GULF OF MAINE (JUDGMENT)

243. For these reasons,

THE CHAMBER,

By four votes to one,

Decides

That the course of the single maritime boundary that divides the continental shelf and the exclusive fisheries zones of Canada and the United States of America in the area referred to in the Special Agreement concluded by those two States on 29 March 1979 shall be defined by geodetic lines connecting the points with the following co-ordinates:

<table>
<thead>
<tr>
<th>Latitude North</th>
<th>Longitude West</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 44° 11' 12&quot;</td>
<td>67° 16' 46&quot;</td>
</tr>
<tr>
<td>B 42° 53' 14&quot;</td>
<td>67° 44' 35&quot;</td>
</tr>
<tr>
<td>C 42° 31' 08&quot;</td>
<td>67° 28' 05&quot;</td>
</tr>
<tr>
<td>D 40° 27' 05&quot;</td>
<td>65° 41' 59&quot;</td>
</tr>
</tbody>
</table>

IN FAVOUR: President Ago; Judges Mosler, Schwebel; Judge ad hoc Cohen;
AGAINST: Judge Gros.

Done in French and in English, the French text being authoritative, at the Peace Palace, The Hague, this twelfth day of October one thousand nine hundred and eighty-four, in three copies, one of which will be placed in the archives of the Court and the others transmitted to the Government of Canada and the Government of the United States of America respectively.

(Signed) Roberto AGO,
President of the Chamber.

(Signed) Santiago TORRES BERNÁRDEZ.
Registrar.

Judge SCHWEBEL appends a separate opinion to the Judgment of the Chamber.

Judge GROS appends a dissenting opinion to the Judgment of the Chamber.

(Initialled) R.A.
(Initialled) S.T.B.
Delimitation of the Maritime Boundary in the Gulf of Maine Area

TECHNICAL REPORT


1. To conform to Article II (2) and Article IV (b) of the Special Agreement, and to achieve consistency between the delimitation line and the method of its construction, all lines are taken to be geodetic lines.

2. For practical application of the methods described in the Judgment for determination of the first two segments of the line calculations have been made on the Universal Transverse Mercator grid using a Central Meridian of 68° West. The course of the closing line of the Gulf and the perpendicular to it have been determined using geodetic azimuths. Computations were based on the Clarke 1866 spheroid. The basepoints having been determined to a second of arc the final positions of the delimitation line have been defined in whole seconds of arc also.

3. Positions of the various coastal points were found to be as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Latitude N</th>
<th>Longitude W</th>
<th>Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE tip of Nantucket Island</td>
<td>41° 15' 04&quot;</td>
<td>69° 58' 01&quot;</td>
<td>13241</td>
</tr>
<tr>
<td>LWL position for determining 200' limit</td>
<td>41° 15' 56&quot;</td>
<td>69° 57' 37&quot;</td>
<td>13241</td>
</tr>
<tr>
<td>Cape Cod elbow</td>
<td>41° 38' 35&quot;</td>
<td>69° 57' 15&quot;</td>
<td>13248</td>
</tr>
<tr>
<td>Position on Cape Cod nearest to Chebo­-</td>
<td>42° 00' 31&quot;</td>
<td>70° 01' 36&quot;</td>
<td>13246</td>
</tr>
<tr>
<td>Name</td>
<td>Latitude N</td>
<td>Longitude W</td>
<td>Chart</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------</td>
<td>------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Cape Ann</td>
<td>42° 38' 12&quot;</td>
<td>70° 34' 27&quot;</td>
<td>13279 US</td>
</tr>
<tr>
<td>Cape Elizabeth</td>
<td>43° 33' 41&quot;</td>
<td>70° 12' 02&quot;</td>
<td>13290 US</td>
</tr>
<tr>
<td>International Boundary Terminus (TP15)</td>
<td>44° 46' 35.3&quot;</td>
<td>66° 54' 11.3&quot;</td>
<td></td>
</tr>
<tr>
<td>North coast of Bay of Fundy</td>
<td>45° 16' 31&quot;</td>
<td>65° 41' 01&quot;</td>
<td>4010 Canadian</td>
</tr>
<tr>
<td>South coast of Bay of Fundy</td>
<td>44° 53' 49&quot;</td>
<td>65° 22' 47&quot;</td>
<td>4010 Canadian</td>
</tr>
<tr>
<td>Brier Island (Whipple Point)</td>
<td>44° 14' 11&quot;</td>
<td>66° 23' 50&quot;</td>
<td>4324 Canadian</td>
</tr>
<tr>
<td>Chebogue Point</td>
<td>43° 43' 57&quot;</td>
<td>66° 07' 18&quot;</td>
<td>4326 Canadian</td>
</tr>
<tr>
<td>Cape Sable</td>
<td>43° 23' 22&quot;</td>
<td>65° 37' 23&quot;</td>
<td>4216 Canadian</td>
</tr>
<tr>
<td>Seal Island (SW point)</td>
<td>43° 23' 33&quot;</td>
<td>66° 01' 21&quot;</td>
<td>4330 Canadian</td>
</tr>
</tbody>
</table>

4. All positions are on 1927 North American Datum. Corrections have been applied to positions from the Canadian charts as indicated in the Agent for Canada's letter to the Registrar dated 18 April 1984. The Annex lists the rectangular UTM co-ordinates of some of these positions.

5. The two positions in the Bay of Fundy were determined by plotting taking account of the fact that the most easterly point of a 12-mile limit (depending on the low-water lines of Quaco Ledge and the southern shore of the Bay) was found to be at 45° 04' 21" N, 65° 31' 11" W approximately.

6. For calculation of the ratio of coastal lengths the following true distances in nautical miles were determined:

   Cape Cod Elbow to Cape Ann              65.7
   Cape Ann to Cape Elizabeth              57.9
   Cape Elizabeth to Boundary Terminus     160.0

   TOTAL United States coastline          283.6  (284)  

   Boundary terminus to N coast of Bay of Fundy  59.9
   N coast to S coast of Bay of Fundy        26.1
   S coast of Bay of Fundy to Whipple Point  59.0

   Whipple Point to Cape Sable              60.9
   TOTAL Canadian coastline                 205.9  (206)
Therefore the ratio of coastline lengths United States : Canada is

1.38 : 1

7. To determine the course of the bisector, forming the first segment of the line, UTM grid bearings were determined:

- Boundary terminus to Cape Elizabeth: 243° 16' 24"
- Boundary terminus to Cape Sable: 145° 09' 30"

Therefore the perpendiculare from A to these lines are, respectively,

333° 16' 24"
055° 09' 30"

and the course of the bisector lies along the grid bearing

194° 12' 57"

8. To determine the direction of the median line, which forms the basis of the second segment of the delimitation line, it is necessary to make allowance for a change of scale factor between the southeastern and northwestern ends of the two controlling lines. The grid bearings of the controlling lines are:

- Cape Cod Elbow to Cape Ann: 336° 36' 32.5"
- Cape Sable to Whipple Point: 325° 07' 14.9"

9. A mid-point between Whipple Point and the Cape Ann to Cape Cod line will lie on a grid bearing from Whipple Point of

240° 51' 53.7"

and will intersect the line at position

(1) 42° 32' 29.6" N 70° 30' 49.8" W.

The mid-point of this line after correcting for scale factor is

(2) 43° 24' 27.0" N 68° 29' 03.0" W.

10. Similarly a mid-point between Cape Cod Elbow and the Whipple Point to Cape Sable line lies on the reciprocal bearing which intersects at

(3) 43° 24' 38.4" N 65° 38' 31.7" W

and the corrected mid-point is

(4) 42° 32' 50.1" N 67° 49' 42.9" W.
11. The grid bearing between these two corrected mid points is the
direction of the median line which is

\[150° 52' 34.3''\]

12. *To determine the location of the second segment* of the line I under-
stand my instructions from the Chamber to be to give half-effect to Seal
Island when applying the ratio in which the line from Chebogue Point to
the nearest point on Cape Cod (the location line) is to be divided. To effect
this; Seal Island must be related to Chebogue Point and the location line
rather than to the coast nearest to the island.

13. The true (geodetic) length of the location line was found to be

\[372 088\] metres

and the grid bearing from Chebogue Point is

\[239° 04' 36.1''\].

A line parallel to the line from Cape Sable to Whipple Point (representing
the coastal front of Nova Scotia) drawn from the southwestern point of Seal
Island intersects the location line at a true distance of 14 234 metres from
Chebogue Point. A position 7 117 metres along the location line from
Chebogue Point would then represent a notional half-effect position for
the island. Applying the ratio of 1.38:1 on the location line between Cape
Cod and the half-effect position of the island divides the line at a position
153 349 metres from the half effect position, or

\[160 466\] metres (grid distance 160 418 metres)

from Chebogue Point. This represents a division of the whole location line
in the ratio 1.319:1 (1.32:1). The co-ordinates of this point are

\[(5)\ 43° 00' 19.8''\ N \ 67° 49' 56.7''\ W.\]

14. A line of grid bearing 150° 52' 34.3'' from this point intersects the
bisector from A at position

\[B\ 42° 53' 14''\ N \ 67° 44' 35''\ W\]

which is the first turning point on the line of delimitation. A line on the
same grid bearing intercepts the geodetic line (geodesic) between Nan-
tucket and Cape Sable at position

\[C\ 42° 31' 08''(.35)\ N \ 67° 28' 05''(.33)\ W\]

which is the second turning point on the line of delimitation.
15. The azimuth of the geodetic line between Nantucket and Cape Sable at position C is

\[
\begin{array}{cc}
N & E \\
56° 39' 49" \\
S & W
\end{array}
\]

so that the required perpendicular has an azimuth of

\[
S 33° 20' 11" E.
\]

The last place on the path of this perpendicular where the 200-mile zones claimed by the two Parties overlap is a point 200 nautical miles from the nearest point of the low-water line of the United States of America. The relevant point of the low-water line is given at paragraph 3 above, and the point of intersection between the perpendicular and a 200-nautical mile arc drawn from that point is position

\[
D \quad 40° 27' 05" N \quad 65° 41' 59" W
\]

which also lies within the area laid down in Article II of the Special Agreement.

16. The delimitation line is therefore defined by geodetic lines joining in succession the following positions the co-ordinates of which are given in 1927 North American Datum :

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>44° 11' 12&quot; N</td>
<td>67° 16' 46&quot; W</td>
</tr>
<tr>
<td>B</td>
<td>42° 53' 14&quot; N</td>
<td>67° 44' 35&quot; W</td>
</tr>
<tr>
<td>C</td>
<td>42° 31' 08&quot; N</td>
<td>67° 28' 05&quot; W</td>
</tr>
<tr>
<td>D</td>
<td>40° 27' 05&quot; N</td>
<td>65° 41' 59&quot; W</td>
</tr>
</tbody>
</table>

This line crosses Georges Bank, as defined by the 100-fathom contour on Canadian chart 8005, at positions

\[
\begin{array}{cc}
42° 11'.8 N & 67° 11'.0 W \\
41° 10'.1 N & 66° 17'.9 W
\end{array}
\]

but these positions do not form part of the definition of the delimitation line.

Done in one copy, in English, at The Hague, 3 October 1984.

(Signed) P. B. BEAZLEY.
List or UTM rectangular co-ordinates of certain positions mentioned in the Report. Central Meridian 68° W; Clarke’s 1866 spheroid.

<table>
<thead>
<tr>
<th>Position</th>
<th>Easting</th>
<th>Northing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape Cod Elbow</td>
<td>337 251.1</td>
<td>4 611 778.0</td>
</tr>
<tr>
<td>Position on Cape Cod nearest to Chebogue Point</td>
<td>332 170.6</td>
<td>4 652 505.7</td>
</tr>
<tr>
<td>Cape Ann</td>
<td>288 940.0</td>
<td>4 723 466.6</td>
</tr>
<tr>
<td>Cape Elizabeth</td>
<td>322 270.6</td>
<td>4 825 296.1</td>
</tr>
<tr>
<td>TP15</td>
<td>586 787.5</td>
<td>4 958 487.9</td>
</tr>
<tr>
<td>Whipple Point</td>
<td>627 994.2</td>
<td>4 899 161.2</td>
</tr>
<tr>
<td>Chebogue Point</td>
<td>651 274.2</td>
<td>4 843 661.5</td>
</tr>
<tr>
<td>Cape Sable</td>
<td>692 521.4</td>
<td>4 806 592.0</td>
</tr>
<tr>
<td>Seal Island</td>
<td>660 159.4</td>
<td>4 806 086.4</td>
</tr>
<tr>
<td>A</td>
<td>557 590.2</td>
<td>4 892 641.9</td>
</tr>
<tr>
<td>(1)</td>
<td>293 572.8</td>
<td>4 712 756.3</td>
</tr>
<tr>
<td>(2)</td>
<td>460 796.9</td>
<td>4 805 966.2</td>
</tr>
<tr>
<td>(3)</td>
<td>690 908.9</td>
<td>4 808 905.2</td>
</tr>
<tr>
<td>(4)</td>
<td>514 074.6</td>
<td>4 710 338.6</td>
</tr>
<tr>
<td>(5)</td>
<td>513 658.6</td>
<td>4 761 224.3</td>
</tr>
<tr>
<td>B</td>
<td>520 972.0</td>
<td>4 748 097.5</td>
</tr>
<tr>
<td>C</td>
<td>543 688.4</td>
<td>4 707 324.0</td>
</tr>
</tbody>
</table>

(position C is on the geodesic between Cape Sable and Nantucket about 7 metres from the grid line joining those points).
DELIMITATION LINE DRAWN BY THE CHAMBER