

**UNDERSEA FEATURE NAME PROPOSAL**

(Sea NOTE overleaf)

Note: The boxes will expand as you fill the form.

<b>Name Proposed:</b>	<b>Cotton Seamount</b>	<b>Ocean or Sea:</b>	South Pacific Ocean
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<b>Geometry</b> that best defines the feature (Yes/No) :						
Point	Line	Polygon	Multiple points	Multiple lines*	Multiple polygons*	Combination of geometries*
		X				

\* Geometry should be clearly distinguished when providing the coordinates below.

<b>Coordinates:</b>	Lat. (e.g. 63°32.6'N)	Long. (e.g. 046°21.3'W)
	35°02.69'S (centre)	178°58.50'E (centre)
	35°1.683'S	178°58.933'E
	35°1.983'S	178°59.717'E
	35°2.133'S	179°0.633'E
	35°3.033'S	179°1.067'E
	35°4.033'S	179°0.467'E
	35°4.6'S	178°58.617'E
	35°3.883'S	178°56.117'E
	35°2.483'S	178°55.817'E
	35°1.817'S	178°57.217'E
35°1.683'S	178°58.933'E	

<b>Feature Description:</b>	Maximum Depth:	2100 metres	Steepness :	
	Minimum Depth :	980 metres	Shape :	Volcanic cone
	Total Relief :	1120 metres	Dimension/Size :	6 x 8 km

<b>Associated Features:</b>	On the flanks of Healy Seamount, the summit of which lies 5 km to the north
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<b>Chart/Map References:</b>	<del>Shown Named on Map/Chart:</del> Named in an internationally peer reviewed journal	IC Wright & JA Gamble (1999). Southern Kermadec submarine caldera arc volcanoes (SW Pacific): caldera formation by effusive and pyroclastic eruption. Marine Geology 161, 207-227.
	Shown Unnamed on Map/Chart:	
	Within Area of Map/Chart:	Chart NZ 14600 INT 600, INT 605

<b>Reason for Choice of Name</b> (if a person, state how associated with the feature to be named):	Named after Professor Charles Andrew Cotton (1885-1970), Geologist, who first worked on volcanic geomorphology. Victoria University of Wellington, Professor 1915-1953. See: <a href="https://en.wikipedia.org/wiki/Charles_Cotton_(geologist)">https://en.wikipedia.org/wiki/Charles_Cotton_(geologist)</a>
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<b>Discovery Facts:</b>	Discovery Date:	August 1994
	Discoverer (Individual, Ship):	RV Giljanes

<b>Supporting Survey Data, including Track Controls:</b>	Date of Survey:	Multiple surveys 1994-2007
	Survey Ship:	RV Giljanes (1994), RV Tangaroa (2002, 2011), RV Yokosuka (2004), RV Sonne (2007)
	Sounding Equipment:	EM12 and MR2, EM120, Seabeam2000, EM300, Seabeam2112 multibeam
	Type of Navigation:	DGPS
	Estimated Horizontal Accuracy (nm):	25 m
	Survey Track Spacing:	Variable
	Supporting material can be submitted as Annex in analog or digital form.	

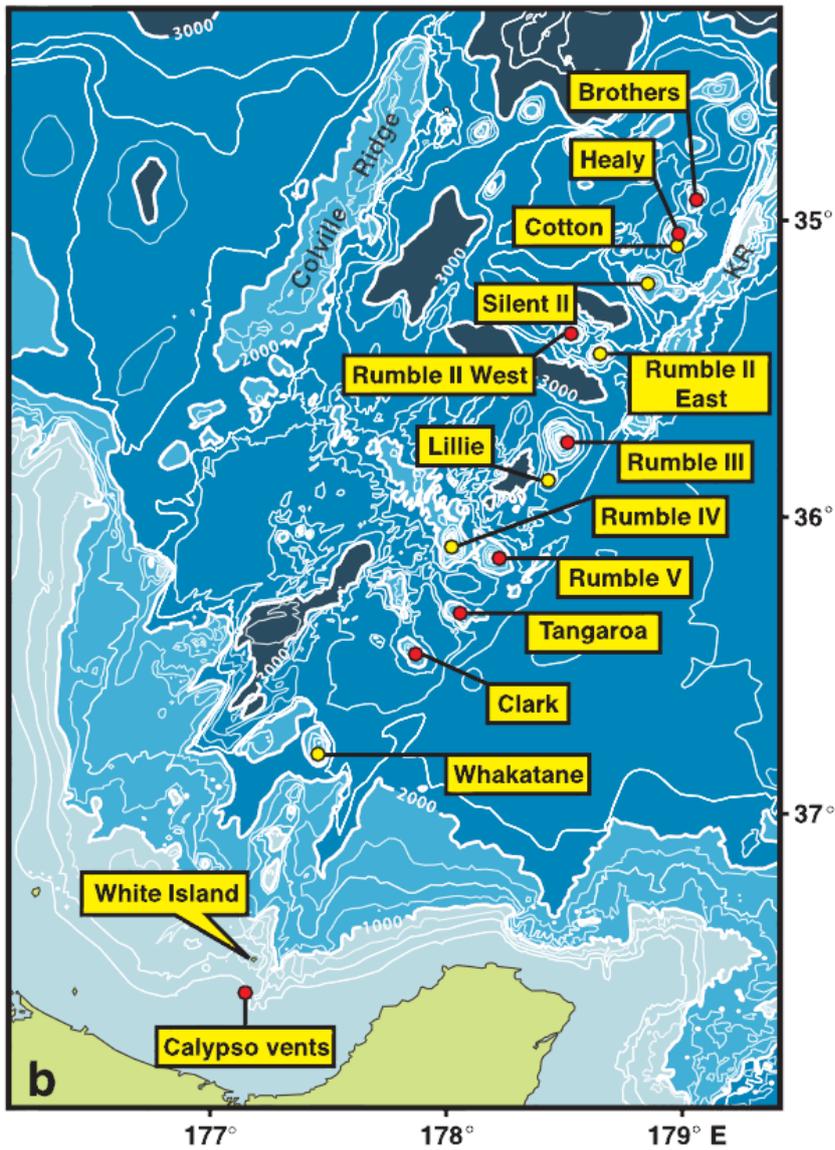
<b>Proposer(s):</b>	Name(s):	Mr Mark Dyer (Chairperson of the NZGB) & Mr Adam Greenland (National Hydrographer)
	Date:	27 June 2016
	E-mail:	markdyer@linz.govt.nz
	Organization and Address:	New Zealand Geographic Board PO Box 5501 Wellington 6145 New Zealand
	Concurrer (name, e-mail, organization and address):	Dr Vaughan Stagpoole V.Stagpoole@gns.cri.nz GNS Science PO Box 30 368 Lower Hutt 5040 New Zealand

<b>Remarks:</b>	Informally named Cotton Volcano. The New Zealand Geographic Board gazetted <b>Cotton Seamount</b> as an official undersea feature name on 26 May 2016.
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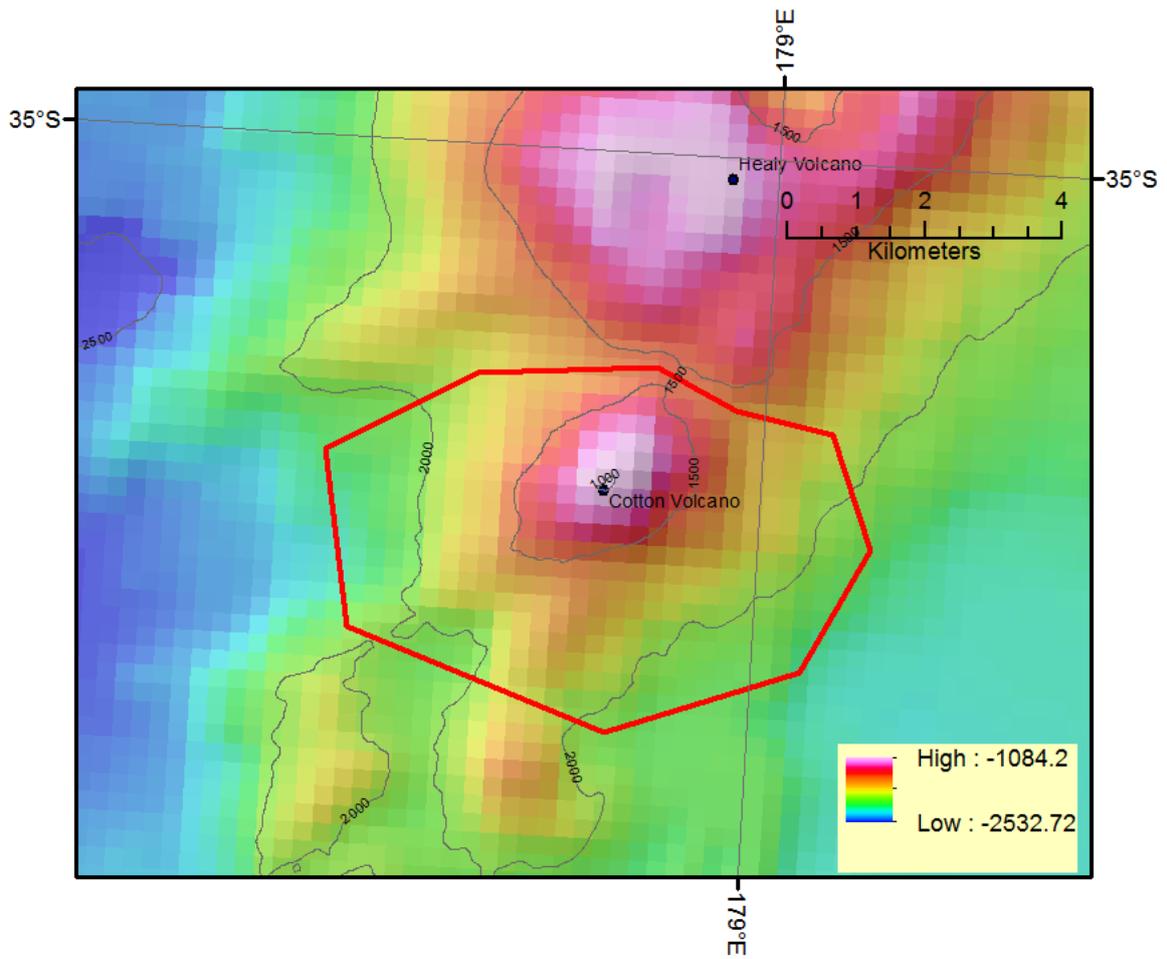
**NOTE :** This form should be forwarded, when completed :

- a) **If the undersea feature is located inside the external limit of the territorial sea:-**  
to your "National Authority for Approval of Undersea Feature Names" (see page 2-9) or, if this does not exist or is not known, either to the IHB or to the IOC (see addresses below);
- b) **If at least 50 % of the undersea feature is located outside the external limits of the territorial sea:-**  
to the IHB or to the IOC, at the following addresses :

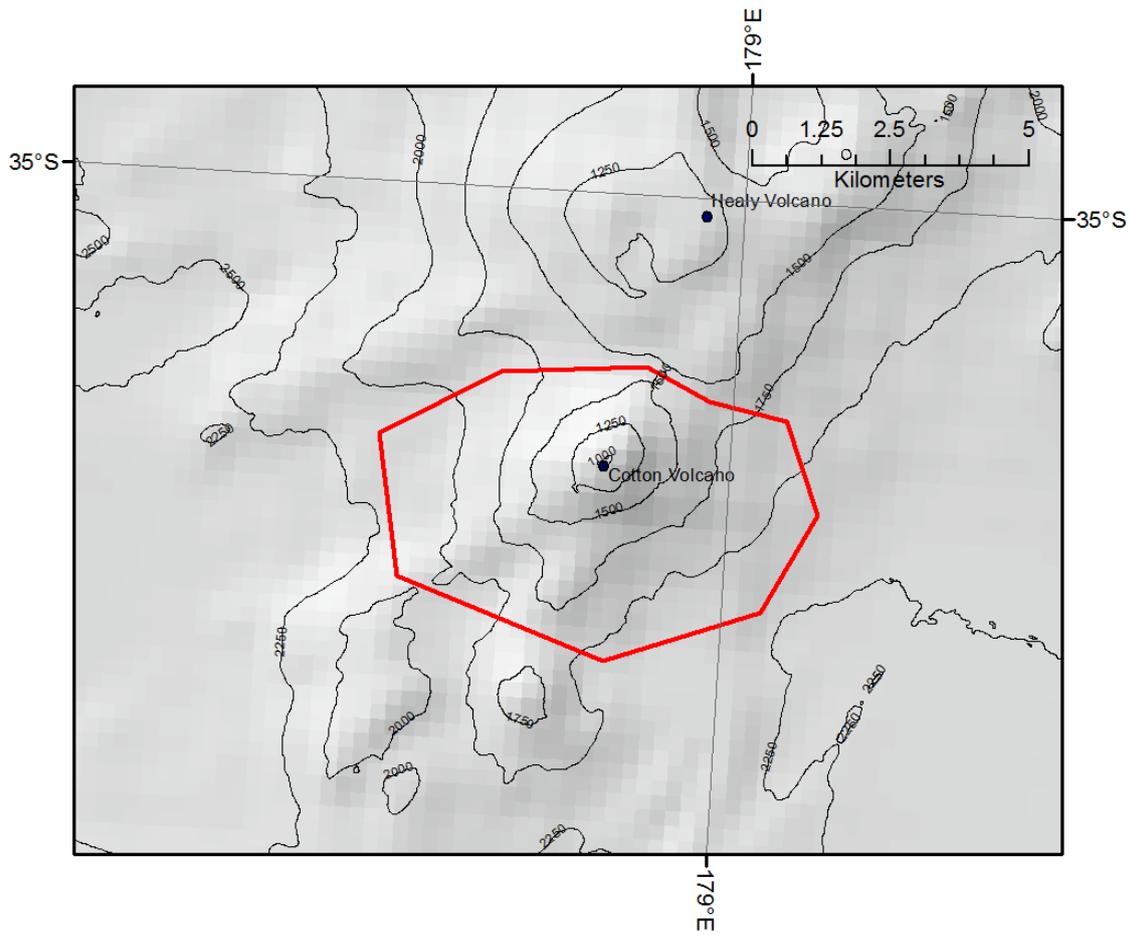
International Hydrographic Bureau (IHB) 4, Quai Antoine 1er B.P. 445 MC 98011 MONACO CEDEX Principality of MONACO Fax: +377 93 10 81 40 E-mail: <a href="mailto:info@ihb.mc">info@ihb.mc</a>	Intergovernmental Oceanographic Commission (IOC) UNESCO Place de Fontenoy 75700 PARIS France Fax: +33 1 45 68 58 12 E-mail: <a href="mailto:info@unesco.org">info@unesco.org</a>
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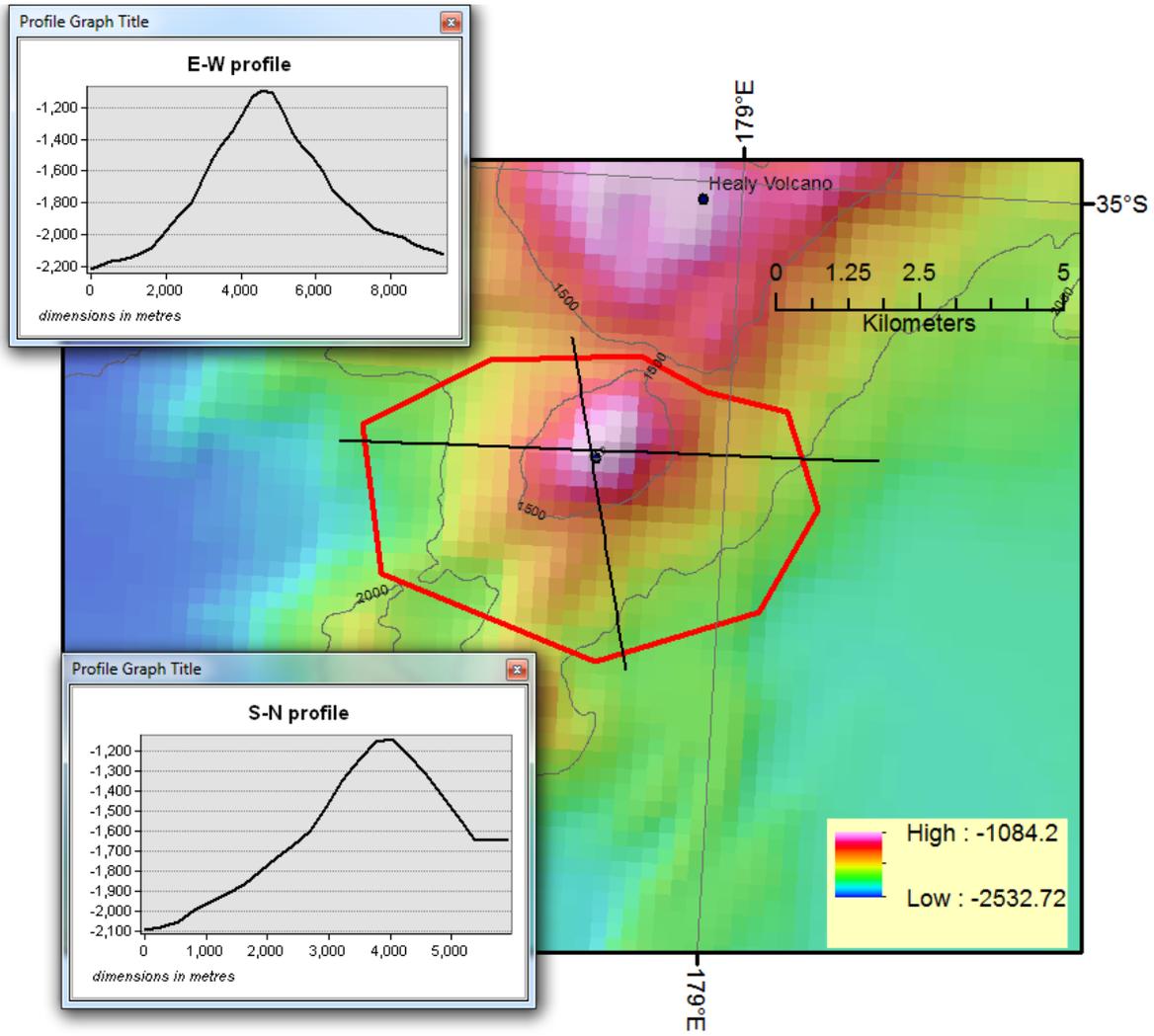
Commonly used names of volcanoes on the southern Kermadec volcanic arc, north of the Bay of Plenty, New Zealand (from CEJ de Ronde, ET Baker, GJ Massoth, JE Lupton, IC Wright, RA Feely, RR. Greene, 2001. Intra-oceanic subduction-related hydrothermal venting, Kermadec volcanic arc, New Zealand. *Earth and Planetary Science Letters* 193, 359-369). Hydrothermally active sites, vent hot water, are shown with red circles. Cotton Seamount lies in the north of the map.



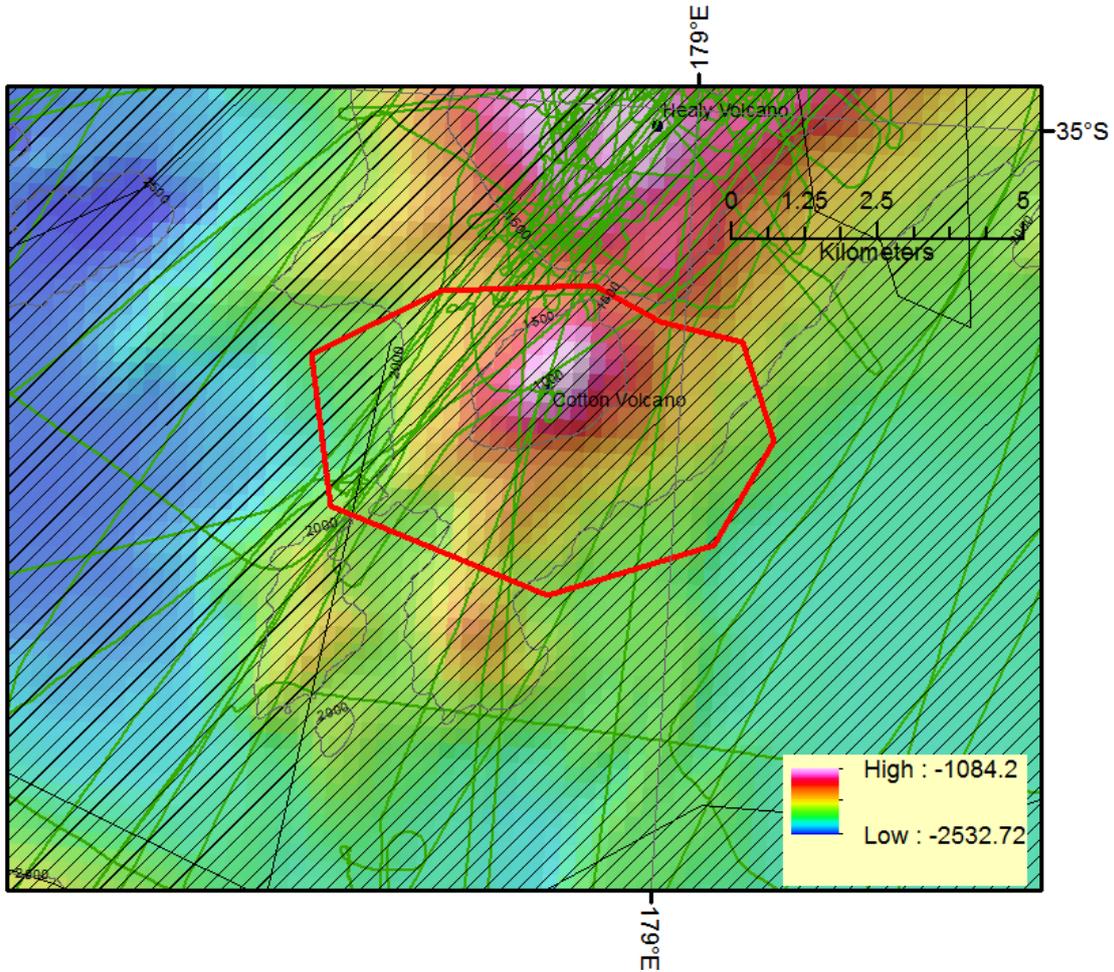
Bathymetry (250m grid) of Cotton Seamount and polygon around the feature



Bathymetry contours on hillshade background



Profiles of Cotton Seamount (dimensions in metres), summit elevation = 980 m



Data coverage

Cross-hatch = multibeam bathymetry coverage  
 Dark green = single beam bathymetry data

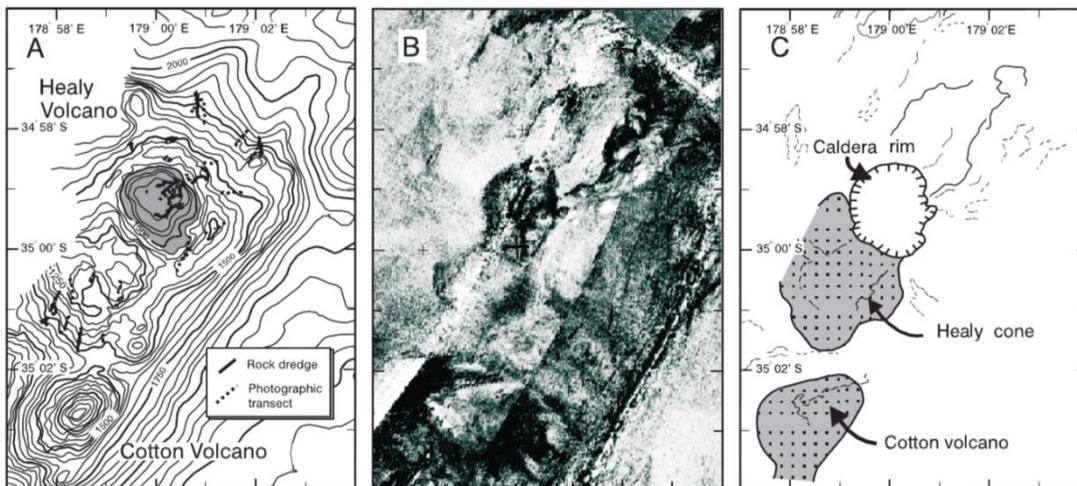


Fig. 4. Healy and Cotton volcanoes; (A) Bathymetry, and seafloor dredge and photographic transects, (B) MR1 imagery with dark areas as regions of high acoustic backscatter, and (C) Geological interpretation of swath and photographic data.

Source: IC Wright & JA Gamble (1999). Southern Kermadec submarine caldera arc volcanoes (SW Pacific): caldera formation by effusive and pyroclastic eruption. *Marine Geology* 161, 207–227