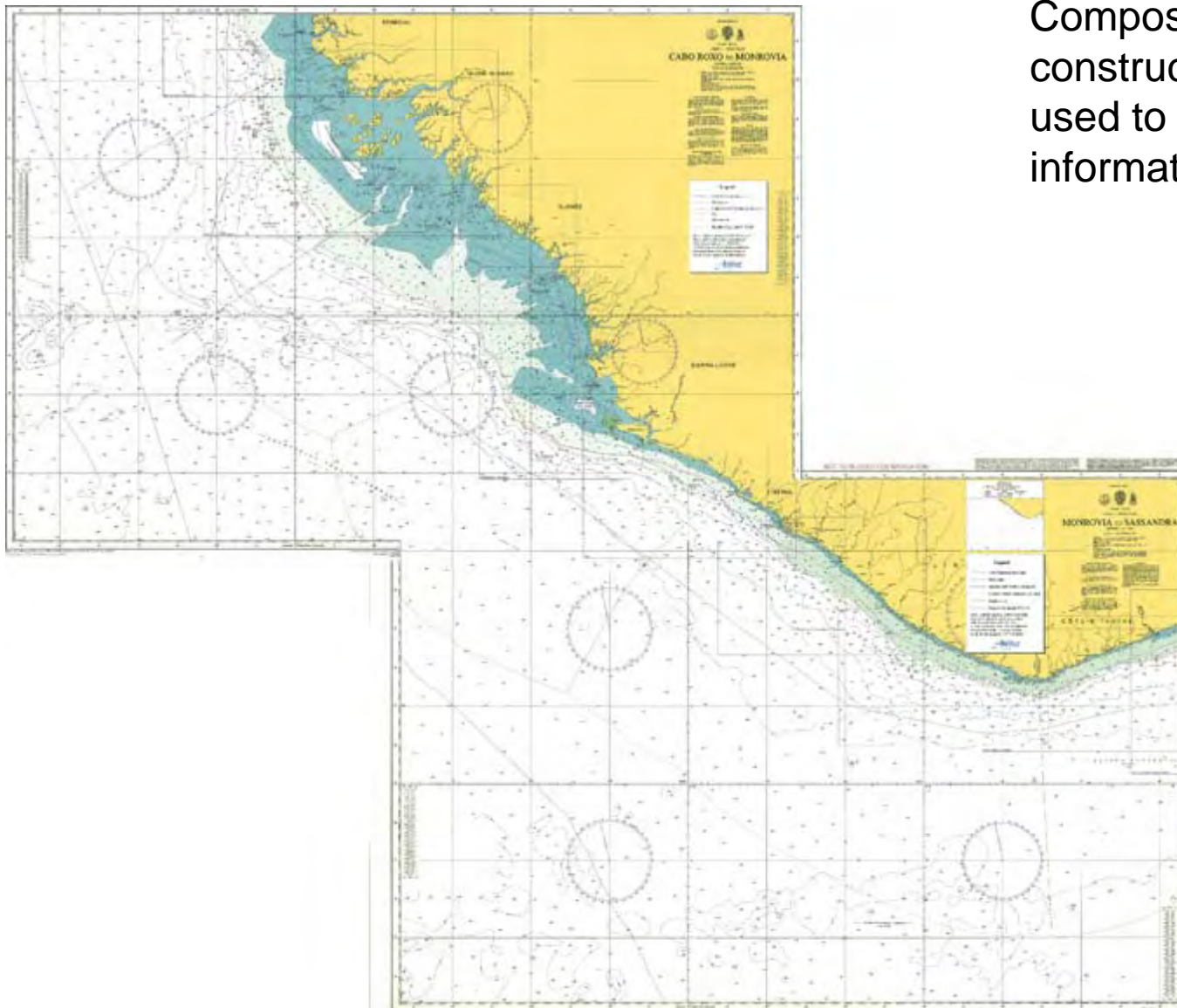


Figure 2.

IBCEA 08-1 bathymetric chart used to display the data and information.

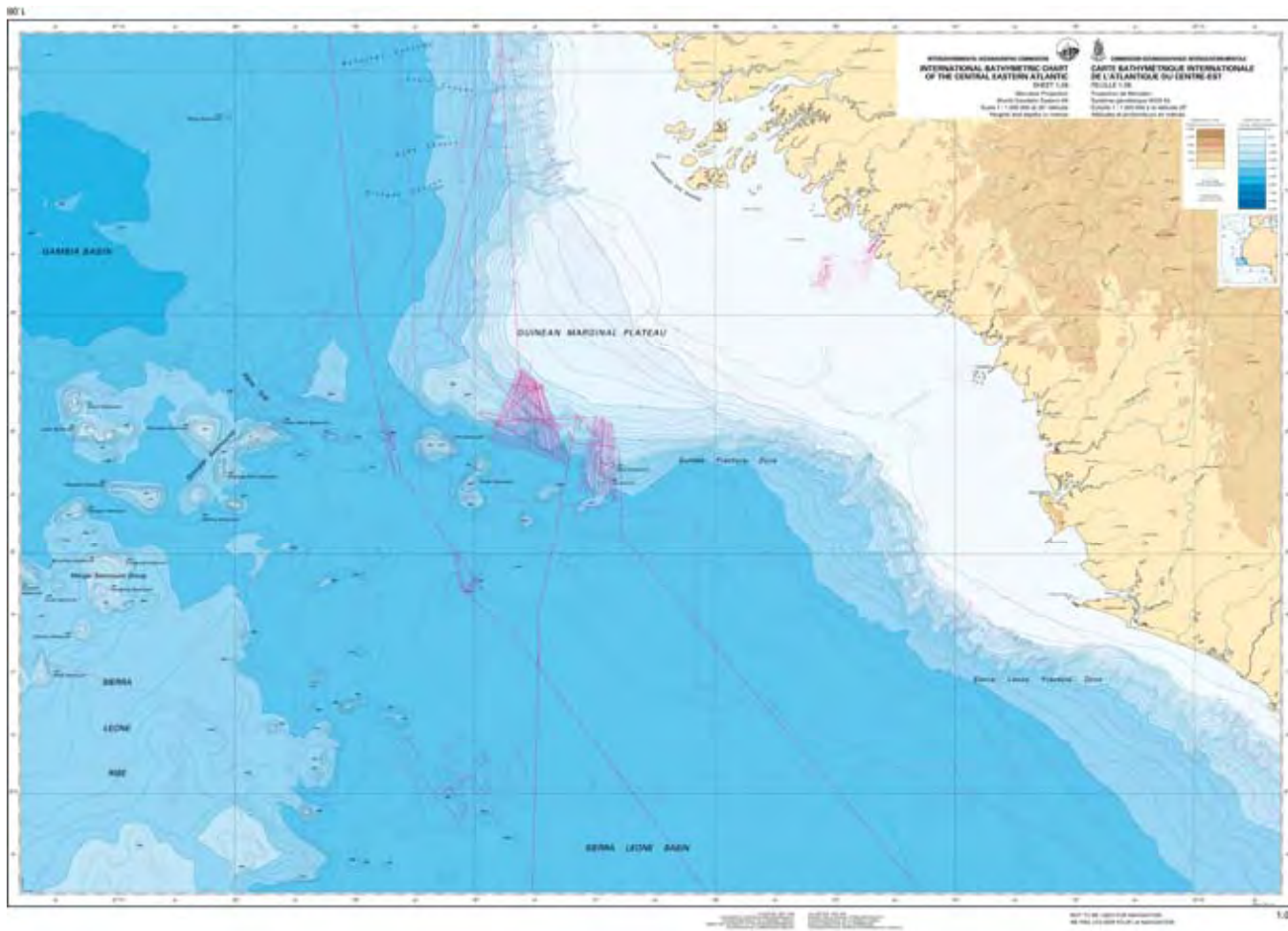




Figure 3.

Three-dimensional digital elevation model constructed to display the data and information.

Figure 4.

Normal baselines from which the breadth of the territorial sea is measured.

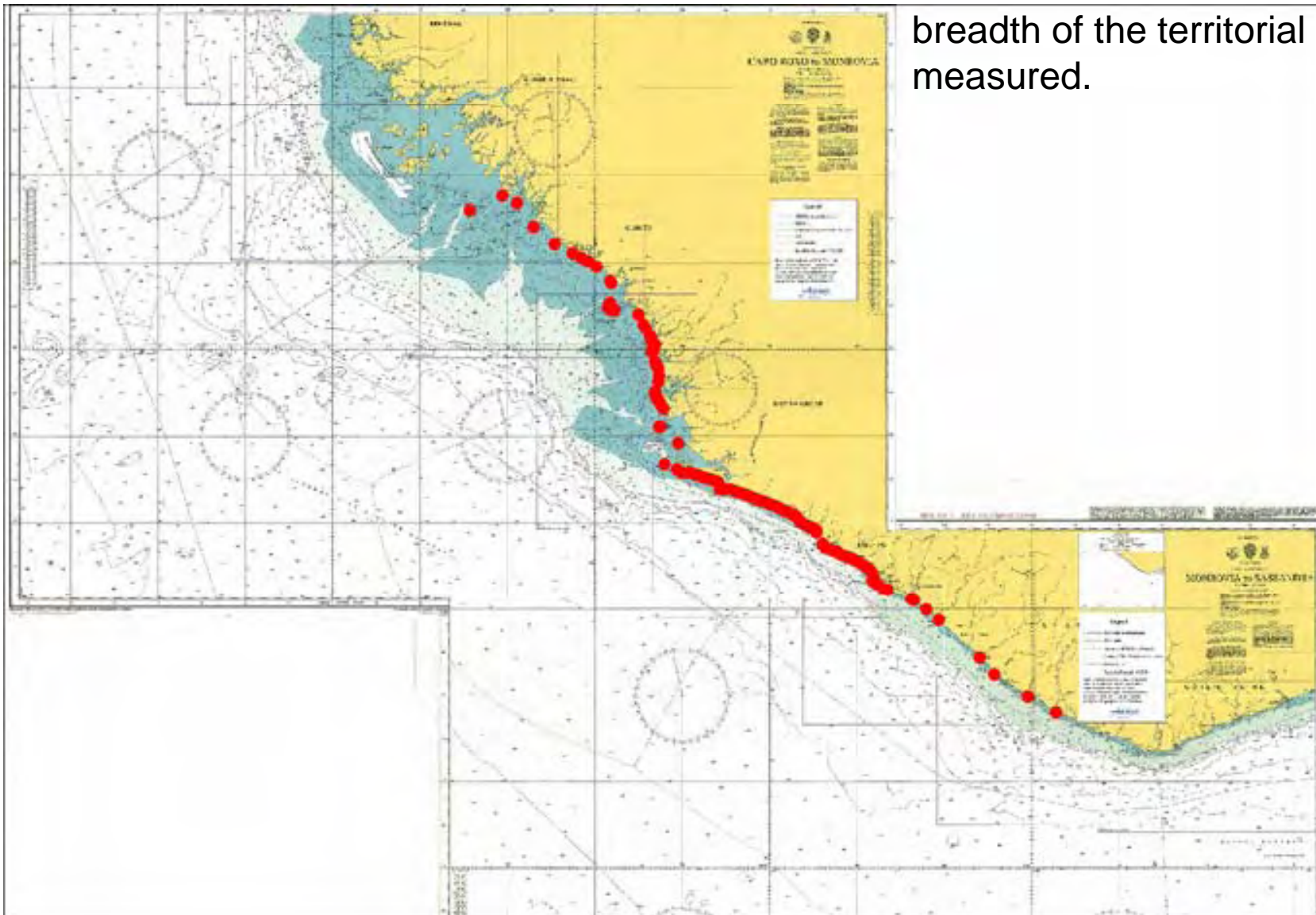
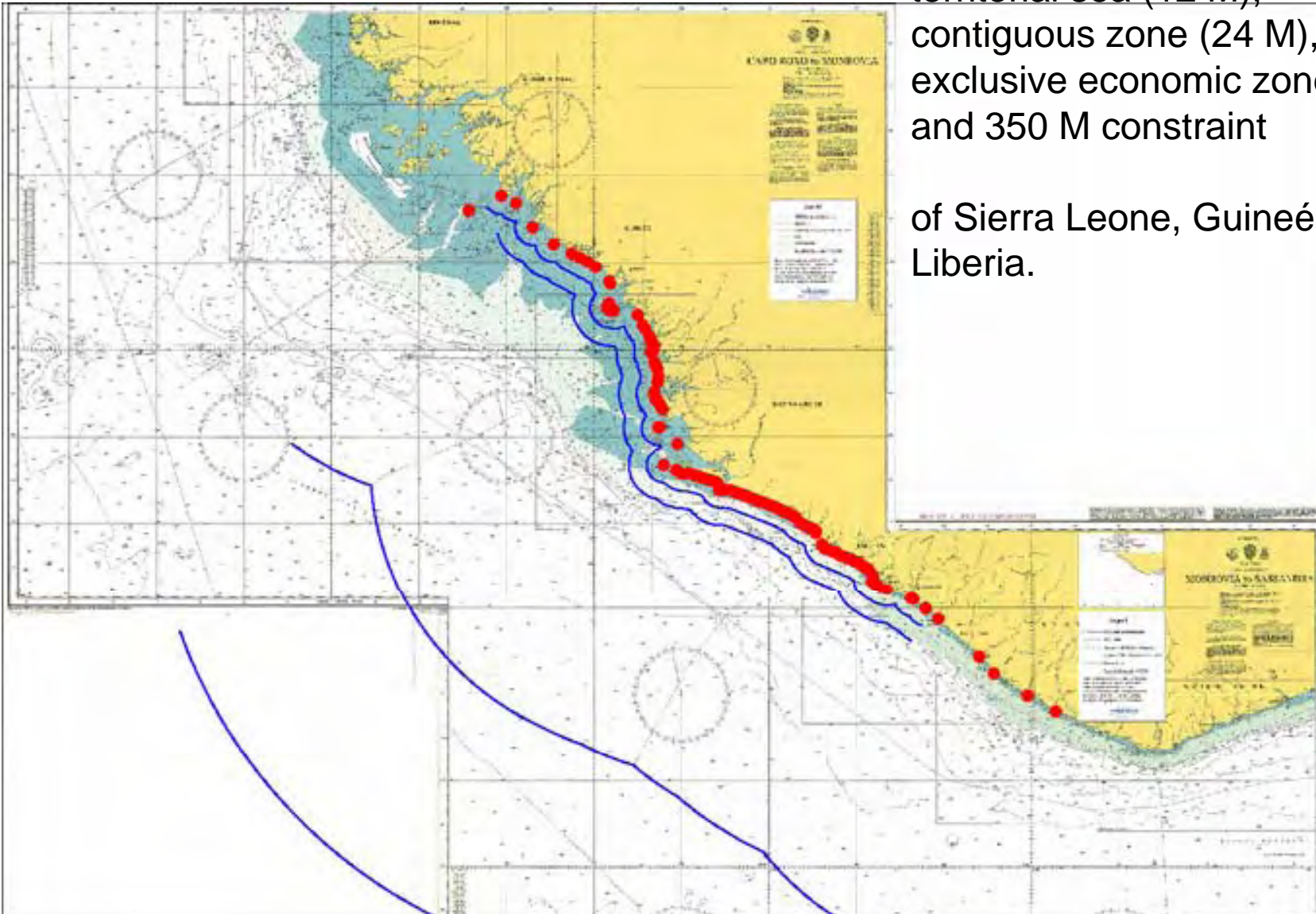


Figure 5.

Outer limit of the

territorial sea (12 M),
contiguous zone (24 M),
exclusive economic zone (200 M)
and 350 M constraint

of Sierra Leone, Guineé and
Liberia.



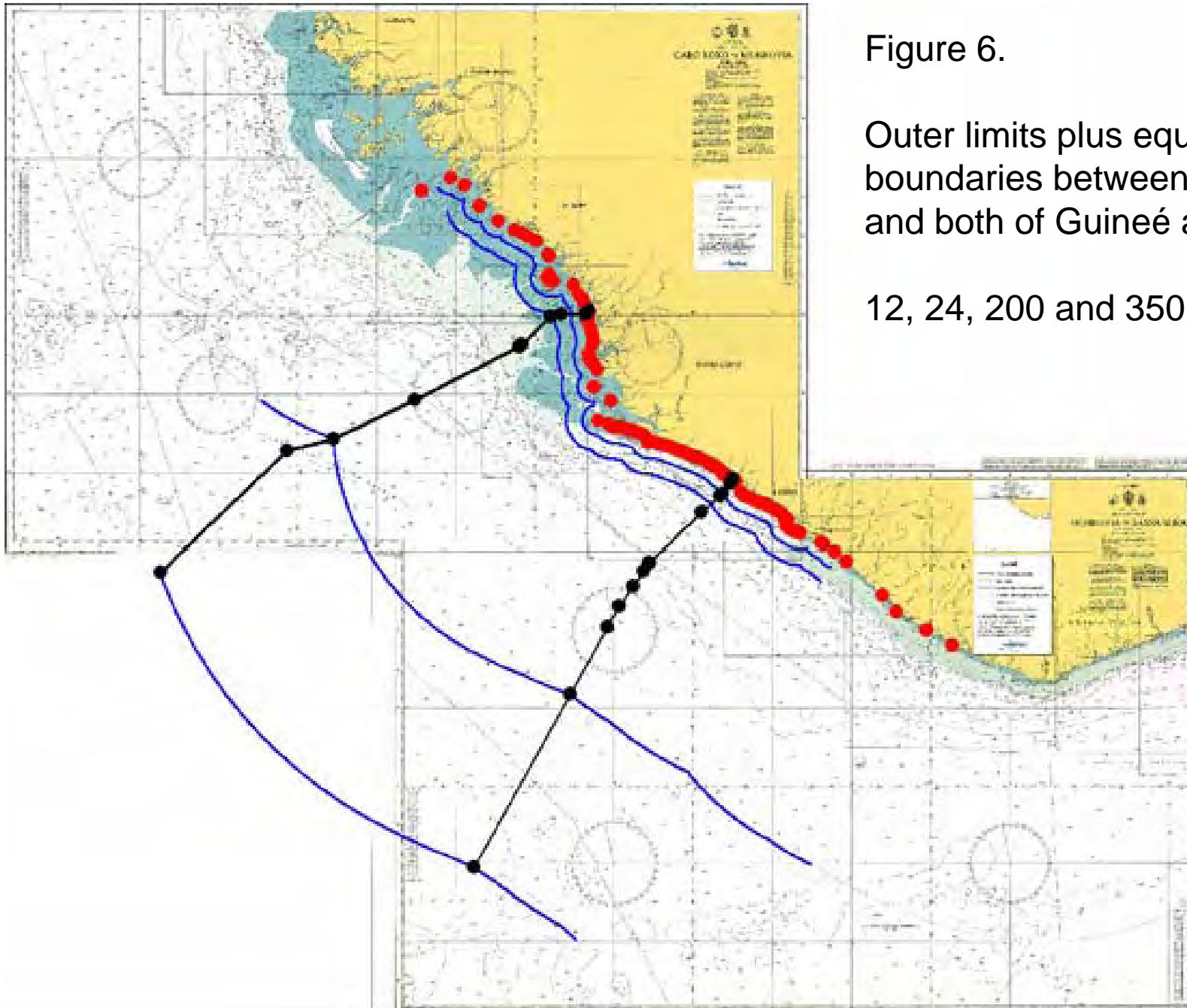


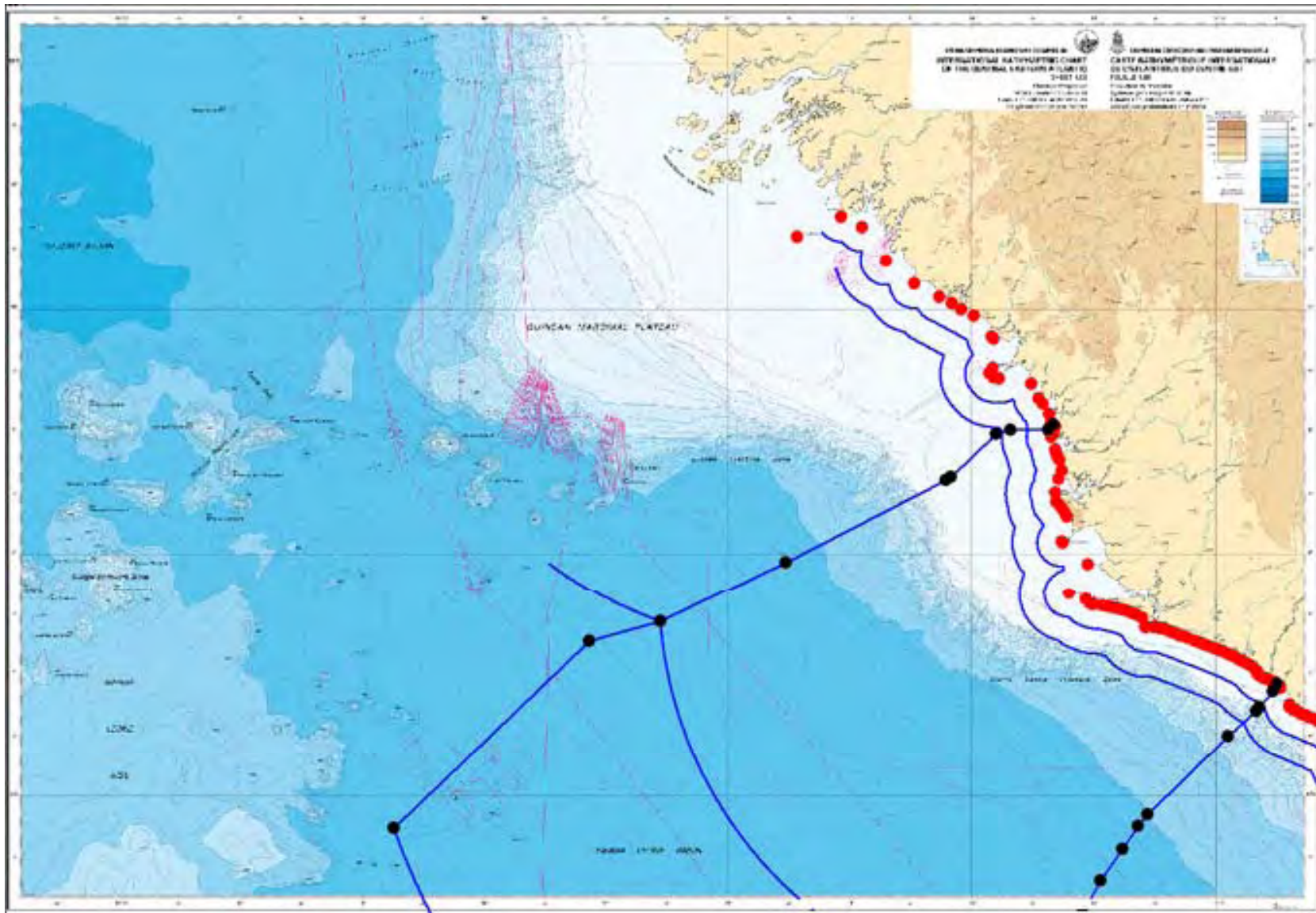
Figure 6.

Outer limits plus equidistant boundaries between Sierra Leone and both of Guineé and Liberia.

12, 24, 200 and 350 M in blue

Figure 7.

Outer limits plus equidistant boundaries between Sierra Leone and both of Guineé and Liberia



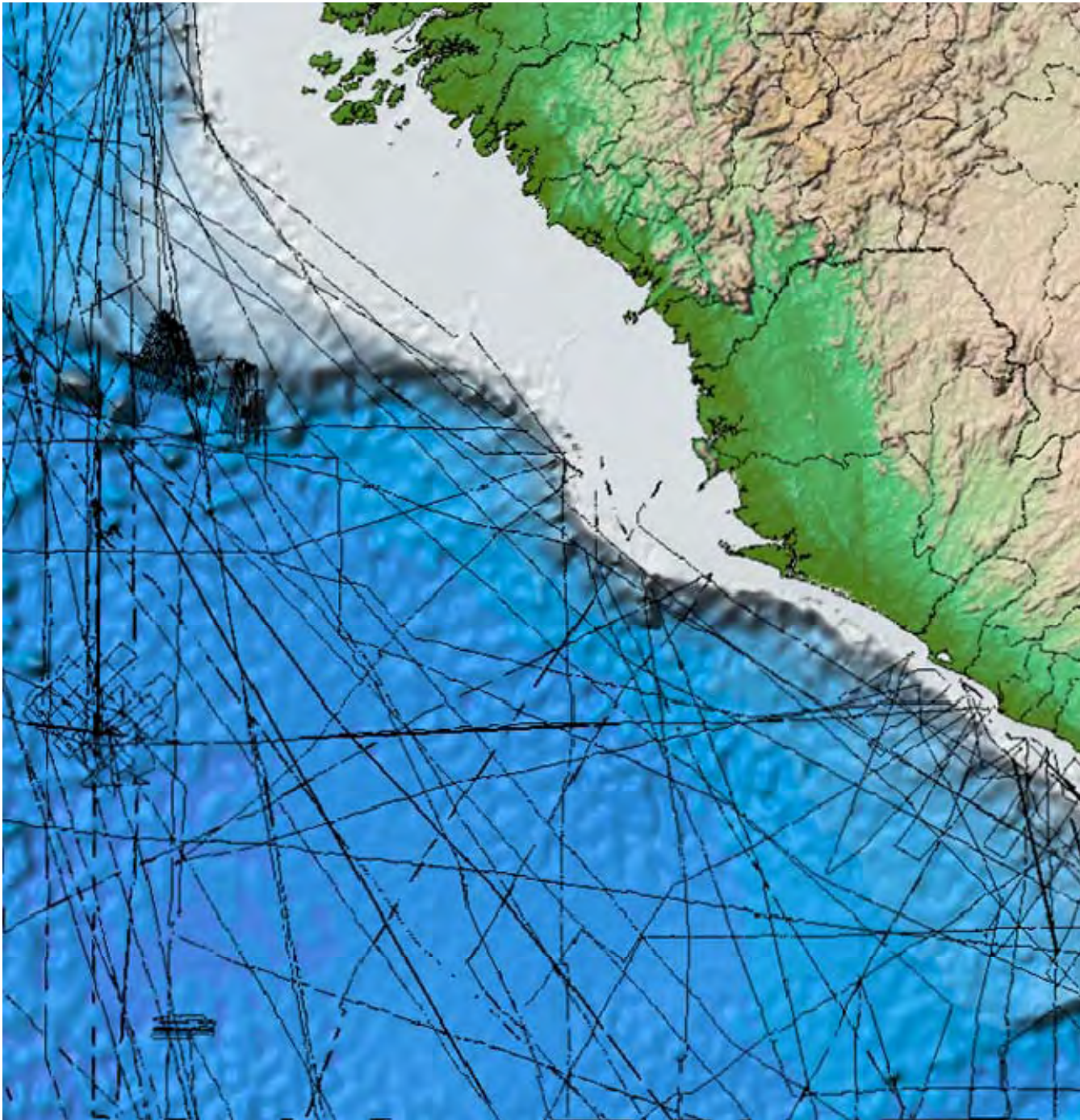


Figure 8.

Single-beam echo-sounding (SBES) data compiled from international databases in support of the Submission of Sierra Leone

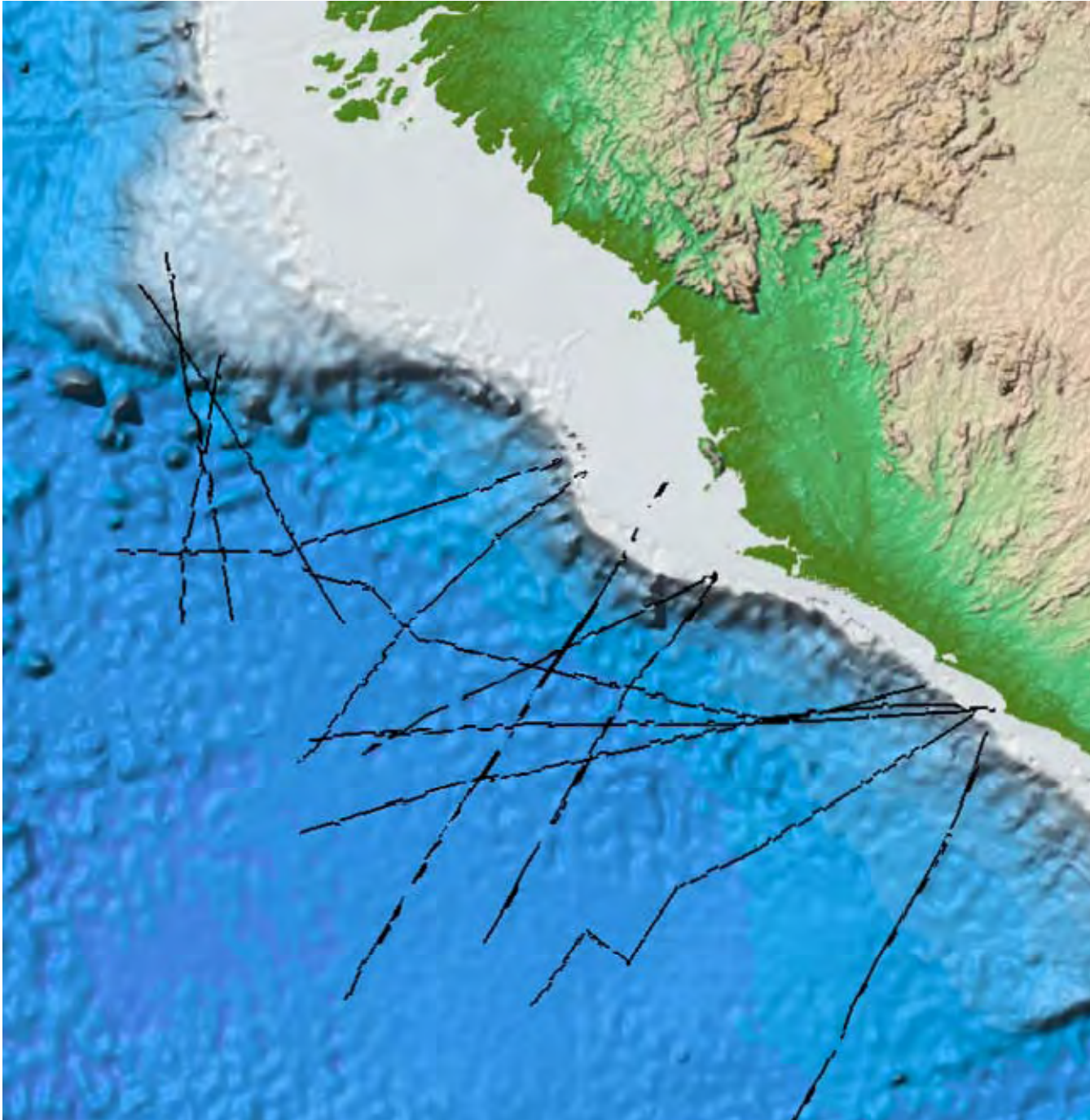


Figure 9.

Single-beam echosounding (SBES) profiles investigated for the determination of the base and the foot of the continental slope of Sierra Leone

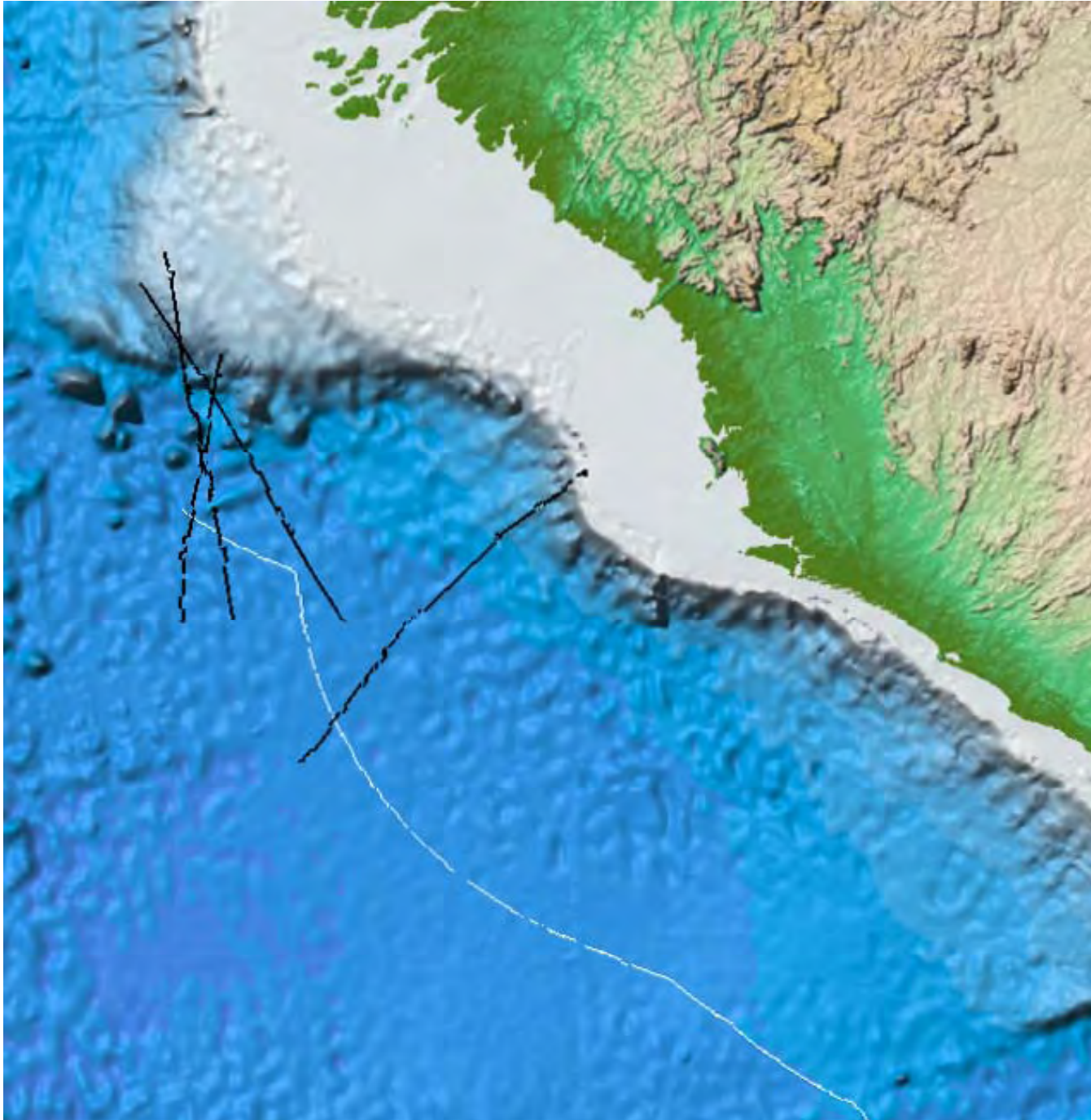
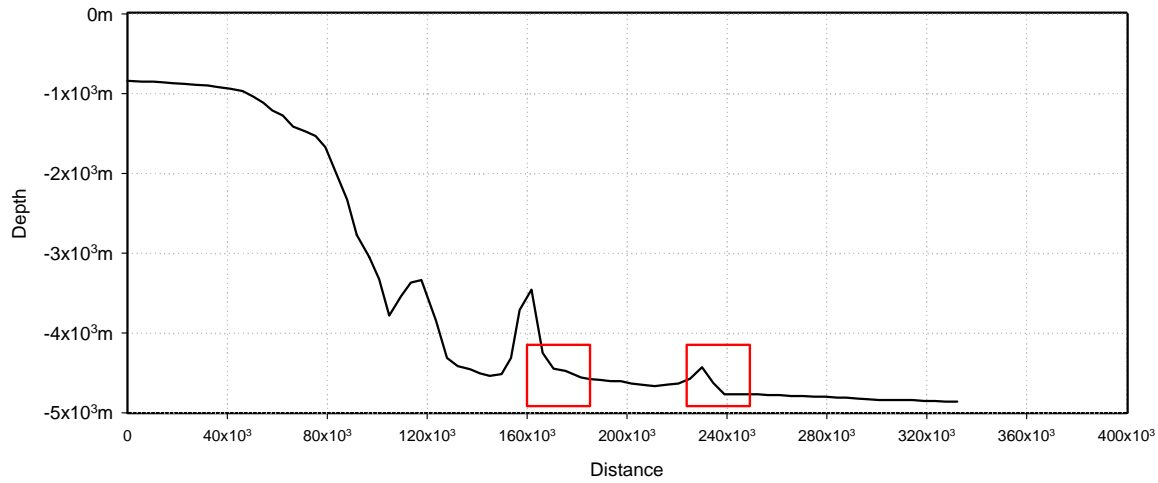


Figure 10.

Four single-beam echosounding (SBES) profiles **identified** for the determination of the base and the foot of the continental slope of Sierra Leone

Profile 19960001



Profile 88000711

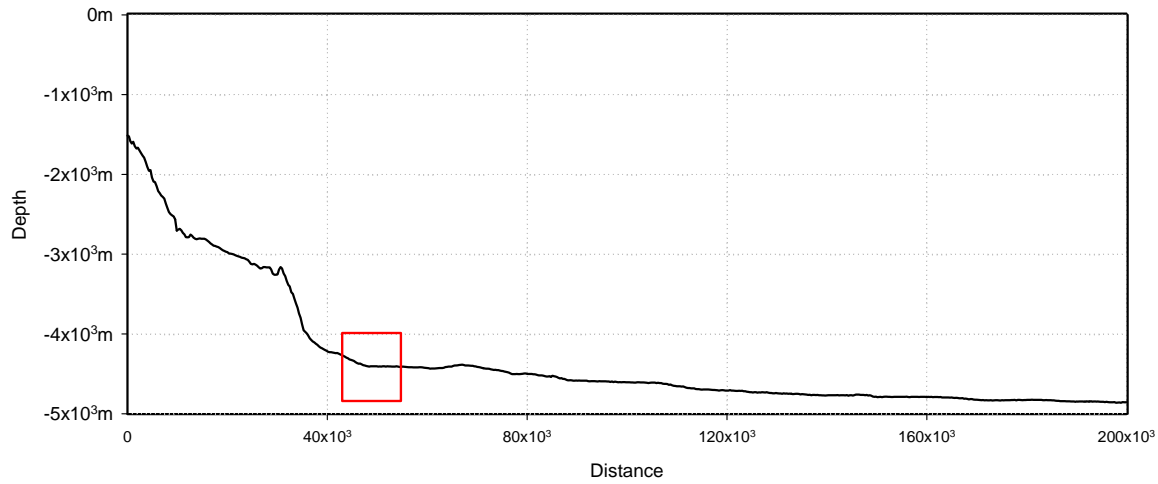


Figure 11a.

Single-beam echo-sounding (SBES) profiles analysed for the determination of the base and the foot of the continental slope of Sierra Leone

Profile a2067102

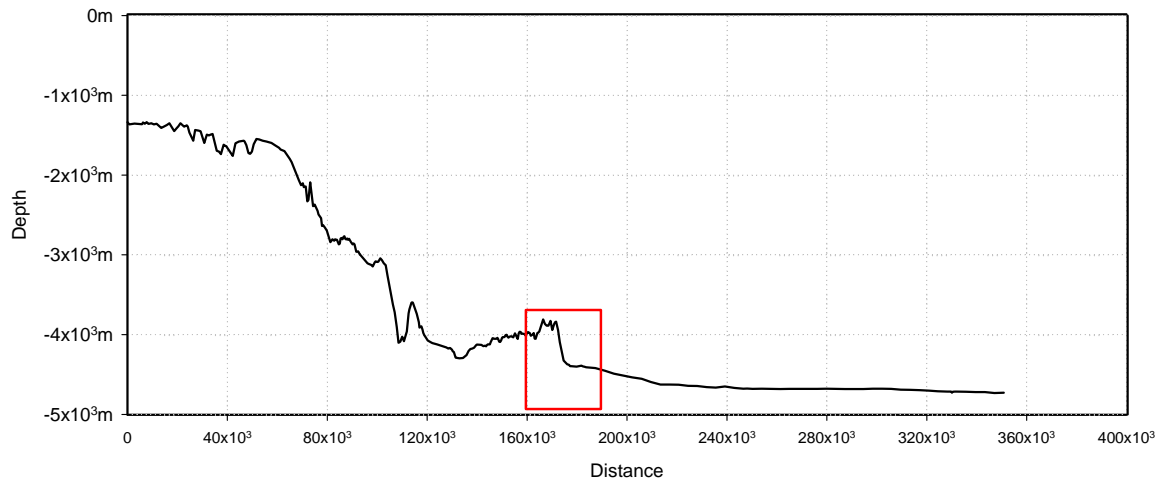
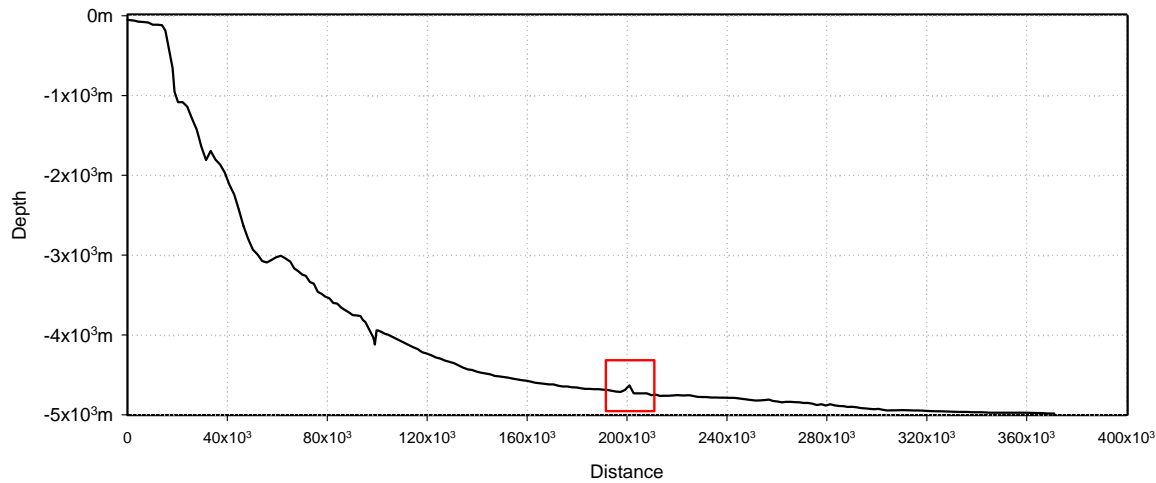


Figure 11b.

Single-beam echo-sounding (SBES) profiles analysed for the determination of the base and the foot of the continental slope of Sierra Leone

Profile P_v2908_b



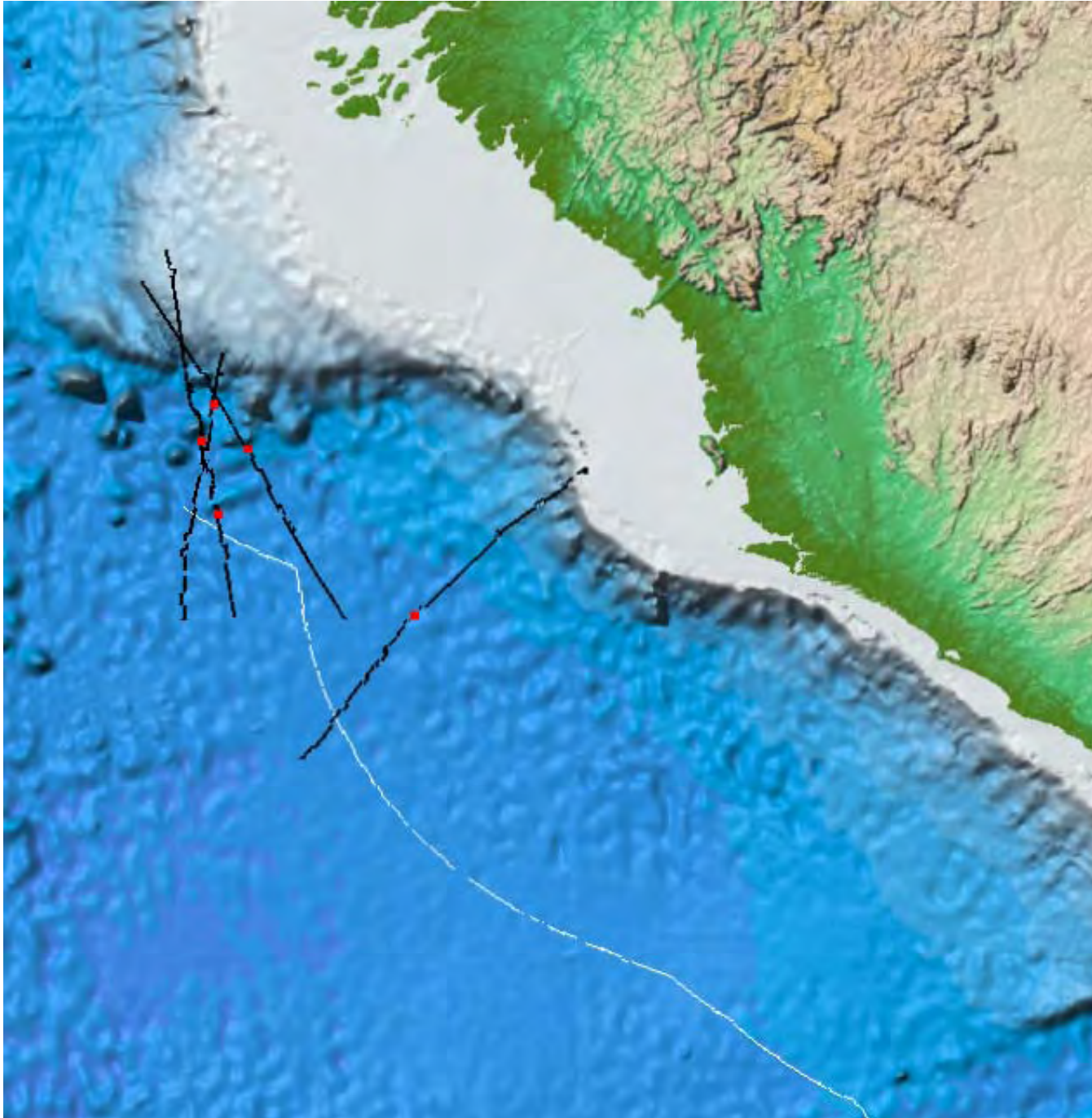


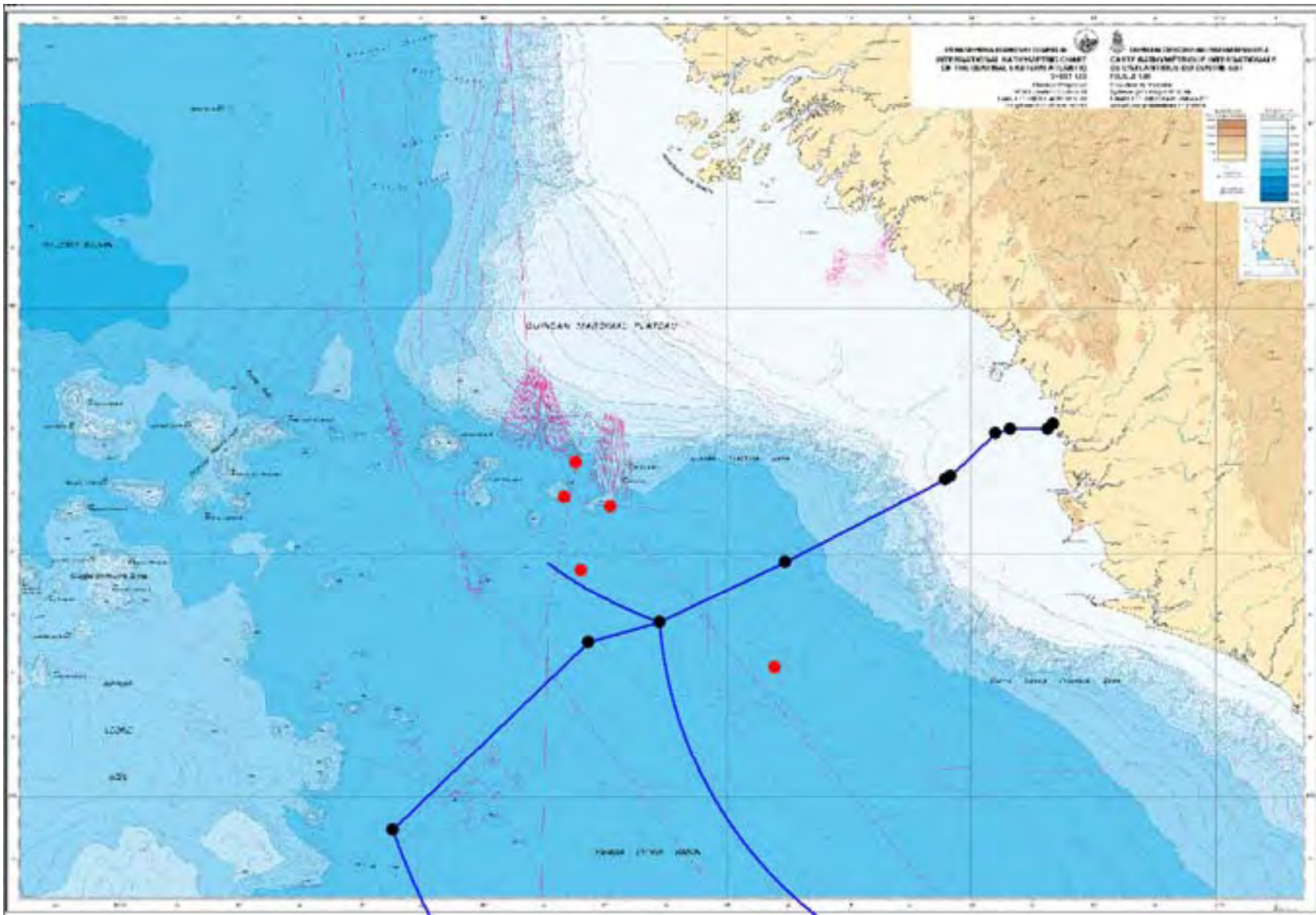
Figure 12.

Four potential locations of the foot of the continental slope along the four single-beam echo-sounding (SBES) profiles.

200 M line in white

Figure 13.

Four potential locations of the foot of the continental slope along the four single-beam echo-sounding (SBES) profiles. Equidistant, 200 M and 350 M line in blue.



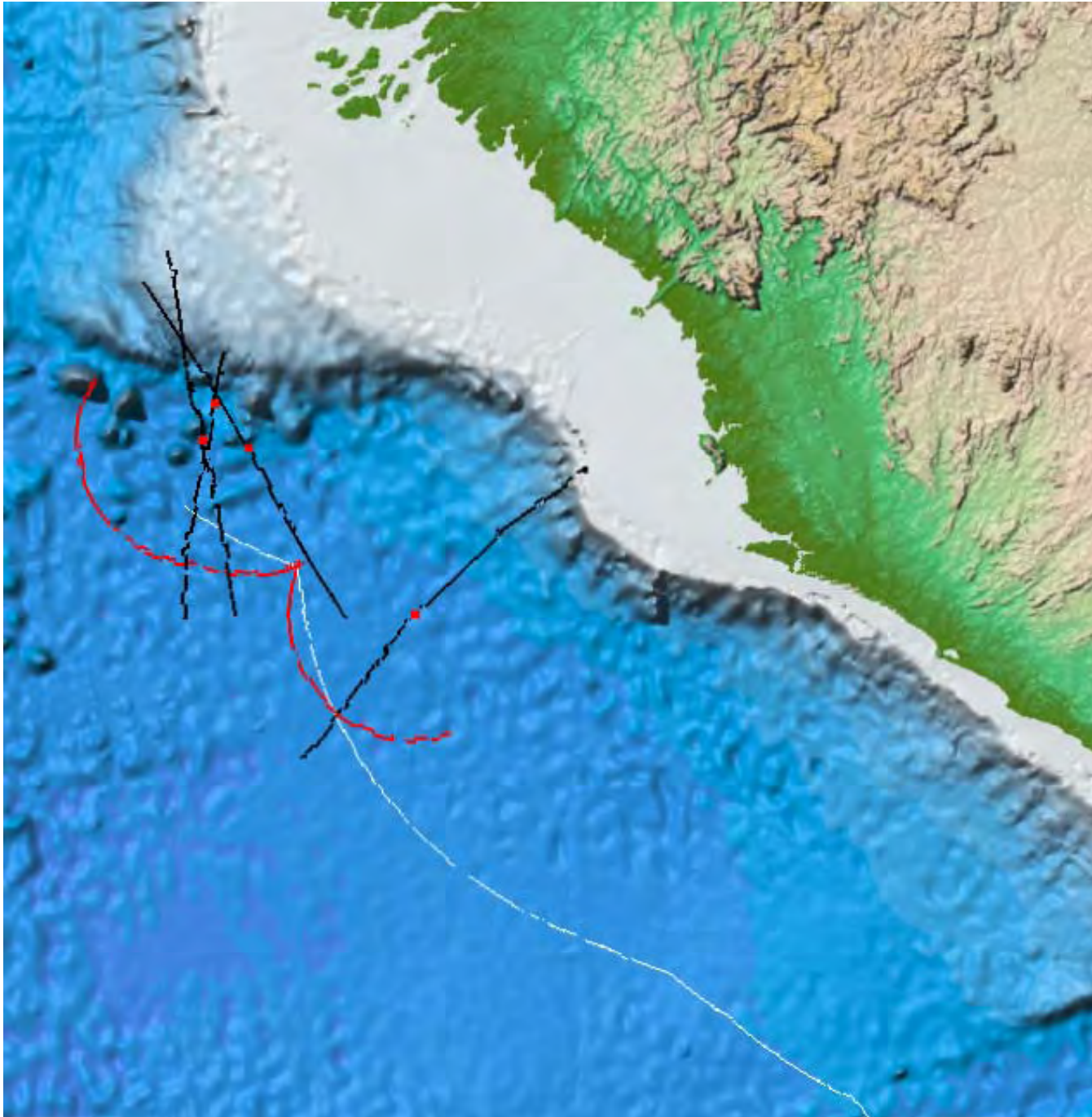


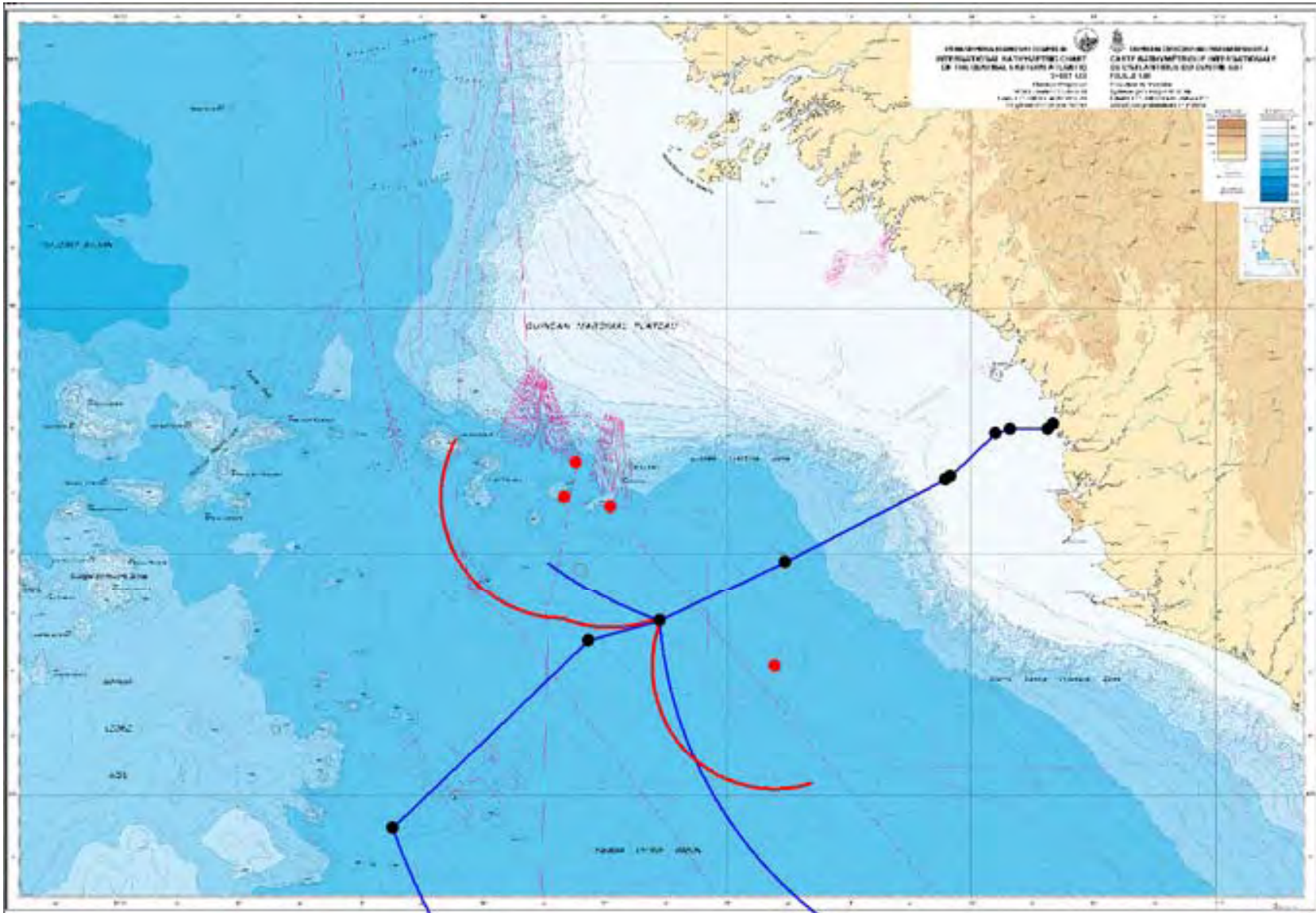
Figure 14.

Foot of the continental slope plus 60 M formula.

200 M line in white

Figure 15.

Foot of the continental slope plus 60 M formula. Equidistant, 200 M and 350 blue lines.



SIERRA LEONE CONTINENTAL SHELF OUTER LIMITS

Outer Limit Point	Latitude S	Longitude E	Distance M	Outer Limit Point	Latitude S	Longitude E	Distance M
1	8 45 32.74	18 17 19.58	0.54	219	7 25 12.98	17 14 53.76	0.538
2	8 45 1.65	18 17 29.29	0.54	220	7 25 3.52	17 14 22.62	0.538
3	8 44 30.48	18 17 38.71	0.54	221	7 24 54.33	17 13 51.40	0.538
4	8 43 59.22	18 17 47.86	0.54	222	7 24 45.42	17 13 20.10	0.538
5	8 43 27.88	18 17 56.72	0.54	223	7 24 36.79	17 12 48.72	0.538
6	8 42 56.46	18 18 5.29	0.54	224	7 24 28.45	17 12 17.27	0.538
7	8 42 24.97	18 18 13.58	0.54	225	7 24 20.38	17 11 45.74	0.538
8	8 41 53.41	18 18 21.59	0.54	226	7 24 12.60	17 11 14.14	0.538
9	8 41 21.77	18 18 29.30	0.54	227	7 24 5.10	17 10 42.47	0.538
10	8 40 50.07	18 18 36.74	0.54	228	7 23 57.88	17 10 10.73	0.538
11	8 40 18.30	18 18 43.88	0.54	229	7 23 50.95	17 9 38.94	0.538
12	8 39 46.47	18 18 50.74	0.54	230	7 23 44.31	17 9 7.08	0.538
13	8 39 14.58	18 18 57.30	0.54	231	7 23 37.94	17 8 35.16	0.538
14	8 38 42.63	18 19 3.58	0.54	232	7 23 31.87	17 8 3.19	0.538
15	8 38 10.63	18 19 9.57	0.54	233	7 23 26.08	17 7 31.16	0.538
16	8 37 38.57	18 19 15.27	0.54	234	7 23 20.58	17 6 59.09	0.538
17	8 37 6.46	18 19 20.68	0.54	235	7 23 15.36	17 6 26.96	0.538
18	8 36 34.31	18 19 25.80	0.54	236	7 23 10.43	17 5 54.79	0.538
19	8 36 2.11	18 19 30.63	0.54	237	7 23 5.79	17 5 22.58	0.538
20	8 35 29.87	18 19 35.16	0.54	238	7 23 1.44	17 4 50.33	0.538
21	8 34 57.60	18 19 39.41	0.54	239	7 22 57.38	17 4 18.04	0.538
22	8 34 25.28	18 19 43.36	0.54	240	7 22 53.60	17 3 45.71	0.538
23	8 33 52.93	18 19 47.02	0.54	241	7 22 50.12	17 3 13.35	0.538
24	8 33 20.55	18 19 50.38	0.54	242	7 22 46.92	17 2 40.96	0.538
25	8 32 48.14	18 19 53.46	0.54	243	7 22 44.02	17 2 8.55	0.538
26	8 32 15.70	18 19 56.24	0.54	244	7 22 41.40	17 1 36.11	0.538
27	8 31 43.24	18 19 58.72	0.54	245	7 22 39.08	17 1 3.65	0.538
28	8 31 10.76	18 20 0.91	0.54	246	7 22 37.04	17 0 31.17	0.538
29	8 30 38.26	18 20 2.81	0.54	247	7 22 35.30	16 59 58.67	0.538
30	8 30 5.75	18 20 4.42	0.54	248	7 22 33.85	16 59 26.15	0.538
31	8 29 33.22	18 20 5.73	0.54	249	7 22 32.69	16 58 53.63	0.538
32	8 29 0.68	18 20 6.75	0.54	250	7 22 31.81	16 58 21.10	0.538
33	8 28 28.13	18 20 7.47	0.54	251	7 22 31.23	16 57 48.56	0.538
34	8 27 55.58	18 20 7.90	0.54	252	7 22 30.95	16 57 16.01	0.538
35	8 27 23.03	18 20 8.03	0.54	253	7 22 30.95	16 56 43.47	0.538
36	8 26 50.47	18 20 7.87	0.54	254	7 22 31.24	16 56 10.92	0.538
37	8 26 17.92	18 20 7.42	0.54	255	7 22 31.83	16 55 38.38	0.538
38	8 25 45.38	18 20 6.67	0.54	256	7 22 32.70	16 55 5.85	0.538
39	8 25 12.84	18 20 5.62	0.54	257	7 22 33.87	16 54 33.32	0.538
40	8 24 40.31	18 20 4.29	0.54	258	7 22 35.33	16 54 0.81	0.538
41	8 24 7.80	18 20 2.66	0.54	259	7 22 37.07	16 53 28.31	0.538
42	8 23 35.30	18 20 0.73	0.54	260	7 22 39.11	16 52 55.83	0.538
43	8 23 2.82	18 19 58.52	0.54	261	7 22 41.44	16 52 23.37	0.538
44	8 22 30.36	18 19 56.00	0.54	262	7 22 44.06	16 51 50.93	0.538
45	8 21 57.93	18 19 53.20	0.54	263	7 22 46.97	16 51 18.51	0.538
46	8 21 25.52	18 19 50.10	0.54	264	7 22 50.17	16 50 46.13	0.538
47	8 20 53.14	18 19 46.71	0.54	265	7 22 53.66	16 50 13.77	0.538

48	8 20 20.79	18 19 43.03	0.54	266	7 22 57.44	16 49 41.44	0.538
49	8 19 48.48	18 19 39.06	0.54	267	7 23 1.51	16 49 9.15	0.538
50	8 19 16.20	18 19 34.79	0.54	268	7 23 5.86	16 48 36.90	0.538
51	8 18 43.97	18 19 30.24	0.54	269	7 23 10.51	16 48 4.69	0.538
52	8 18 11.77	18 19 25.39	0.54	270	7 23 15.44	16 47 32.52	0.538
53	8 17 39.62	18 19 20.25	0.54	271	7 23 20.66	16 47 0.40	0.538
54	8 17 7.52	18 19 14.82	0.54	272	7 23 26.17	16 46 28.32	0.538
55	8 16 35.47	18 19 9.10	0.54	273	7 23 31.96	16 45 56.30	0.538
56	8 16 3.47	18 19 3.10	0.54	274	7 23 38.04	16 45 24.33	0.538
57	8 15 31.52	18 18 56.80	0.54	275	7 23 44.41	16 44 52.41	0.538
58	8 14 59.63	18 18 50.22	0.54	276	7 23 51.06	16 44 20.55	0.538
59	8 14 27.81	18 18 43.35	0.54	277	7 23 58.00	16 43 48.76	0.538
60	8 13 56.04	18 18 36.19	0.54	278	7 24 5.22	16 43 17.02	0.538
61	8 13 24.34	18 18 28.75	0.54	279	7 24 12.72	16 42 45.35	0.538
62	8 12 52.71	18 18 21.02	0.54	280	7 24 20.51	16 42 13.76	0.538
63	8 12 21.15	18 18 13.00	0.54	281	7 24 28.58	16 41 42.23	0.538
64	8 11 49.67	18 18 4.70	0.54	282	7 24 36.93	16 41 10.77	0.538
65	8 11 18.25	18 17 56.12	0.54	283	7 24 45.56	16 40 39.40	0.538
66	8 10 46.92	18 17 47.25	0.54	284	7 24 54.47	16 40 8.10	0.538
67	8 10 15.67	18 17 38.10	0.54	285	7 25 3.67	16 39 36.88	0.538
68	8 9 44.50	18 17 28.68	0.54	286	7 25 13.14	16 39 5.74	0.538
69	8 9 13.41	18 17 18.96	0.54	287	7 25 22.88	16 38 34.69	0.538
70	8 8 42.42	18 17 8.97	0.54	288	7 25 32.91	16 38 3.73	0.538
71	8 8 11.51	18 16 58.70	0.54	289	7 25 43.21	16 37 32.86	0.538
72	8 7 40.70	18 16 48.16	0.54	290	7 25 53.79	16 37 2.09	0.538
73	8 7 9.99	18 16 37.33	0.54	291	7 26 4.65	16 36 31.41	0.538
74	8 6 39.37	18 16 26.23	0.54	292	7 26 15.77	16 36 0.83	0.538
75	8 6 8.85	18 16 14.85	0.54	293	7 26 27.17	16 35 30.35	0.538
76	8 5 38.44	18 16 3.20	0.54	294	7 26 38.85	16 34 59.97	0.538
77	8 5 8.13	18 15 51.28	0.54	295	7 26 50.79	16 34 29.70	0.538
78	8 4 37.93	18 15 39.08	0.54	296	7 27 3.01	16 33 59.53	0.538
79	8 4 7.84	18 15 26.61	0.54	297	7 27 15.49	16 33 29.48	0.538
80	8 3 37.86	18 15 13.87	0.54	298	7 27 28.24	16 32 59.54	2.658
81	8 3 8.00	18 15 0.86	0.54	299	7 24 51.01	16 32 28.40	0.54
82	8 2 38.26	18 14 47.58	0.54	300	7 24 20.45	16 32 39.80	0.54
83	8 2 8.64	18 14 34.03	0.54	301	7 23 49.78	16 32 50.91	0.54
84	8 1 39.14	18 14 20.22	0.54	302	7 23 19.02	16 33 1.75	0.54
85	8 1 9.76	18 14 6.14	0.54	303	7 22 48.16	16 33 12.31	0.54
86	8 0 40.51	18 13 51.80	0.54	304	7 22 17.21	16 33 22.60	0.54
87	8 0 11.39	18 13 37.19	0.54	305	7 21 46.16	16 33 32.60	0.54
88	7 59 42.41	18 13 22.33	0.54	306	7 21 15.03	16 33 42.32	0.54
89	7 59 13.55	18 13 7.20	0.54	307	7 20 43.81	16 33 51.76	0.54
90	7 58 44.84	18 12 51.81	0.54	308	7 20 12.50	16 34 0.91	0.54
91	7 58 16.26	18 12 36.17	0.54	309	7 19 41.12	16 34 9.78	0.54
92	7 57 47.83	18 12 20.27	0.54	310	7 19 9.65	16 34 18.37	0.54
93	7 57 19.54	18 12 4.11	0.54	311	7 18 38.11	16 34 26.68	0.54
94	7 56 51.39	18 11 47.70	0.54	312	7 18 6.50	16 34 34.69	0.54
95	7 56 23.39	18 11 31.04	0.54	313	7 17 34.81	16 34 42.43	0.54
96	7 55 55.55	18 11 14.12	0.54	314	7 17 3.06	16 34 49.87	0.54
97	7 55 27.85	18 10 56.96	0.54	315	7 16 31.24	16 34 57.03	0.54
98	7 55 0.31	18 10 39.54	0.54	316	7 15 59.36	16 35 3.90	0.54
99	7 54 32.93	18 10 21.88	0.54	317	7 15 27.42	16 35 10.48	0.54
100	7 54 5.71	18 10 3.98	0.54	318	7 14 55.41	16 35 16.77	0.54

101	7 53 38.64	18 9 45.82	0.54	319	7 14 23.36	16 35 22.78	0.54
102	7 53 11.75	18 9 27.43	0.54	320	7 13 51.25	16 35 28.49	0.54
103	7 52 45.02	18 9 8.80	0.54	321	7 13 19.09	16 35 33.91	0.54
104	7 52 18.45	18 8 49.92	0.54	322	7 12 46.88	16 35 39.05	0.54
105	7 51 52.06	18 8 30.81	0.54	323	7 12 14.63	16 35 43.89	0.54
106	7 51 25.84	18 8 11.46	0.54	324	7 11 42.34	16 35 48.44	0.54
107	7 50 59.79	18 7 51.87	0.54	325	7 11 10.01	16 35 52.70	0.54
108	7 50 33.92	18 7 32.05	0.54	326	7 10 37.63	16 35 56.66	0.54
109	7 50 8.23	18 7 12.00	0.54	327	7 10 5.23	16 36 0.34	0.54
110	7 49 42.72	18 6 51.72	0.54	328	7 9 32.79	16 36 3.72	0.54
111	7 49 17.39	18 6 31.21	0.54	329	7 9 0.33	16 36 6.81	0.54
112	7 48 52.25	18 6 10.47	0.54	330	7 8 27.84	16 36 9.60	0.54
113	7 48 27.29	18 5 49.51	0.54	331	7 7 55.32	16 36 12.10	0.54
114	7 48 2.52	18 5 28.32	0.54	332	7 7 22.78	16 36 14.31	0.54
115	7 47 37.95	18 5 6.92	0.54	333	7 6 50.23	16 36 16.22	0.54
116	7 47 13.56	18 4 45.29	0.54	334	7 6 17.65	16 36 17.84	0.54
117	7 46 49.37	18 4 23.44	0.54	335	7 5 45.07	16 36 19.17	0.54
118	7 46 25.38	18 4 1.38	0.54	336	7 5 12.47	16 36 20.20	0.54
119	7 46 1.59	18 3 39.10	0.54	337	7 4 39.87	16 36 20.93	0.54
120	7 45 37.99	18 3 16.61	0.54	338	7 4 7.26	16 36 21.38	0.54
121	7 45 14.60	18 2 53.91	0.54	339	7 3 34.65	16 36 21.53	0.54
122	7 44 51.42	18 2 30.99	0.54	340	7 3 2.04	16 36 21.38	0.54
123	7 44 28.44	18 2 7.87	0.54	341	7 2 29.43	16 36 20.94	0.54
124	7 44 5.66	18 1 44.55	0.54	342	7 1 56.82	16 36 20.21	0.54
125	7 43 43.10	18 1 21.02	0.54	343	7 1 24.23	16 36 19.18	0.54
126	7 43 20.75	18 0 57.29	0.54	344	7 0 51.64	16 36 17.86	0.54
127	7 42 58.62	18 0 33.36	0.54	345	7 0 19.07	16 36 16.24	0.54
128	7 42 36.69	18 0 9.23	0.54	346	6 59 46.51	16 36 14.33	0.54
129	7 42 14.99	17 59 44.90	0.54	347	6 59 13.98	16 36 12.13	0.54
130	7 41 53.50	17 59 20.38	0.54	348	6 58 41.46	16 36 9.63	0.54
131	7 41 32.24	17 58 55.67	0.54	349	6 58 8.97	16 36 6.84	0.54
132	7 41 11.20	17 58 30.77	0.54	350	6 57 36.50	16 36 3.76	0.54
133	7 40 50.38	17 58 5.68	0.54	351	6 57 4.06	16 36 0.38	0.54
134	7 40 29.79	17 57 40.40	0.54	352	6 56 31.66	16 35 56.71	0.54
135	7 40 9.42	17 57 14.94	0.54	353	6 55 59.29	16 35 52.75	0.54
136	7 39 49.28	17 56 49.30	0.54	354	6 55 26.95	16 35 48.50	0.54
137	7 39 29.38	17 56 23.48	0.54	355	6 54 54.66	16 35 43.96	0.54
138	7 39 9.70	17 55 57.48	0.54	356	6 54 22.40	16 35 39.12	0.54
139	7 38 50.26	17 55 31.30	0.54	357	6 53 50.20	16 35 34.00	0.54
140	7 38 31.06	17 55 4.95	0.54	358	6 53 18.04	16 35 28.58	0.54
141	7 38 12.09	17 54 38.43	0.54	359	6 52 45.93	16 35 22.88	0.54
142	7 37 53.36	17 54 11.74	0.54	360	6 52 13.87	16 35 16.88	0.54
143	7 37 34.87	17 53 44.89	0.54	361	6 51 41.87	16 35 10.60	0.54
144	7 37 16.63	17 53 17.86	0.54	362	6 51 9.92	16 35 4.03	0.54
145	7 36 58.62	17 52 50.68	0.54	363	6 50 38.04	16 34 57.17	0.54
146	7 36 40.86	17 52 23.33	0.54	364	6 50 6.22	16 34 50.03	0.54
147	7 36 23.34	17 51 55.83	0.54	365	6 49 34.46	16 34 42.60	0.54
148	7 36 6.08	17 51 28.17	0.54	366	6 49 2.78	16 34 34.88	0.54
149	7 35 49.06	17 51 0.35	0.54	367	6 48 31.16	16 34 26.88	0.54
150	7 35 32.29	17 50 32.39	0.54	368	6 47 59.62	16 34 18.59	0.54
151	7 35 15.77	17 50 4.27	0.54	369	6 47 28.15	16 34 10.02	0.54
152	7 34 59.51	17 49 36.01	0.54	370	6 46 56.76	16 34 1.16	0.54
153	7 34 43.49	17 49 7.60	0.54	371	6 46 25.45	16 33 52.03	0.54

154	7 34 27.74	17 48 39.05	0.54	372	6 45 54.23	16 33 42.61	0.54
155	7 34 12.24	17 48 10.36	0.54	373	6 45 23.09	16 33 32.91	0.54
156	7 33 57.00	17 47 41.53	0.54	374	6 44 52.04	16 33 22.93	0.54
157	7 33 42.01	17 47 12.56	0.54	375	6 44 21.08	16 33 12.67	0.54
158	7 33 27.29	17 46 43.46	0.54	376	6 43 50.22	16 33 2.13	0.54
159	7 33 12.83	17 46 14.23	0.54	377	6 43 19.45	16 32 51.32	0.54
160	7 32 58.63	17 45 44.88	0.54	378	6 42 48.78	16 32 40.23	0.54
161	7 32 44.70	17 45 15.39	0.54	379	6 42 18.21	16 32 28.86	0.54
162	7 32 31.03	17 44 45.78	0.54	380	6 41 47.75	16 32 17.22	0.54
163	7 32 17.62	17 44 16.05	0.54	381	6 41 17.39	16 32 5.31	0.54
164	7 32 4.48	17 43 46.20	0.54	382	6 40 47.14	16 31 53.12	0.54
165	7 31 51.61	17 43 16.24	0.54	383	6 40 17.00	16 31 40.66	0.54
166	7 31 39.01	17 42 46.16	0.54	384	6 39 46.97	16 31 27.93	0.54
167	7 31 26.68	17 42 15.96	0.54	385	6 39 17.06	16 31 14.93	0.54
168	7 31 14.63	17 41 45.66	0.54	386	6 38 47.27	16 31 1.66	0.54
169	7 31 2.84	17 41 15.25	0.54	387	6 38 17.60	16 30 48.12	0.54
170	7 30 51.32	17 40 44.74	0.54	388	6 37 48.05	16 30 34.32	0.54
171	7 30 40.08	17 40 14.12	0.54	389	6 37 18.63	16 30 20.25	0.54
172	7 30 29.12	17 39 43.41	0.54	390	6 36 49.33	16 30 5.92	0.54
173	7 30 18.43	17 39 12.60	0.54	391	6 36 20.17	16 29 51.32	0.54
174	7 30 8.02	17 38 41.69	0.54	392	6 35 51.14	16 29 36.46	0.54
175	7 29 57.88	17 38 10.69	0.54	393	6 35 22.24	16 29 21.34	0.54
176	7 29 48.02	17 37 39.60	0.54	394	6 34 53.48	16 29 5.97	0.54
177	7 29 38.44	17 37 8.42	0.54	395	6 34 24.86	16 28 50.33	0.54
178	7 29 29.15	17 36 37.16	0.54	396	6 33 56.38	16 28 34.44	0.54
179	7 29 20.13	17 36 5.82	0.54	397	6 33 28.05	16 28 18.29	0.54
180	7 29 11.39	17 35 34.40	0.54	398	6 32 59.86	16 28 1.89	0.54
181	7 29 2.94	17 35 2.90	0.54	399	6 32 31.82	16 27 45.23	0.54
182	7 28 54.76	17 34 31.32	0.54	400	6 32 3.94	16 27 28.32	0.54
183	7 28 46.87	17 33 59.67	0.54	401	6 31 36.20	16 27 11.17	0.54
184	7 28 39.27	17 33 27.96	0.54	402	6 31 8.63	16 26 53.76	0.54
185	7 28 31.95	17 32 56.17	0.54	403	6 30 41.21	16 26 36.11	0.54
186	7 28 24.91	17 32 24.33	0.54	404	6 30 13.95	16 26 18.21	0.54
187	7 28 18.16	17 31 52.42	0.54	405	6 29 46.85	16 26 0.06	0.54
188	7 28 11.70	17 31 20.45	0.54	406	6 29 19.92	16 25 41.68	0.54
189	7 28 5.52	17 30 48.42	0.54	407	6 28 53.15	16 25 23.05	0.54
190	7 27 59.63	17 30 16.34	0.54	408	6 28 26.55	16 25 4.18	0.54
191	7 27 54.03	17 29 44.21	0.54	409	6 28 0.12	16 24 45.08	0.54
192	7 27 48.72	17 29 12.03	0.54	410	6 27 33.87	16 24 25.73	0.54
193	7 27 43.69	17 28 39.80	0.54	411	6 27 7.79	16 24 6.15	0.54
194	7 27 38.96	17 28 7.53	0.54	412	6 26 41.89	16 23 46.34	0.54
195	7 27 34.51	17 27 35.22	0.54	413	6 26 16.17	16 23 26.30	0.54
196	7 27 30.36	17 27 2.87	0.54	414	6 25 50.63	16 23 6.02	0.54
197	7 27 26.49	17 26 30.48	0.54	415	6 25 25.27	16 22 45.52	0.54
198	7 27 22.91	17 25 58.06	0.54	416	6 25 0.10	16 22 24.79	0.54
199	7 27 19.63	17 25 25.61	0.54	417	6 24 35.12	16 22 3.83	0.54
200	7 27 16.63	17 24 53.13	0.54	418	6 24 10.33	16 21 42.65	0.54
201	7 27 13.93	17 24 20.62	0.54	419	6 23 45.73	16 21 21.25	0.54
202	7 27 11.52	17 23 48.10	0.54	420	6 23 21.32	16 20 59.63	0.54
203	7 27 9.40	17 23 15.55	0.54	421	6 22 57.11	16 20 37.79	0.54
204	7 27 7.57	17 22 42.98	0.54	422	6 22 33.09	16 20 15.73	0.54
205	7 27 6.03	17 22 10.40	0.54	423	6 22 9.28	16 19 53.46	0.54
206	7 27 4.79	17 21 37.81	0.54	424	6 21 45.67	16 19 30.98	0.54

207	7 27 3.84	17 21 5.21	0.54	425	6 21 22.26	16 19 8.28	0.54
208	7 27 3.18	17 20 32.60	0.54	426	6 20 59.05	16 18 45.37	0.54
209	7 27 2.81	17 19 59.98	0.538	427	6 20 36.05	16 18 22.26	0.54
210	7 26 50.60	17 19 29.82	0.538	428	6 20 13.27	16 17 58.94	0.54
211	7 26 38.66	17 18 59.54	0.538	429	6 19 50.69	16 17 35.42	0.54
212	7 26 26.99	17 18 29.16	0.538	430	6 19 28.33	16 17 11.69	0.54
213	7 26 15.59	17 17 58.68	0.538	431	6 19 6.18	16 16 47.77	0.54
214	7 26 4.47	17 17 28.10	0.538	432	6 18 44.24	16 16 23.64	0.54
215	7 25 53.62	17 16 57.42	0.538	433	6 18 22.53	16 15 59.33	0.54
216	7 25 43.05	17 16 26.64	0.538	434	6 18 1.03	16 15 34.81	0.54
217	7 25 32.75	17 15 55.77	0.538	435	6 17 39.76	16 15 10.11	-
218	7 25 22.73	17 15 24.81	0.538				