INTERNATIONAL HYDROGRAPHIC ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

UNDERSEA FEATURE NAME PROPOSAL

(Sea **NOTE** overleaf)

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

Name Proposed:	**Haungaroa Seamount**	**Ocean or Sea:**	South Pacific Ocean

Geometry 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.*

	Lat. (e.g. 63°32.6'N)	Long. (e.g. 046°21.3'W)
Coordinates:	32°36.91'S (centre) 32°31.133`S 32°30.5`S 32°31.417`S 32°33.717`S 32°37.1`S 32°41.483`S 32°44.45`S 32°45.1`S 32°41.8`S 32°38.467`S 32°34.083`S 32°32.45`S 32°31.133`S	179°37.30'W (centre) 179°41.65`W 179°38.3`W 179°32.617`W 179°30.033`W 179°29.317`W 179°32.067`W 179°35.333`W 179°39.617`W 179°43.017`W 179°47`W 179°45.967`W 179°45.3`W 179°41.65`W

Feature Description:	Maximum Depth:	3100 metres	Steepness :	
	Minimum Depth :	660 metres	Shape :	Volcanic cone with summit crater
	Total Relief :	2440 metres	Dimension/Size :	25 x 25 km

Associated Features:	Haungaroa Seamount lies 25 km south of Oliver Knoll and Speight Knoll in the Kermadec volcanic arc.

Chart/Map References:	~~Shown Named on Map/Chart:~~ Named in an internationally peer reviewed journal	IC Wright, TJ Worthington & JA Gamble (2006). New multibeam mapping and geochemistry of the 308–358 S sector, and overview, of southern Kermadec arc volcanism. *Journal of Volcanology and Geothermal Research* 149, 263 – 296.
	Shown Unnamed on Map/Chart:	
	Within Area of Map/Chart:	Chart NZ 14600 INT 600, INT 605

Reason for Choice of Name (if a person, state how associated with the feature to be named)**:**	From the Māori legend of the great navigator Ngātoroirangi, who was caught in a cold southerly snow blizzard at the peak of Mount Tongariro calling to his sisters Kuiwai and Haungaroa in Hawaiki to send fire to warm

	him. The sisters summoned the fire demons Te Pupu and Te Hoata who travelled underground, erupting flames as they went.

Discovery Facts:	Discovery Date:	March 1977
	Discoverer (Individual, Ship):	RV Tangaroa (1)

Supporting Survey Data, including Track Controls:	Date of Survey:	1998 - 2012
	Survey Ship:	RV Sonne (1998, 2007), RV Tangaroa (2005, 2012)
	Sounding Equipment:	Atlas hydrosweep DS-2, EM120, EM300, EM 302 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.	

Proposer(s):	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

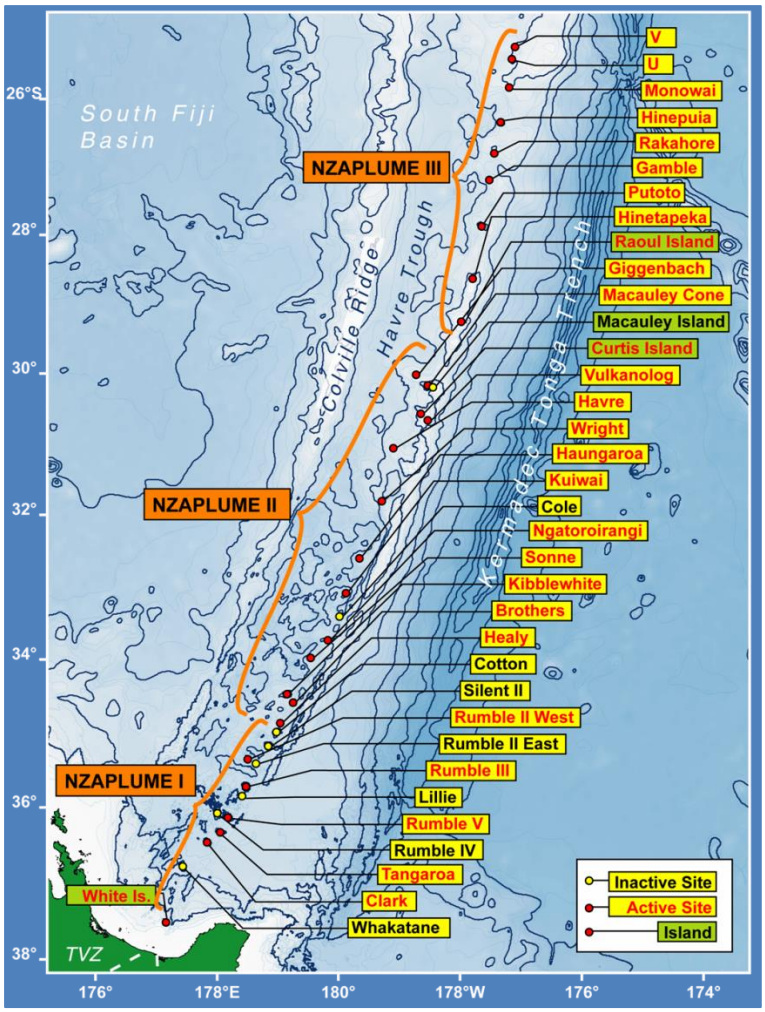
Remarks:	Informally named Haungaroa Volcano. The New Zealand Geographic Board gazetted **Haungaroa Seamount** as an official undersea feature name on 26 May 2016.

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: info@ihb.mc	Intergovernmental Oceanographic Commission (IOC) UNESCO Place de Fontenoy 75700 PARIS France Fax: +33 1 45 68 58 12 E-mail: info@unesco.org



Commonly used names of volcanoes of the Kernmadec arc (de Ronde, pers. com. 2015). NZAPLUME I (1999) NZAPLUME II (2002) and NZAPLUME III (2004) refer to New Zealand-led surveys that mapped the regions and named many of the features (U and V are in Tongan waters). Active sites are those that are hydrothermally active and known to vent hot water.

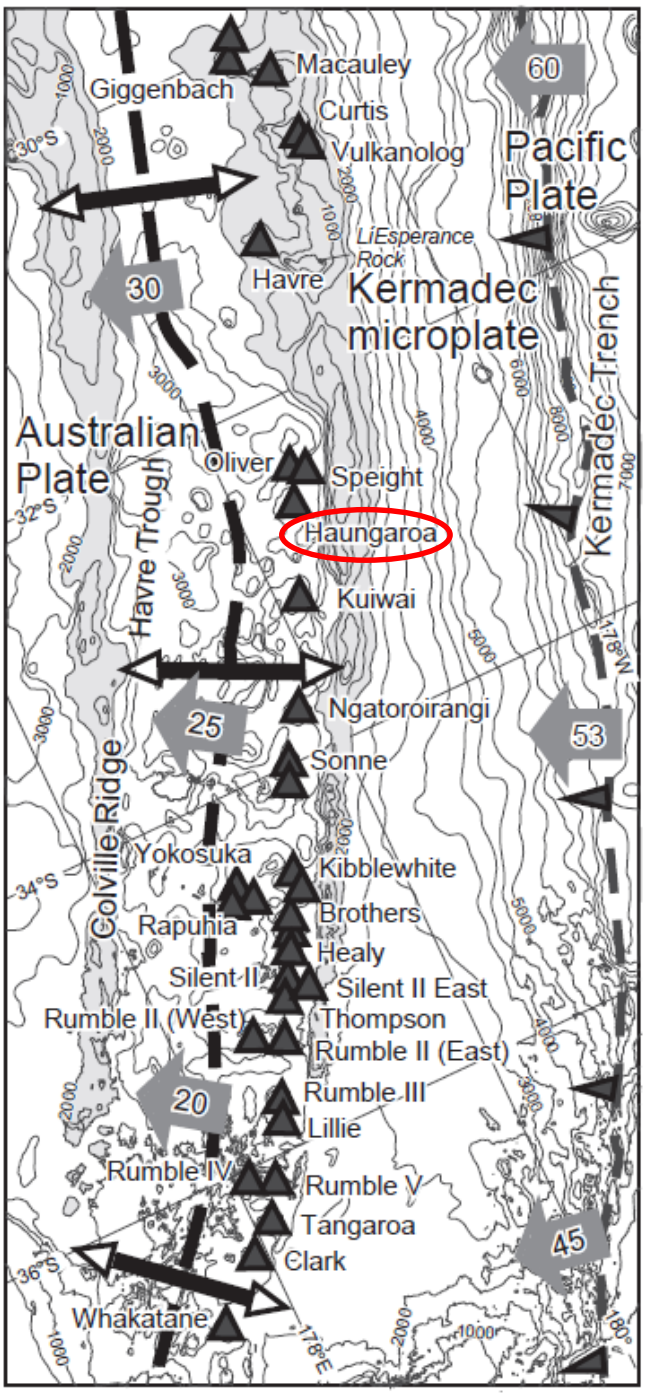
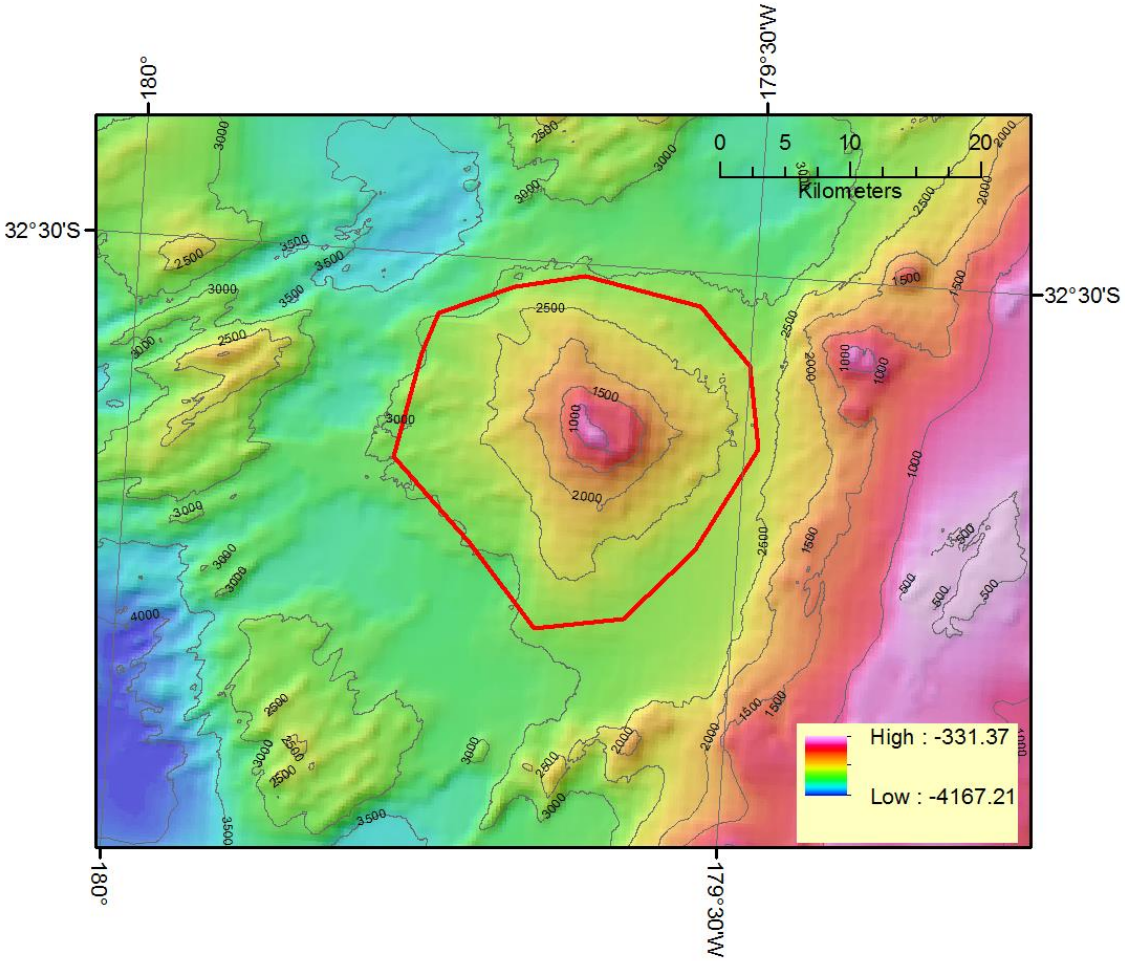
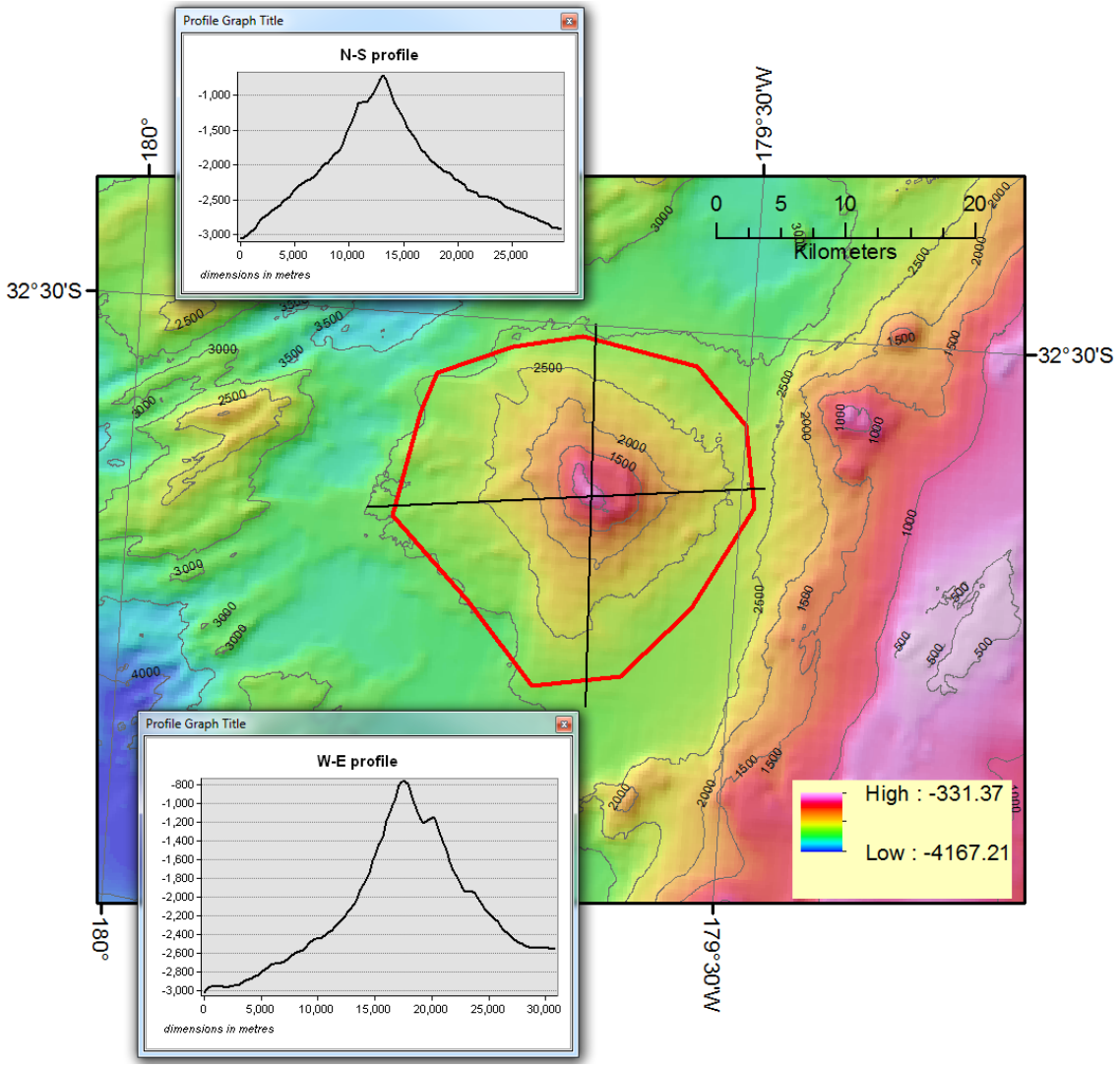


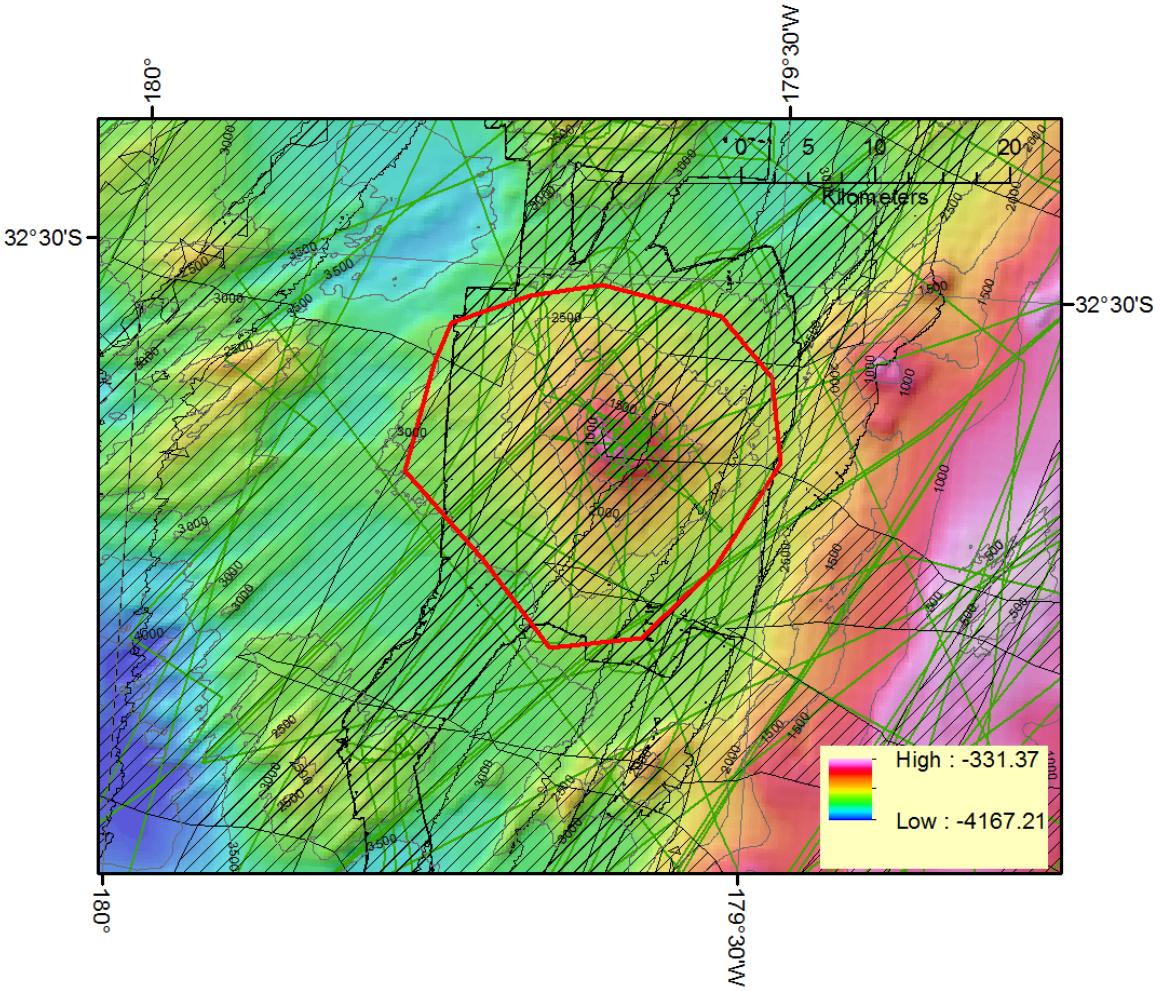
Fig. 2A of Wright et al 2006. Regional setting of the southern and central Kermadec subduction system, including newly discovered volcanoes (closed triangles) of the arc front [including Haungaroa]. Dashed lines show location of the subduction and extensional plate boundaries, east and west of the Kermadec microplate, respectively, with grey arrows showing estimated relative Pa–Ke and Ke–Au plate motion in millimeters per annum.



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



Profiles of Haungaroa Seamount (dimensions in metres)



Data coverage :

Cross-hatch = multibeam bathymetry coverage

Dark green = single beam bathymetry data

Source: Wright et al., 2006

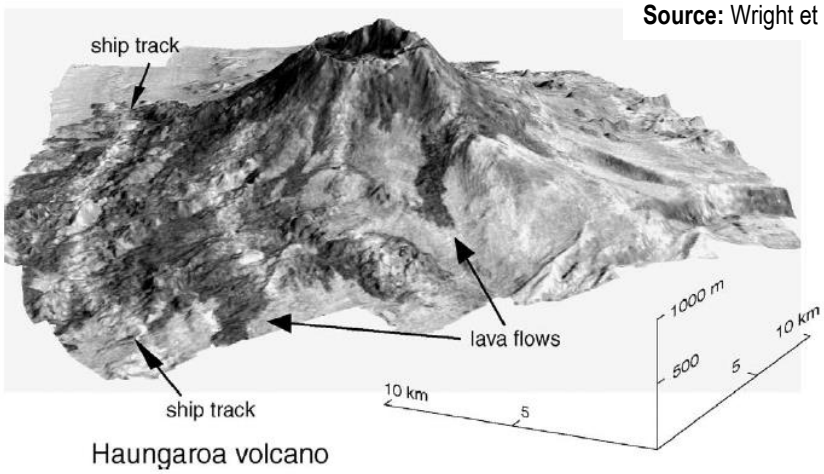


Fig. 11. EM300 back-scatter imagery draped over bathymetry terrain grids (cell size 25 m) for Haungaroa volcanoes. Areas of high acoustic reflectivity (back-scatter) are shown as black/dark grey and are interpreted as recent lava flows, whereas areas of light grey are interpreted as sediment.

Source: Wright et al., 2006

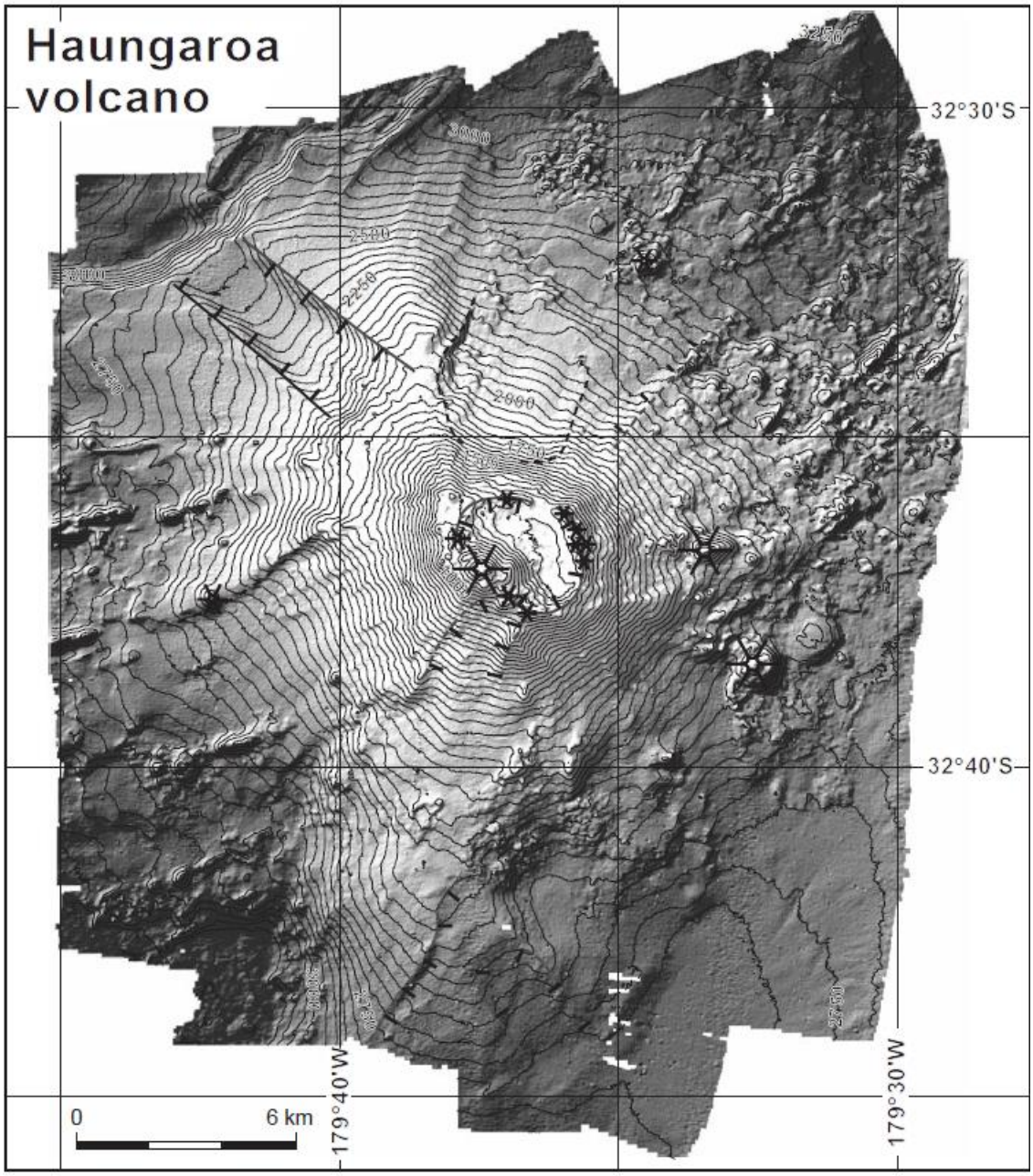


Fig. 10. Bathymetry and synoptic volcanic geology of Haungaroa volcano.

Source: Wright et al., 2006