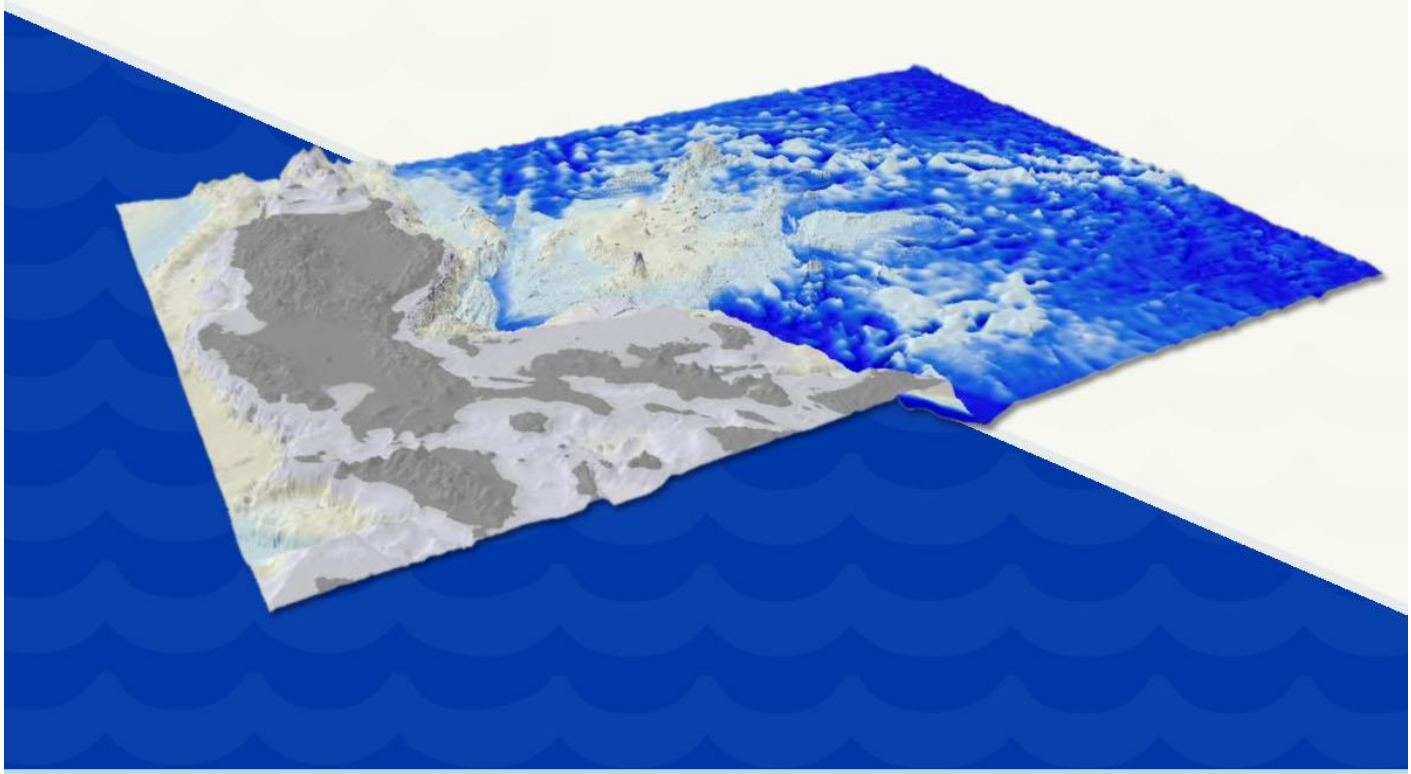
A Partial Submission of Data and Information on the Outer Limits of the Continental Shelf of the Republic of the Philippines Pursuant to Article 76 (8) of the United Nations Convention on the Law of the Sea



PART I - EXECUTIVE SUMMARY

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE SUMMARY

1.0 INTRODUCTION

The Republic of the Philippines presents to the Commission on the Limits of the Continental Shelf (CLCS), this partial submission containing information on the outer limits of a portion of its continental shelf extending beyond 200 nautical miles (M) from the baselines from which the breadth of the territorial sea is measured in accordance with the 1982 United Nations Convention on the Law of the Sea (UNCLOS). This Submission is made without prejudice to the right of the Philippines to make other submissions for other areas at a future time.

The Philippines is located in Southeast Asia, surrounded by the Philippine Sea to the East, the South China Sea to the West, the Bashi Channel to the North, and Celebes Sea, Malaysia and Indonesia to the South (Figure 1). This Submission establishes that the natural prolongation of the Philippine territory from its coast to the outer edge of the continental margin extends beyond 200 M in the Benham Rise Region east of Luzon, one of the main islands of the Philippines. Hydrographic, geological, and geophysical data and information collected by the Philippines, together with those compiled from acknowledged international scientific investigations, are used in a manner consistent with accepted international scientific practices to determine the geomorphology and geological nature, structure, and extent of the continental shelf beyond 200 M in that region. The outer limits of the continental shelf beyond 200 M in this area are delineated in accordance with the rules and methodologies described in the provisions of Article 76 of UNCLOS and the Scientific and Technical Guidelines of the Commission on the Limits of the Continental Shelf (CLCS/11).

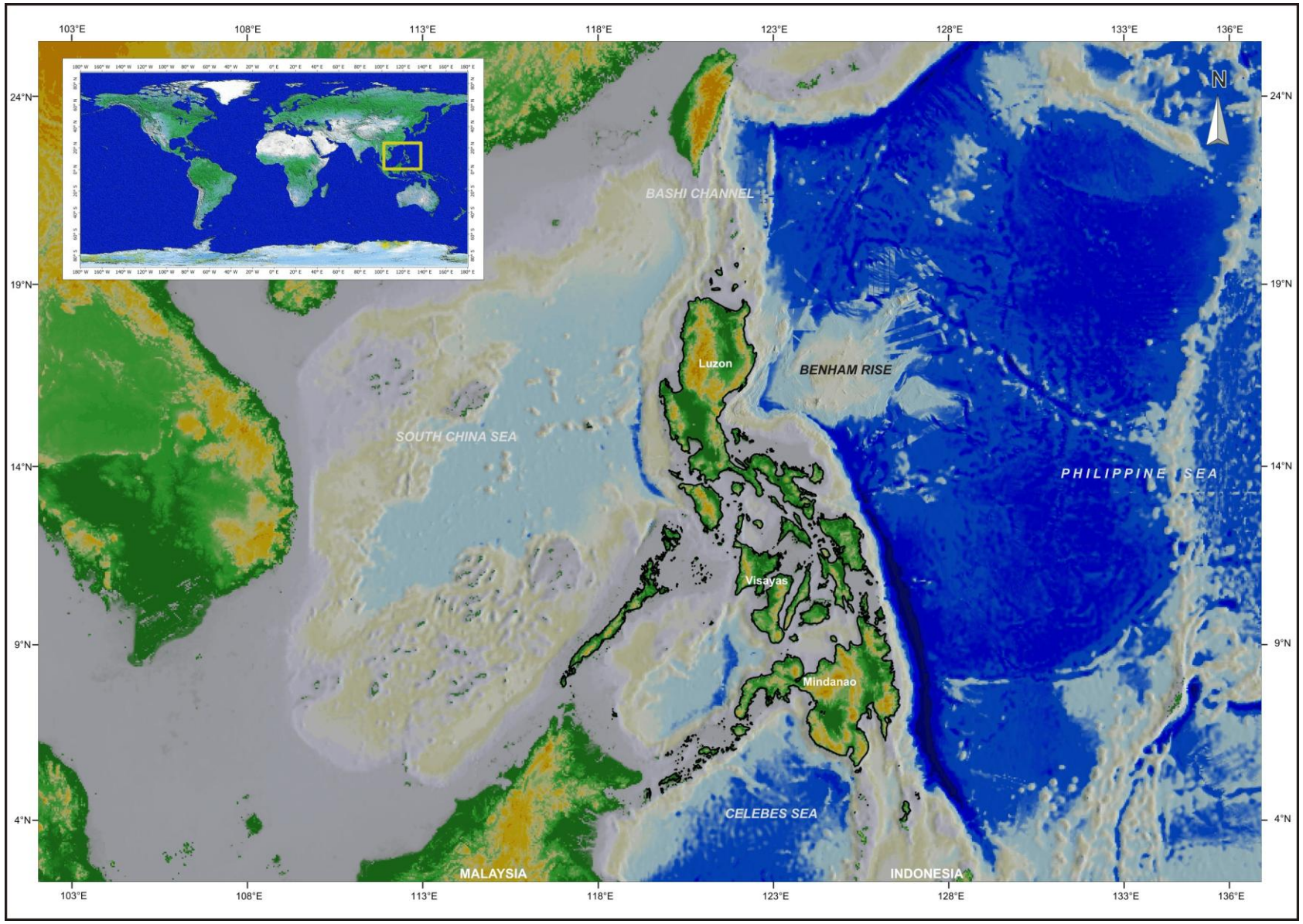


Figure 1 Geographic setting of the Philippines and Benham Rise.

2.0 LEGAL CONSIDERATIONS

2.1 The Philippines as State-Party to UNCLOS

The Republic of the Philippines signed the UNCLOS on 10 December 1982 at the close of the Third United Nations Conference on the Law of the Sea in Montego Bay, Jamaica. The Convention entered into force for the Philippines on 16 November 1994.

2.2 Definition of the Continental Shelf

Paragraph 1 of Article 76 of the Convention defines the continental shelf that may be subject to the sovereign rights and jurisdiction of the coastal State:

> *1. The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.*

The nature of the continental shelf and its constituent parts are generally explained in paragraph 3 of Article 76:

> *3. The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the sea-bed and subsoil of the shelf, the slope, and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof.*

It is accepted that the above paragraphs of Article 76 provide a *legal* definition that is different from and independent of the geological or geographical meaning of the term "continental shelf." This distinction lays the basis for the entitlement of a coastal State to a continental shelf even though its land territory may not be continental in nature.

2.3 Establishment of the Commission on the Limits of the Continental Shelf

The consistent implementation of the provisions of Article 76 of UNCLOS is the responsibility of all coastal States that intend to exercise national jurisdiction over the continental shelf beyond 200 M from the baselines from which the breadth of their territorial sea is measured. To assist coastal States in carrying out this responsibility, UNCLOS established the CLCS, and provided for a procedure for the submission of information on the determination of the outer limits of the continental shelf beyond 200 M in paragraphs 8 and 9 of Article 76:

> *8. Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.*
>
> *9. The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.*

2.4 Rules for Determination of the Outer Limits

Article 76 of UNCLOS and the Scientific and Technical Guidelines of the Commission (CLCS/11) provide for a clear process and distinct criteria for defining the outer limits of the continental shelf, where the continental margin extends beyond 200 M.

The first step in determining the outer limits of the continental shelf according to the Scientific and Technical Guidelines is for coastal States to satisfy a *test of appurtenance*, stated in paragraph 4(a) of Article 76 of the Convention:

> *4(a). For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured…*

Coastal States may resort to spatial, geographical, geomorphological, geological, and geophysical criteria to demonstrate that the outer edge of their continental margin extends beyond 200 M from their baselines. If the test of appurtenance is satisfied, the coastal State is obliged to establish the outer limits of the continental shelf. There are complex rules governing the exercise of this obligation, contained in paragraphs 4, 5, and 6 of Article 76 of UNCLOS.

Two of these rules are affirmative rules expressed in paragraph 4. Both rules base the determination of the outer edge of the continental margin upon reference to the foot of the continental slope:

> *(i) a line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or*
>
> *(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the slope.*

The use of the inclusive disjunction "or" permits coastal States to use either one or both of the above rules to determine the outer edge of the continental margin.

The maximum distance to which the outer limits of the continental shelf can extend is then subject to two negative rules, expressed as spatial constraints, contained in paragraphs 5 and 6 of Article 76:

> *5. The fixed points comprising the line of the outer limits of the continental shelf on the sea-bed, drawn in accordance with paragraph 4(a)(i) and (ii), either shall not exceed 350 nautical miles from the baselines from which*

> *the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres.*
>
> *6. Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs.*

These establish that regardless of which method under paragraph 4(a) is used to determine the distance from the foot of the continental slope, the location of the outer limit cannot exceed either 350 M from the baselines of the coastal State's territorial sea, or 100 M from the 2,500 meter isobath. The use of the disjunctive "or" permits the coastal State to choose the relevant constraint. Thus, the outer limit itself is defined by the coastal State through the application of some or all of the four rules.

2.5 Timeliness of this Partial Submission

Article 4 of Annex II to UNCLOS states that the information on the outer limits of the continental shelf shall be submitted to the CLCS within ten years from the entry into force of the Convention. However, at the Eleventh Meeting of the States Parties to the Convention on 18-21 May 2001, it was agreed that this ten-year period commenced only on 13 May 1999, the date when the Scientific and Technical Guidelines of the Commission were adopted. (*See* SPLOS/72) This deadline applies for those States Parties for which the Convention entered into force prior to 13 May 1999, including the Philippines.

2.6 UNCLOS Provisions Invoked

In this Submission, the relevant provisions of Article 76 are invoked in relation to Articles 46, 47, and 48 of UNCLOS. Under Article 46, the Philippines qualifies as an archipelagic State, described as follows:

(a) "archipelagic State" means a State constituted wholly by one or more archipelagoes and may include other islands;

(b) "archipelago" means a group of islands, including parts of islands, interconnecting waters and other natural features which are so closely interrelated that such islands, waters and other natural features form an intrinsic geographical, economic, and political entity, or which historically have been regarded as such.

As an archipelagic State, the Philippines may then draw archipelagic baselines in accordance with the rules provided in paragraphs 1 to 5 of Article 47 quoted below:

1. An archipelagic State may draw straight archipelagic baselines joining the outermost points of the outermost islands and drying reefs of the archipelago provided that within such baselines are included the main islands and an area in which the ratio of the area of the water to the area of the land, including atolls, is between 1 to 1 and 9 to 1.

2. The length of such baselines shall not exceed 100 nautical miles, except that up to 3 per cent of the total number of baselines enclosing any archipelago may exceed that length, up to a maximum length of 125 nautical miles.

3. The drawing of such baselines shall not depart to any appreciable extent from the general configuration of the archipelago.

4. Such baselines shall not be drawn to and from low-tide elevations, unless lighthouses or similar installations which are permanently above sea level have been built on them or where a low-tide elevation is situated wholly or partly at a distance not exceeding the breadth of the territorial sea from the nearest island.

> *5. The system of such baselines shall not be applied by an archipelagic State in such a manner as to cut off from the high seas or the exclusive economic zone the territorial sea of another State…*

The baselines used in this Submission conform with these requirements. Such baselines may therefore be used as the basis for delineating the maritime territorial and jurisdictional zones, including the continental shelf, in accordance with Article 48 of UNCLOS, which states:

> *The breadth of the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf shall be measured from archipelagic baselines drawn in accordance with Article 47.*

3.0 AREA OF THIS SUBMISSION

The Philippines identified regions to its East and West over which it may be entitled to extended continental shelves. In conformity with Annex I of the Rules of Procedure of the Commission (CLCS/40, Rev. 1), the Philippines is making a partial submission that covers the Benham Rise Region on the country's east coast. The Benham Rise Region is bounded to the North and East by the West Philippine Basin, and to the West and South by the Philippine Island of Luzon. It is enclosed by the coordinates 119^{o} 30'E to 132^{o} 00'E longitude and 12^{o}10'N to 20^{o}30'N latitude. (Figure 2)

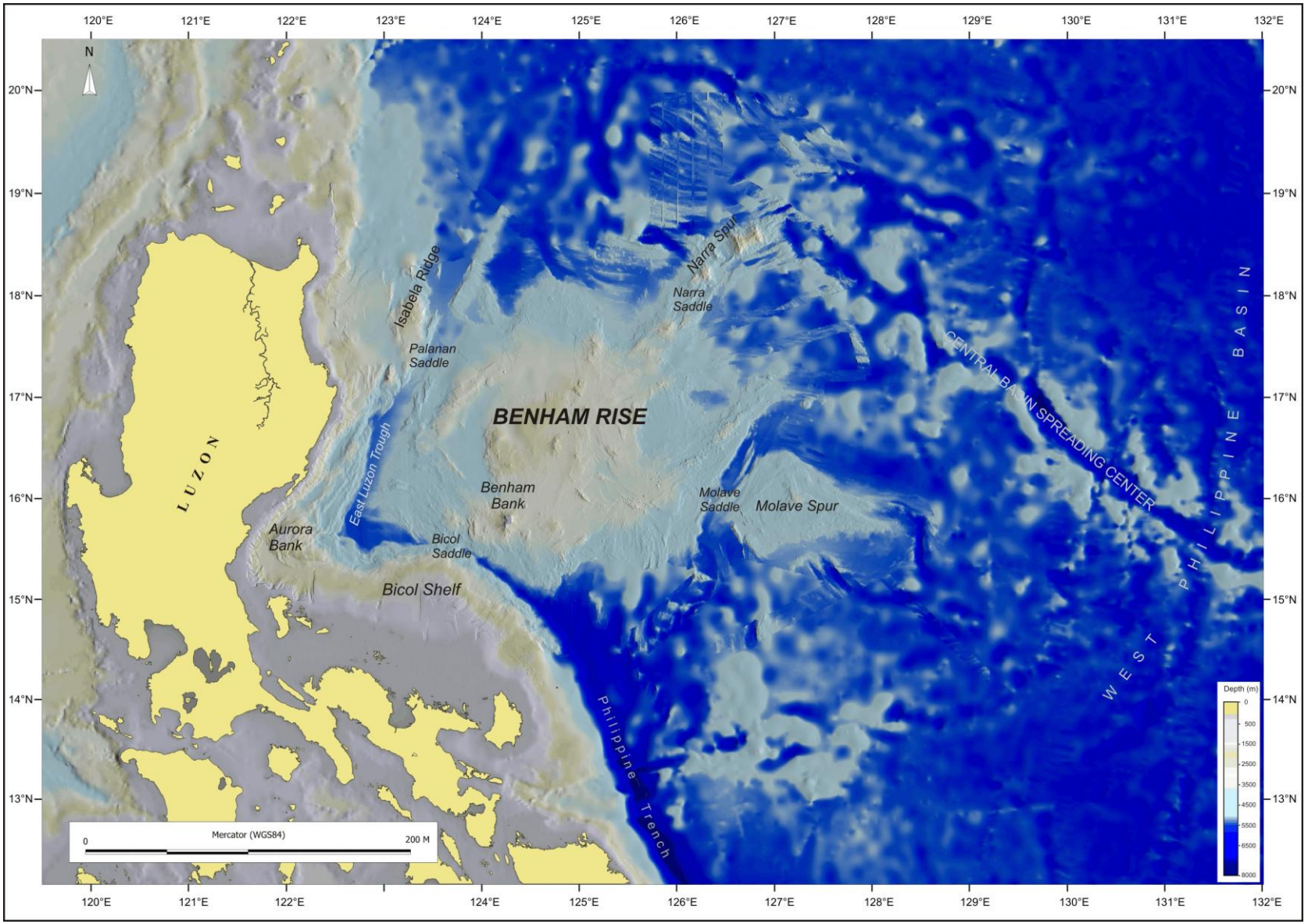


Figure 2 The bathymetric model of the Benham Rise Region.

3.1 Basis

The Philippines notes that neither the rules of Article 76 nor the mandate given to the Commission under the Convention were intended to supersede the sovereign prerogative of all coastal States to delimit continental shelf boundaries between them. Paragraph 10 of Article 76 specifically provides:

> *10. The provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.*

The Convention further clarifies that the procedure for submission of information to the Commission, and actions taken by the Commission in relation thereto, do not affect that sovereign prerogative. Article 9 of Annex II of UNCLOS emphasizes:

> *The actions of the Commission shall not prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts.*

This non-prejudice clause is reiterated in Rule 46 of the Rules of Procedure of the Commission. (CLCS/40/Rev. 1)

The implications of the procedure for determination of the outer limits of the continental shelf on pending matters relating to maritime boundary delimitation between States were adequately considered by the Commission after soliciting comments and opinions from States, the United Nations Legal Counsel, and the Meeting of States Parties in drafting its Rules of Procedure (See CLCS/7, CLCS/9). Indeed, Section 1 of Annex I of the Rules of Procedure of the Commission clearly expresses the view that:

> *1. The Commission recognizes that the competence with respect to matters regarding disputes which may arise in connection with the establishment of the outer limits of the continental shelf rests with States.*

Since continental shelf boundaries between States are still not delimited in many parts of the world, the submission of information by any coastal State which has not yet delimited its continental shelf with its opposite or adjacent neighbors may be seen under certain circumstances as prejudicial to the interests of those affected by the submission. Furthermore, any action taken by the Commission on such a submission would be contrary to the sole competence of States to delimit their continental shelf boundaries. In order to prevent this situation, the Commission may accept partial submissions, described by Section 3 of Annex I of the Rules of Procedure of the Commission which states that:

> *3. A submission may be made by a coastal State for a portion of its continental shelf in order not to prejudice questions relating to the delimitation of boundaries between States in any other portion or portions of the continental shelf for which a submission may be made later, notwithstanding the provisions regarding the ten-year period established by article 4 of Annex II to the Convention.*

Partial submissions may therefore be made by a single coastal State for areas of its continental shelf that are not the subject of a maritime boundary dispute or a future maritime boundary delimitation. In addition, joint or separate submissions may be made by two or more coastal States under Section 4 of Annex I of the Rules of Procedure of the Commission. It provides:

> *4. Joint or separate submissions to the Commission requesting the Commission to make recommendations with respect to delineation may be made by two or more coastal States by agreement:*
>
> > *(a) Without regard to the delimitation of boundaries between those States; or*
> >
> > *(b) Having indicated by means of geodetic coordinates the extent to which a submission is without prejudice to the matters relating to the delimitation of boundaries with another or other States Parties to this Agreement.*

All these options prevent the Commission from inadvertently contradicting the sovereign prerogative of coastal States to resolve disputes and delimit their maritime boundaries. At the same time, they allow coastal States the option and right to defer the submission of information to the Commission regarding areas where there are undelimited continental shelf boundaries, until such time that the coastal States involved have been able to come to an agreement on the delimitation.

3.2 State Practice

The options for partial, joint, and separate submissions by coastal States are all consistent with State practice. Coastal States that previously made submissions to the Commission have invoked and acted in conformity with its guidelines and procedures, including those that have relevance to the future delimitation of continental shelf boundaries. After the Commission became operational, coastal States with pending delimitation issues made partial, joint and separate submissions.

3.3 Exercise of the Option of Partial Submission

As a gesture of good faith, the Philippines makes this partial submission in order to avoid creating or provoking maritime boundary disputes where there are none, or exacerbating them where they may exist, in areas where maritime boundaries have not yet been delimited between opposite or adjacent coastal States. This is to build confidence and promote international cooperation in the peaceful and amicable resolution of maritime boundary issues. It does not in any manner prejudice the position of any coastal State.

3.4 Reservation of the Right to Make Other Submissions in the Future

Accordingly, this partial Submission is made with reference to the Benham Rise Region along the Pacific coast and does not include other areas. The Philippines expressly reserves its right to make other submissions for such other areas of the continental shelf beyond 200 M at a future time in conformity with the provisions of Annex I to the Rules of Procedure of the Commission.

3.5 Absence of Disputes

The Benham Rise Region is not subject to any maritime boundary disputes, claims, or controversies.

4.0 MEMBERS OF THE COMMISSION WHO PROVIDED ADVICE

Commissioner Galo Carrera-Hurtado of the United Mexican States provided advice to the Republic of the Philippines in the preparation of this Submission.

5.0 INSTITUTIONS THAT CONTRIBUTED TO THIS SUBMISSION

This Submission was made possible through the efforts of the following institutions:

- The Commission on Maritime and Ocean Affairs (CMOA);
- The Department of Environment and Natural Resources (DENR), through the National Mapping and Resource Information Authority (NAMRIA), and the Mines and Geosciences Bureau (MGB)
- The Department of Foreign Affairs (DFA)
- The Department of Justice (DOJ)
- The Department of Energy (DOE) and the Philippine National Oil Company Exploration Corporation (PNOC-EC)
- The National Security Council (NSC)
- The Philippine Coast Guard (PCG)
- The University of the Philippines (UP) through the National Institute of Geological Sciences (NIGS) and the Institute of International Legal Studies (IILS)
- The Norwegian Agency for Development (NORAD)
- The Institute of Geological and Nuclear Sciences of New Zealand (GNS-Science)

6.0 THE OUTER LIMITS OF THE CONTINENTAL SHELF IN THE BENHAM RISE REGION

6.1 The Test of Appurtenance

A series of multi-beam bathymetric surveys were conducted by the National Mapping and Resource Information Authority (NAMRIA) in order to determine the morphology of the seabed in the Benham Rise Region. The hydrographic data collected, composed of bathymetric measurements from multi-beam echo-sounding survey cruises conducted between 2004 and 2008, were supplemented by additional data from international bathymetric surveys.

In addition to the bathymetric measurements and geomorphological analyses, geological and geophysical data from Philippine and international research projects were compiled and analyzed. These include seismic, magnetic, gravity, and other geological data, as well as the latest published academic literature in geology and geophysics. The information were collected to determine the nature and structure of the seabed and subsoil in the Benham Rise Region and their relationship to the land territory of the Philippines.

Analysis of all the data and information collected clearly demonstrated a natural prolongation and geomorphological continuity between the Philippine Island of Luzon and Benham Rise, the structure of which extends beyond 200 M from the baselines of the territorial sea.

6.2 The Foot of the Continental Slope plus 60 M Formula

Multi-beam swath bathymetric measurements were used to identify the foot of the continental slope as stipulated in paragraph 4(b) of Article 76, by the points of maximum change in gradient of the seabed in the region where the base of Benham Rise and its associated structures meet the deep ocean floor of the Pacific Ocean. The outer edge of the continental margin in the Benham Rise Region is then determined solely by application of Paragraph 4(a)(i) of Article 76, by reference to fixed points not more than

60 M from the foot of the continental slope. This is shown by the red and white dashed line in Figure 3.

6.3 The 1% Sediment Thickness Formula

The formula in paragraph 4(a)(ii) of Article 76, referring to the percentage of sediment thickness in comparison with the shortest distance to the foot of the continental slope, was not used. Information on sediment thickness at the relevant locations in the Benham Rise Region is not available from marine geophysical surveys to date.

6.4 The 350 M Constraint Line

Geodetic information was collected to calculate the location of the constraint line located 350 M from the baselines from which the breadth of the territorial sea is measured, in accordance with paragraphs 5 and 6 of Article 76. This constraint is satisfied since the outer limits of the continental shelf are located landward of the constraint line. This constraint line is shown by the solid yellow line in Figure 3.

6.5 The 2,500 m plus 100 M Constraint Line

Multi-beam bathymetric measurements were used to determine the location of the 2,500 metre isobath in the areas of the Benham Rise Region beyond 200 M from the baselines from which the breadth of the territorial sea is measured. Geodetic methods were used to determine the location of the constraint line located 100 M from the location of the isobath, as described in paragraph 5 of Article 76. However, this constraint line was not applied since the outer edge of the continental margin lies well inside the 350 M constraint line.

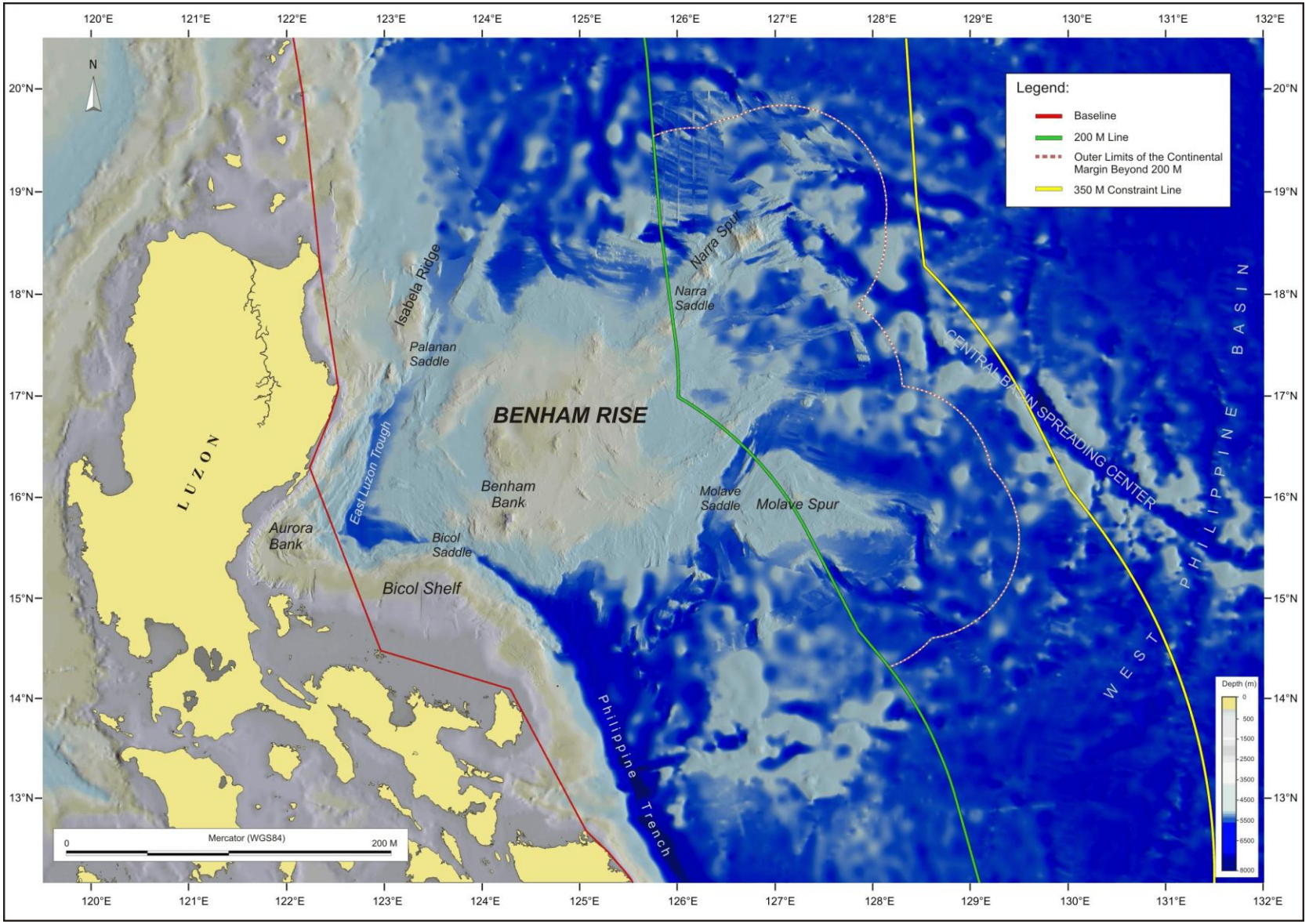


Figure 3 The outer edge of the continental margin in the Benham Rise Region, determined in accordance with the rules of Article 76 (4)(a)(i) of UNCLOS and the Scientific and Technical Guidelines of the Commision on the Limits of the Continental Shelf.

6.6 The Outer Limits of the Continental Shelf

The outer limits of the continental shelf beyond 200 M in the Benham Rise Region is delineated by straight lines not more than 60 M in length, connecting fixed points not more than 60 M from the foot of the continental slope. The outer limits are illustrated by the orange line in Figure 4. In accordance with paragraph 7 of Article 76, Table 1 lists the coordinates of latitude and longitude (in WGS84) of the turning points of the outer limits, and the distances of the straight lines connecting them.

Table 1 Fixed points comprising the outer limits of the continental shelf of the Philippines in the Benham Rise Region, from and to points of intersection with the 200 M line, proceeding in a clockwise direction from the North to the South.

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-001	19° 33' 42.04"	125° 45' 02.66"	0.206
ECS-B-002	19° 33' 46.99"	125° 45' 14.63"	1.000
ECS-B-003	19° 34' 10.10"	125° 46' 13.31"	1.000
ECS-B-004	19° 34' 32.27"	125° 47' 12.38"	1.000
ECS-B-005	19° 34' 53.50"	125° 48' 11.85"	1.000
ECS-B-006	19° 35' 13.79"	125° 49' 11.67"	1.000
ECS-B-007	19° 35' 33.12"	125° 50' 11.86"	1.000
ECS-B-008	19° 35' 51.49"	125° 51' 12.37"	1.000
ECS-B-009	19° 36' 08.90"	125° 52' 13.20"	1.000
ECS-B-010	19° 36' 25.34"	125° 53' 14.34"	1.000
ECS-B-011	19° 36' 40.81"	125° 54' 15.76"	53.613
ECS-B-012	19° 49' 49.15"	126° 49' 22.37"	1.000
ECS-B-013	19° 50' 03.64"	126° 50' 24.15"	1.000
ECS-B-014	19° 50' 17.15"	126° 51' 26.17"	1.000
ECS-B-015	19° 50' 29.67"	126° 52' 28.42"	1.000
ECS-B-016	19° 50' 41.21"	126° 53' 30.88"	1.000
ECS-B-017	19° 50' 51.75"	126° 54' 33.55"	1.000
ECS-B-018	19° 51' 01.29"	126° 55' 36.39"	1.000
ECS-B-019	19° 51' 09.83"	126° 56' 39.40"	1.000
ECS-B-020	19° 51' 17.38"	126° 57' 42.54"	1.000
ECS-B-021	19° 51' 23.92"	126° 58' 45.81"	1.000
ECS-B-022	19° 51' 29.46"	126° 59' 49.20"	1.000
ECS-B-023	19° 51' 33.99"	127° 00' 52.66"	1.000
ECS-B-024	19° 51' 37.51"	127° 01' 56.21"	1.000
ECS-B-025	19° 51' 40.03"	127° 02' 59.80"	1.000
ECS-B-026	19° 51' 41.53"	127° 04' 03.43"	0.991
ECS-B-027	19° 51' 42.03"	127° 05' 06.52"	1.000
ECS-B-028	19° 51' 41.52"	127° 06' 10.17"	1.000
ECS-B-029	19° 51' 40.01"	127° 07' 13.80"	1.000

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-030	19° 51' 37.48"	127° 08' 17.39"	1.000
ECS-B-031	19° 51' 33.95"	127° 09' 20.94"	1.000
ECS-B-032	19° 51' 29.41"	127° 10' 24.41"	1.000
ECS-B-033	19° 51' 23.87"	127° 11' 27.78"	1.000
ECS-B-034	19° 51' 17.32"	127° 12' 31.05"	1.000
ECS-B-035	19° 51' 09.76"	127° 13' 34.21"	1.000
ECS-B-036	19° 51' 01.21"	127° 14' 37.20"	1.000
ECS-B-037	19° 50' 51.66"	127° 15' 40.05"	1.000
ECS-B-038	19° 50' 41.11"	127° 16' 42.71"	1.000
ECS-B-039	19° 50' 29.56"	127° 17' 45.17"	1.000
ECS-B-040	19° 50' 17.04"	127° 18' 47.42"	1.000
ECS-B-041	19° 50' 03.52"	127° 19' 49.44"	1.000
ECS-B-042	19° 49' 49.02"	127° 20' 51.21"	1.000
ECS-B-043	19° 49' 33.54"	127° 21' 52.71"	1.000
ECS-B-044	19° 49' 17.09"	127° 22' 53.93"	1.000
ECS-B-045	19° 48' 59.67"	127° 23' 54.85"	1.000
ECS-B-046	19° 48' 41.29"	127° 24' 55.44"	1.000
ECS-B-047	19° 48' 21.95"	127° 25' 55.70"	1.000
ECS-B-048	19° 48' 01.66"	127° 26' 55.61"	1.000
ECS-B-049	19° 47' 40.41"	127° 27' 55.14"	1.000
ECS-B-050	19° 47' 18.23"	127° 28' 54.29"	1.000
ECS-B-051	19° 46' 55.11"	127° 29' 53.04"	1.000
ECS-B-052	19° 46' 31.06"	127° 30' 51.37"	1.000
ECS-B-053	19° 46' 06.10"	127° 31' 49.26"	1.000
ECS-B-054	19° 45' 40.21"	127° 32' 46.69"	1.000
ECS-B-055	19° 45' 13.42"	127° 33' 43.66"	1.000
ECS-B-056	19° 44' 45.73"	127° 34' 40.15"	1.000
ECS-B-057	19° 44' 17.14"	127° 35' 36.13"	1.000
ECS-B-058	19° 43' 47.68"	127° 36' 31.59"	1.000
ECS-B-059	19° 43' 17.33"	127° 37' 26.53"	1.000
ECS-B-060	19° 42' 46.12"	127° 38' 20.92"	1.000
ECS-B-061	19° 42' 14.05"	127° 39' 14.75"	1.000
ECS-B-062	19° 41' 41.13"	127° 40' 07.99"	1.000
ECS-B-063	19° 41' 07.37"	127° 41' 00.64"	1.000
ECS-B-064	19° 40' 32.78"	127° 41' 52.69"	1.000
ECS-B-065	19° 39' 57.37"	127° 42' 44.12"	1.000
ECS-B-066	19° 39' 21.14"	127° 43' 34.91"	1.000
ECS-B-067	19° 38' 44.12"	127° 44' 25.04"	1.000
ECS-B-068	19° 38' 06.31"	127° 45' 14.51"	1.000
ECS-B-069	19° 37' 27.72"	127° 46' 03.31"	1.000
ECS-B-070	19° 36' 48.36"	127° 46' 51.42"	1.000
ECS-B-071	19° 36' 08.24"	127° 47' 38.81"	1.000
ECS-B-072	19° 35' 27.37"	127° 48' 25.49"	1.000
ECS-B-073	19° 34' 45.77"	127° 49' 11.44"	1.000
ECS-B-074	19° 34' 03.45"	127° 49' 56.64"	1.000

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-075	19° 33' 20.42"	127° 50' 41.08"	1.000
ECS-B-076	19° 32' 36.68"	127° 51' 24.77"	1.000
ECS-B-077	19° 31' 52.27"	127° 52' 07.67"	1.000
ECS-B-078	19° 31' 07.17"	127° 52' 49.76"	1.000
ECS-B-079	19° 30' 21.42"	127° 53' 31.06"	1.000
ECS-B-080	19° 29' 35.01"	127° 54' 11.54"	1.000
ECS-B-081	19° 28' 47.97"	127° 54' 51.20"	1.000
ECS-B-082	19° 28' 00.31"	127° 55' 30.01"	1.000
ECS-B-083	19° 27' 12.03"	127° 56' 07.98"	1.000
ECS-B-084	19° 26' 23.17"	127° 56' 45.09"	1.000
ECS-B-085	19° 25' 33.72"	127° 57' 21.32"	1.000
ECS-B-086	19° 24' 43.70"	127° 57' 56.68"	1.000
ECS-B-087	19° 23' 53.13"	127° 58' 31.15"	1.000
ECS-B-088	19° 23' 02.02"	127° 59' 04.72"	1.000
ECS-B-089	19° 22' 10.38"	127° 59' 37.38"	1.000
ECS-B-090	19° 21' 18.23"	128° 00' 09.13"	1.000
ECS-B-091	19° 20' 25.59"	128° 00' 39.94"	1.000
ECS-B-092	19° 19' 32.46"	128° 01' 09.83"	1.000
ECS-B-093	19° 18' 38.87"	128° 01' 38.78"	1.000
ECS-B-094	19° 17' 44.83"	128° 02' 06.77"	1.000
ECS-B-095	19° 16' 50.35"	128° 02' 33.81"	1.000
ECS-B-096	19° 15' 55.45"	128° 02' 59.88"	1.000
ECS-B-097	19° 15' 00.13"	128° 03' 24.98"	1.000
ECS-B-098	19° 14' 04.44"	128° 03' 49.11"	1.000
ECS-B-099	19° 13' 08.37"	128° 04' 12.24"	1.000
ECS-B-100	19° 12' 11.93"	128° 04' 34.38"	1.000
ECS-B-101	19° 11' 15.16"	128° 04' 55.53"	1.000
ECS-B-102	19° 10' 18.05"	128° 05' 15.68"	1.000
ECS-B-103	19° 09' 20.64"	128° 05' 34.82"	1.000
ECS-B-104	19° 08' 22.93"	128° 05' 52.94"	1.000
ECS-B-105	19° 07' 24.93"	128° 06' 10.05"	1.000
ECS-B-106	19° 06' 26.68"	128° 06' 26.14"	1.000
ECS-B-107	19° 05' 28.18"	128° 06' 41.19"	1.000
ECS-B-108	19° 04' 29.45"	128° 06' 55.22"	1.000
ECS-B-109	19° 03' 30.50"	128° 07' 08.21"	1.000
ECS-B-110	19° 02' 31.36"	128° 07' 20.17"	1.000
ECS-B-111	19° 01' 32.03"	128° 07' 31.09"	1.000
ECS-B-112	19° 00' 32.53"	128° 07' 40.96"	1.000
ECS-B-113	18° 59' 32.89"	128° 07' 49.79"	1.000
ECS-B-114	18° 58' 33.13"	128° 07' 57.57"	1.000
ECS-B-115	18° 57' 33.24"	128° 08' 04.30"	1.000
ECS-B-116	18° 56' 33.25"	128° 08' 09.98"	1.000
ECS-B-117	18° 55' 33.19"	128° 08' 14.61"	1.000
ECS-B-118	18° 54' 33.06"	128° 08' 18.19"	1.000
ECS-B-119	18° 53' 32.87"	128° 08' 20.71"	1.000

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-120	18° 52' 32.66"	128° 08' 22.17"	1.000
ECS-B-121	18° 51' 32.43"	128° 08' 22.58"	1.000
ECS-B-122	18° 50' 32.20"	128° 08' 21.94"	1.000
ECS-B-123	18° 49' 32.00"	128° 08' 20.25"	15.195
ECS-B-124	18° 34' 17.07"	128° 07' 54.46"	1.000
ECS-B-125	18° 33' 16.90"	128° 07' 51.72"	1.000
ECS-B-126	18° 32' 16.77"	128° 07' 47.94"	1.000
ECS-B-127	18° 31' 16.72"	128° 07' 43.10"	59.106
ECS-B-128	17° 32' 02.38"	128° 11' 20.68"	59.695
ECS-B-129	16° 49' 41.58"	128° 55' 28.36"	1.000
ECS-B-130	16° 48' 58.56"	128° 56' 12.14"	1.000
ECS-B-131	16° 48' 14.84"	128° 56' 55.17"	1.000
ECS-B-132	16° 47' 30.44"	128° 57' 37.44"	1.000
ECS-B-133	16° 46' 45.36"	128° 58' 18.92"	1.000
ECS-B-134	16° 45' 59.62"	128° 58' 59.61"	1.000
ECS-B-135	16° 45' 13.23"	128° 59' 39.50"	1.000
ECS-B-136	16° 44' 26.20"	129° 00' 18.58"	1.000
ECS-B-137	16° 43' 38.55"	129° 00' 56.83"	1.000
ECS-B-138	16° 42' 50.30"	129° 01' 34.25"	1.000
ECS-B-139	16° 42' 01.44"	129° 02' 10.83"	1.000
ECS-B-140	16° 41' 12.00"	129° 02' 46.55"	1.000
ECS-B-141	16° 40' 21.99"	129° 03' 21.40"	1.000
ECS-B-142	16° 39' 31.44"	129° 03' 55.38"	1.000
ECS-B-143	16° 38' 40.33"	129° 04' 28.47"	1.000
ECS-B-144	16° 37' 48.70"	129° 05' 00.67"	1.000
ECS-B-145	16° 36' 56.57"	129° 05' 31.98"	1.000
ECS-B-146	16° 36' 03.93"	129° 06' 02.37"	1.000
ECS-B-147	16° 35' 10.81"	129° 06' 31.85"	34.955
ECS-B-148	16° 03' 57.69"	129° 23' 08.67"	1.000
ECS-B-149	16° 03' 03.66"	129° 23' 36.23"	1.000
ECS-B-150	16° 02' 09.18"	129° 24' 02.83"	1.000
ECS-B-151	16° 01' 14.28"	129° 24' 28.50"	1.000
ECS-B-152	16° 00' 18.98"	129° 24' 53.21"	1.000
ECS-B-153	15° 59' 23.29"	129° 25' 16.96"	1.000
ECS-B-154	15° 58' 27.22"	129° 25' 39.76"	1.000
ECS-B-155	15° 57' 30.79"	129° 26' 01.57"	1.000
ECS-B-156	15° 56' 34.02"	129° 26' 22.40"	1.000
ECS-B-157	15° 55' 36.91"	129° 26' 42.25"	1.000
ECS-B-158	15° 54' 39.50"	129° 27' 01.11"	1.000
ECS-B-159	15° 53' 41.78"	129° 27' 18.98"	1.000
ECS-B-160	15° 52' 43.79"	129° 27' 35.85"	1.000
ECS-B-161	15° 51' 45.53"	129° 27' 51.72"	1.000
ECS-B-162	15° 50' 47.03"	129° 28' 06.57"	1.000
ECS-B-163	15° 49' 48.29"	129° 28' 20.42"	1.000
ECS-B-164	15° 48' 49.34"	129° 28' 33.25"	1.000

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-165	15° 47' 50.18"	129° 28' 45.06"	1.000
ECS-B-166	15° 46' 50.85"	129° 28' 55.85"	1.000
ECS-B-167	15° 45' 51.35"	129° 29' 05.62"	1.000
ECS-B-168	15° 44' 51.70"	129° 29' 14.36"	1.000
ECS-B-169	15° 43' 51.91"	129° 29' 22.07"	1.000
ECS-B-170	15° 42' 52.01"	129° 29' 28.75"	1.000
ECS-B-171	15° 41' 52.02"	129° 29' 34.40"	1.000
ECS-B-172	15° 40' 51.94"	129° 29' 39.01"	1.000
ECS-B-173	15° 39' 51.79"	129° 29' 42.59"	1.000
ECS-B-174	15° 38' 51.59"	129° 29' 45.14"	1.000
ECS-B-175	15° 37' 51.36"	129° 29' 46.64"	1.000
ECS-B-176	15° 36' 51.11"	129° 29' 47.12"	1.000
ECS-B-177	15° 35' 50.87"	129° 29' 46.55"	1.000
ECS-B-178	15° 34' 50.64"	129° 29' 44.95"	1.000
ECS-B-179	15° 33' 50.45"	129° 29' 42.32"	1.000
ECS-B-180	15° 32' 50.30"	129° 29' 38.65"	1.000
ECS-B-181	15° 31' 50.22"	129° 29' 33.95"	1.000
ECS-B-182	15° 30' 50.23"	129° 29' 28.22"	1.000
ECS-B-183	15° 29' 50.34"	129° 29' 21.46"	1.000
ECS-B-184	15° 28' 50.56"	129° 29' 13.67"	1.000
ECS-B-185	15° 27' 50.93"	129° 29' 04.86"	1.000
ECS-B-186	15° 26' 51.43"	129° 28' 55.02"	1.000
ECS-B-187	15° 25' 52.11"	129° 28' 44.17"	1.000
ECS-B-188	15° 24' 52.97"	129° 28' 32.29"	1.000
ECS-B-189	15° 23' 54.04"	129° 28' 19.41"	1.000
ECS-B-190	15° 22' 55.31"	129° 28' 05.52"	1.000
ECS-B-191	15° 21' 56.82"	129° 27' 50.63"	1.000
ECS-B-192	15° 20' 58.57"	129° 27' 34.74"	1.000
ECS-B-193	15° 20' 00.60"	129° 27' 17.85"	1.000
ECS-B-194	15° 19' 02.90"	129° 26' 59.96"	1.000
ECS-B-195	15° 18' 05.50"	129° 26' 41.09"	1.000
ECS-B-196	15° 17' 08.41"	129° 26' 21.25"	1.000
ECS-B-197	15° 16' 11.65"	129° 26' 00.43"	1.000
ECS-B-198	15° 15' 15.24"	129° 25' 38.64"	1.000
ECS-B-199	15° 14' 19.19"	129° 25' 15.89"	1.000
ECS-B-200	15° 13' 23.50"	129° 24' 52.18"	1.000
ECS-B-201	15° 12' 28.21"	129° 24' 27.53"	1.000
ECS-B-202	15° 11' 33.32"	129° 24' 01.94"	1.000
ECS-B-203	15° 10' 38.87"	129° 23' 35.40"	1.000
ECS-B-204	15° 09' 44.84"	129° 23' 07.95"	1.000
ECS-B-205	15° 08' 51.26"	129° 22' 39.57"	1.000
ECS-B-206	15° 07' 58.15"	129° 22' 10.28"	1.000
ECS-B-207	15° 07' 05.52"	129° 21' 40.09"	1.000
ECS-B-208	15° 06' 13.38"	129° 21' 09.00"	1.000
ECS-B-209	15° 05' 21.75"	129° 20' 37.03"	1.000

Fixed Point ID	Latitude (DMS)	Longitude (DMS)	Distance to Next Point (M)
ECS-B-210	15° 04' 30.65"	129° 20' 04.19"	1.000
ECS-B-211	15° 03' 40.08"	129° 19' 30.46"	1.000
ECS-B-212	15° 02' 50.07"	129° 18' 55.89"	1.000
ECS-B-213	15° 02' 00.62"	129° 18' 20.47"	1.000
ECS-B-214	15° 01' 11.74"	129° 17' 44.21"	1.000
ECS-B-215	15° 00' 23.47"	129° 17' 07.12"	1.000
ECS-B-216	14° 59' 35.80"	129° 16' 29.22"	1.000
ECS-B-217	14° 58' 48.74"	129° 15' 50.50"	1.000
ECS-B-218	14° 58' 02.32"	129° 15' 10.99"	1.000
ECS-B-219	14° 57' 16.54"	129° 14' 30.69"	1.000
ECS-B-220	14° 56' 31.42"	129° 13' 49.62"	1.000
ECS-B-221	14° 55' 46.97"	129° 13' 07.79"	1.000
ECS-B-222	14° 55' 03.20"	129° 12' 25.21"	1.000
ECS-B-223	14° 54' 20.12"	129° 11' 41.88"	1.000
ECS-B-224	14° 53' 37.75"	129° 10' 57.84"	1.000
ECS-B-225	14° 52' 56.10"	129° 10' 13.06"	1.000
ECS-B-226	14° 52' 15.17"	129° 09' 27.59"	1.000
ECS-B-227	14° 51' 34.99"	129° 08' 41.44"	1.000
ECS-B-228	14° 50' 55.56"	129° 07' 54.60"	1.000
ECS-B-229	14° 50' 16.88"	129° 07' 07.10"	1.000
ECS-B-230	14° 49' 38.98"	129° 06' 18.95"	1.000
ECS-B-231	14° 49' 01.87"	129° 05' 30.16"	1.000
ECS-B-232	14° 48' 25.55"	129° 04' 40.74"	1.000
ECS-B-233	14° 47' 50.02"	129° 03' 50.72"	1.000
ECS-B-234	14° 47' 15.32"	129° 03' 00.10"	1.000
ECS-B-235	14° 46' 41.43"	129° 02' 08.89"	1.000
ECS-B-236	14° 46' 08.38"	129° 01' 17.12"	1.000
ECS-B-237	14° 45' 36.17"	129° 00' 24.79"	1.000
ECS-B-238	14° 45' 04.81"	128° 59' 31.93"	1.000
ECS-B-239	14° 44' 34.30"	128° 58' 38.53"	1.000
ECS-B-240	14° 44' 04.66"	128° 57' 44.63"	1.000
ECS-B-241	14° 43' 35.90"	128° 56' 50.22"	41.084
ECS-B-242	14° 23' 56.75"	128° 19' 35.26"	1.000
ECS-B-243	14° 23' 27.98"	128° 18' 40.94"	1.000
ECS-B-244	14° 23' 00.09"	128° 17' 46.15"	1.000
ECS-B-245	14° 22' 33.10"	128° 16' 50.88"	1.000
ECS-B-246	14° 22' 07.01"	128° 15' 55.16"	1.000
ECS-B-247	14° 21' 41.82"	128° 14' 59.02"	1.000
ECS-B-248	14° 21' 17.53"	128° 14' 02.45"	1.000
ECS-B-249	14° 20' 54.18"	128° 13' 05.48"	1.000
ECS-B-250	14° 20' 31.74"	128° 12' 08.12"	1.000
ECS-B-251	14° 20' 10.23"	128° 11' 10.39"	1.000
ECS-B-252	14° 19' 49.67"	128° 10' 12.30"	0.408
ECS-B-253	14° 19' 41.66"	128° 09' 48.46"	N/A

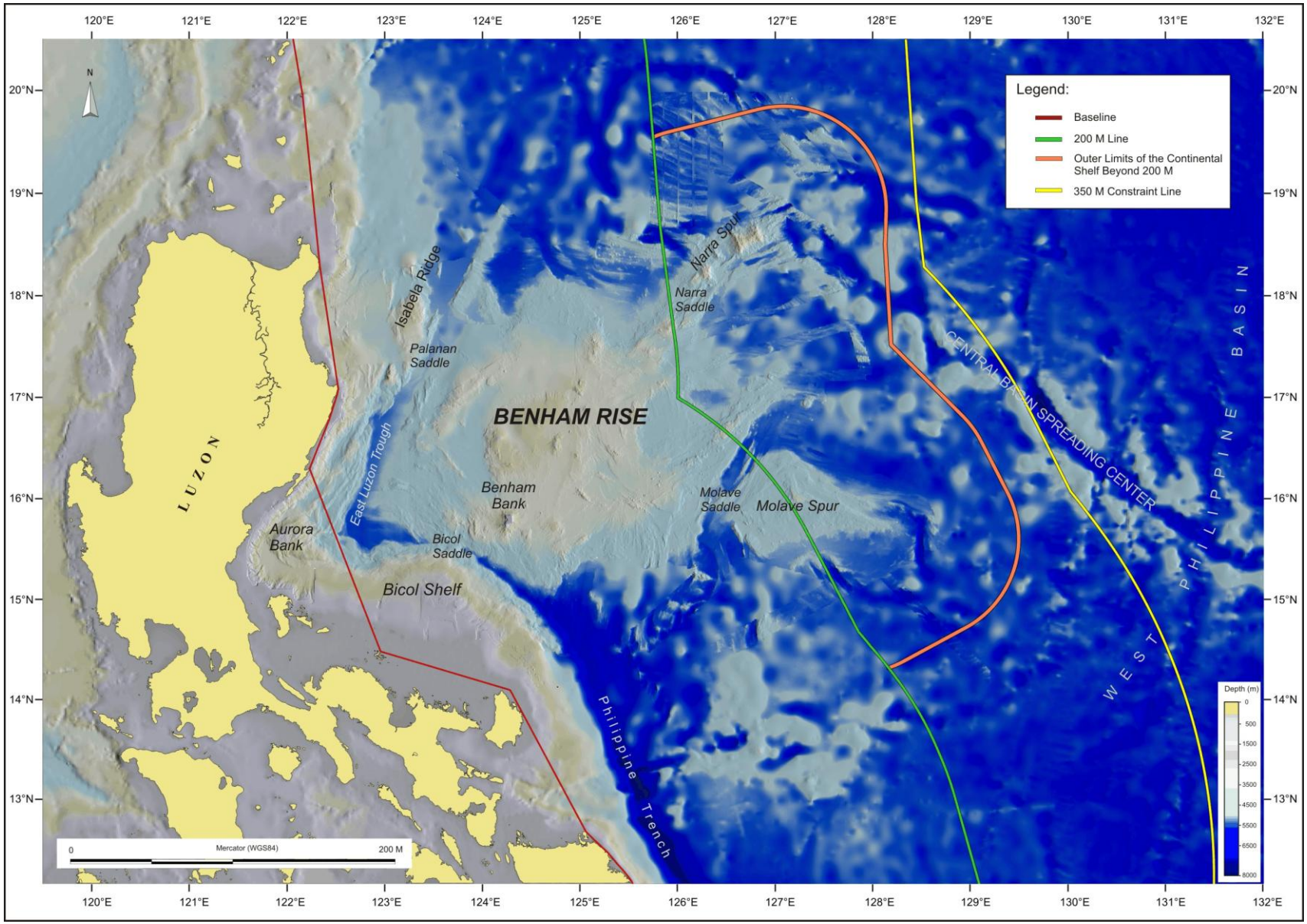


Figure 4 The outer limits of the continental shelf beyond 200 M in the Benham Rise region. The 200 M line and the 350 M constraint line are also shown.