

UNDERSEA FEATURE NAME PROPOSAL

(Sea NOTE overleaf)

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

Name Proposed:	Lillie Seamount	Ocean or Sea:	South Pacific Ocean
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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.

Coordinates:	Lat. (e.g. 63°32.6'N)	Long. (e.g. 046°21.3'W)
	35°52.22'S (centre)	178°26.24'E (centre)
	35°49.2'S	178°26.817'E
	35°49.8'S	178°28.483'E
	35°51.267'S	178°30.433'E
	35°52.617'S	178°30.033'E
	35°54.083'S	178°28.5'E
	35°55.567'S	178°25.867'E
	35°54.867'S	178°22.917'E
	35°52.683'S	178°22.767'E
	35°50.433'S	178°23.067'E
	35°49.017'S	178°24.2'E
35°49.2'S	178°26.817'E	

Feature Description:	Maximum Depth:	2500m	Steepness :	
	Minimum Depth :	1280m	Shape :	Volcanic cone
	Total Relief :	1220m	Dimension/Size :	10 x 11 km

Associated Features:	Lillie Seamount is located 14 km south of Rumble III Seamount on the Kermadec volcanic arc.
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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. <i>Journal of Volcanology and Geothermal Research</i> 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):	Named after Professor Arnold Lillie (1909-1999), Professor of Geology at Auckland University. See: http://www.royalsociety.org.nz/publications/reports/yearbooks/year1999/obituaries/arnold-lillie/
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Discovery Facts:	Discovery Date:	1993
	Discoverer (Individual, Ship):	RV Lavrentyev

Supporting Survey Data, including Track Controls:	Date of Survey:	2002 - 2012
	Survey Ship:	RV Tangaroa (2002, 2004, 2011), RV Yokosuka (2009),
	Sounding Equipment:	EM300 EM301, 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.	

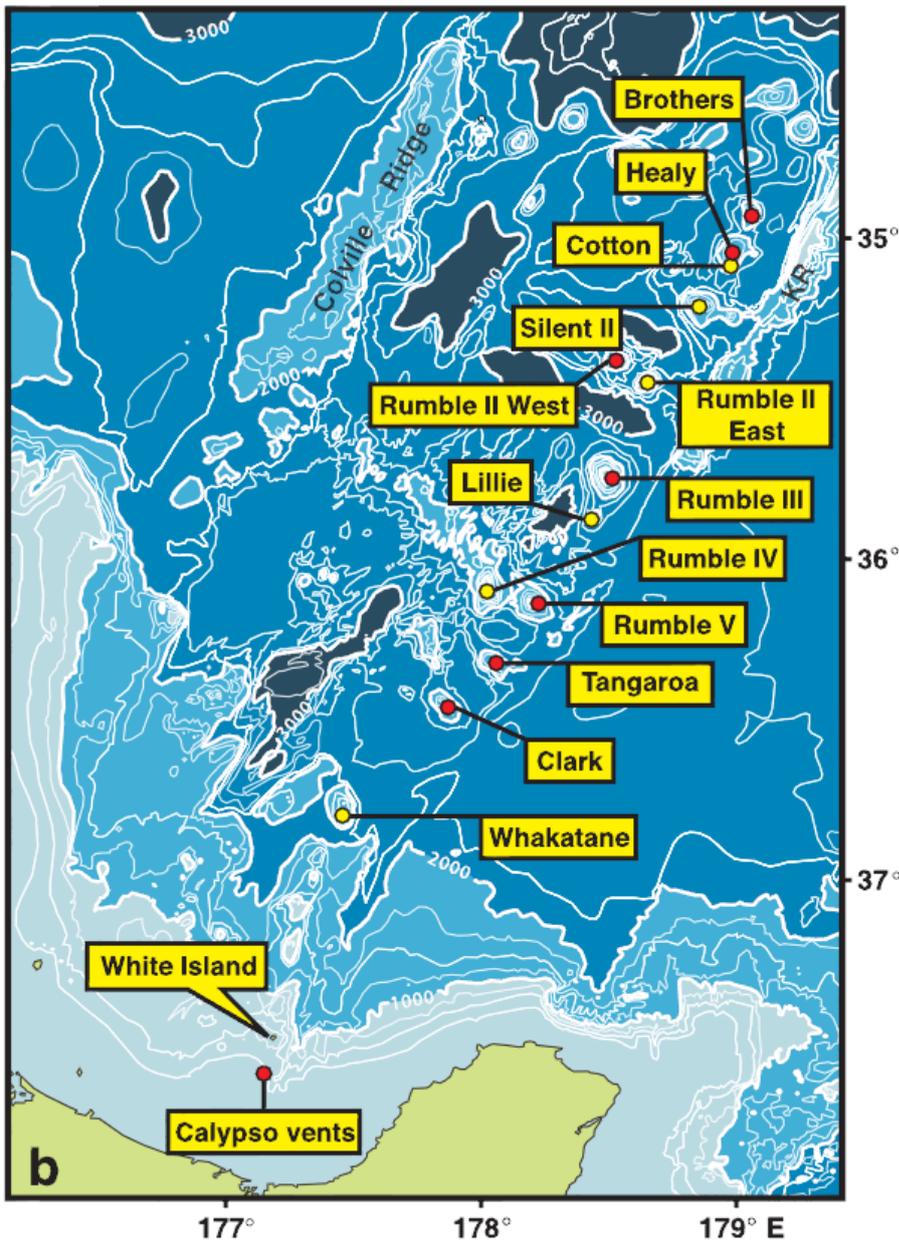
Proposer(s):	Name(s):	Mr Mark Dyer (Chairperson of the NZGB) & Mr Adam Greenland (National Hydrographer)
	Date:	27 June 2016
	E-mail:	markdyer@linz.govt.nz
	Organization and Address:	New Zealand Geographic Board PO Box 5501 Wellington 6145 New Zealand
	Concurrer (name, e-mail, organization and address):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

Remarks:	Informally named Lillie Knoll. The New Zealand Geographic Board gazetted Lillie Seamount 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 <u>Principality of MONACO</u> Fax: +377 93 10 81 40 E-mail: info@ihb.mc	Intergovernmental Oceanographic Commission (IOC) UNESCO Place de Fontenoy 75700 PARIS <u>France</u> Fax: +33 1 45 68 58 12 E-mail: info@unesco.org
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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.

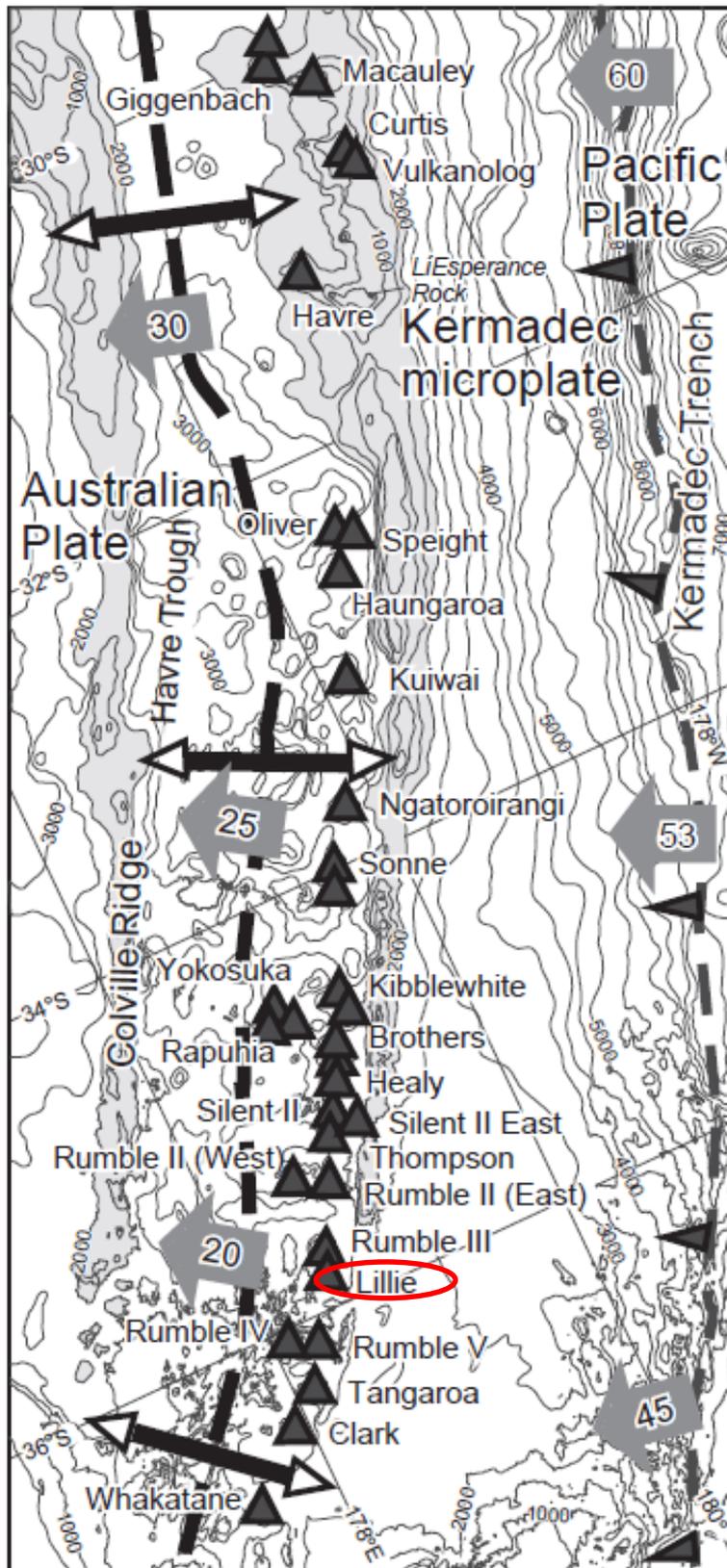
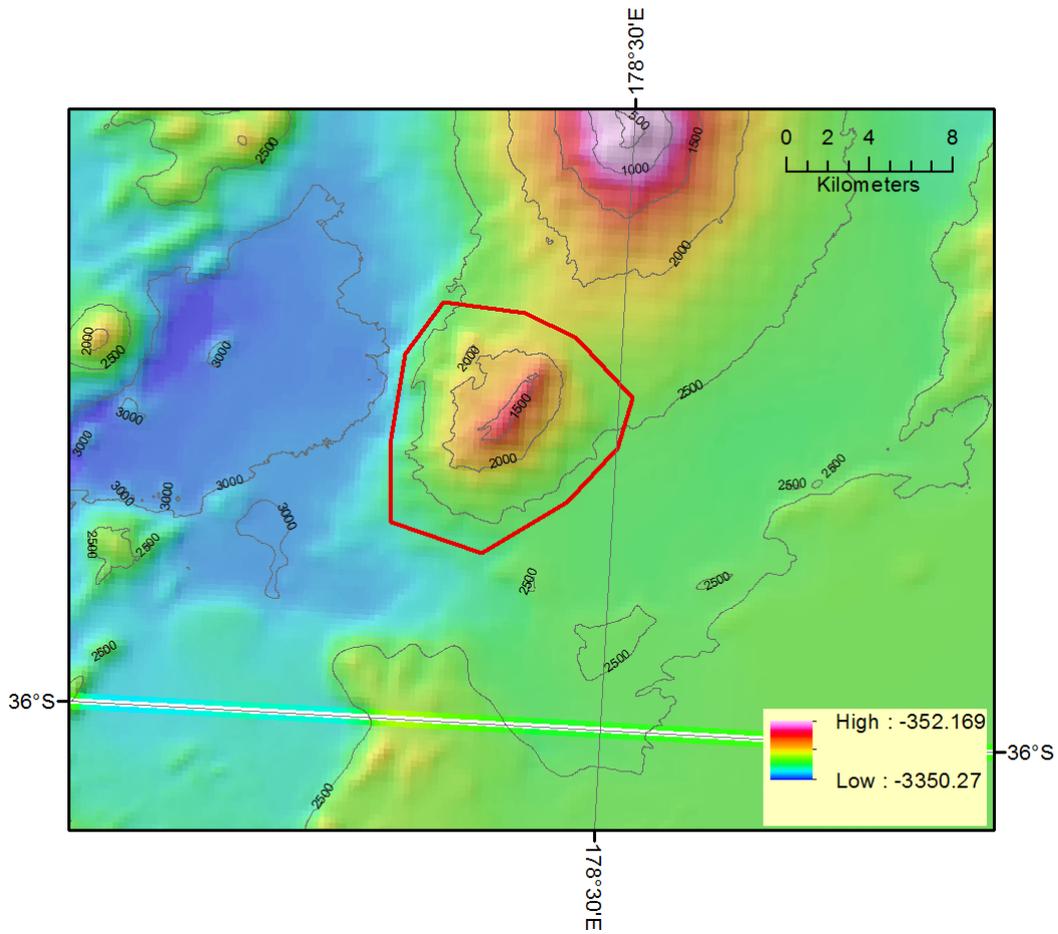
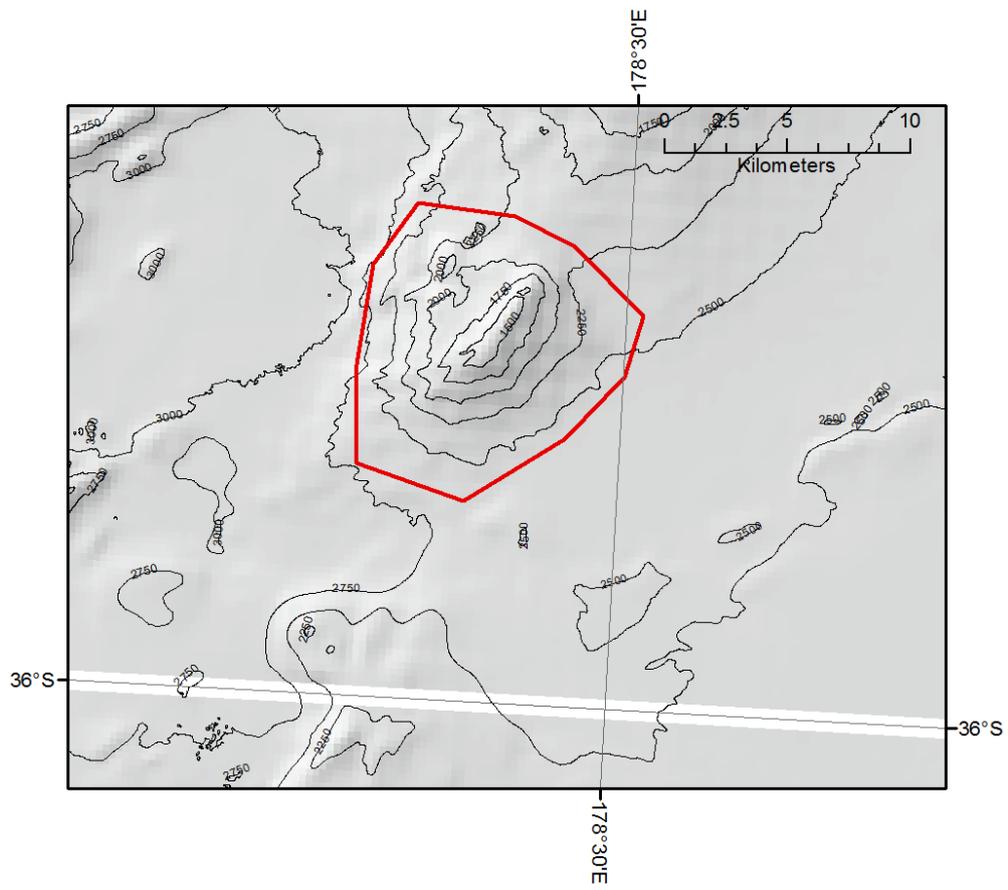


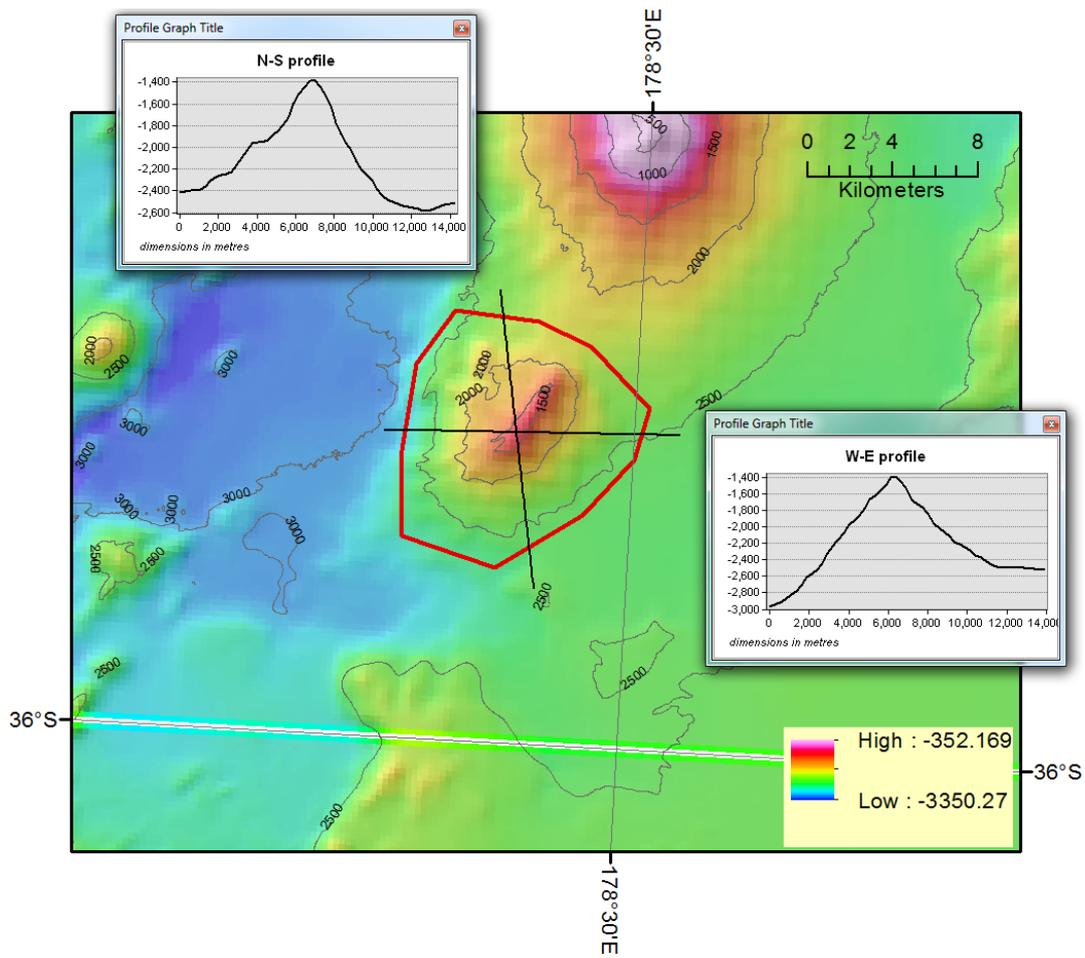
Fig. 2A of Wright et al 2006. Regional setting of the southern and central Kermadec subduction system, including newly discovered volcanoes (closed triangles) of the arc front [including Lillie Seamount]. Dashed lines show location of the subduction and extensional plate boundaries, east and west of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



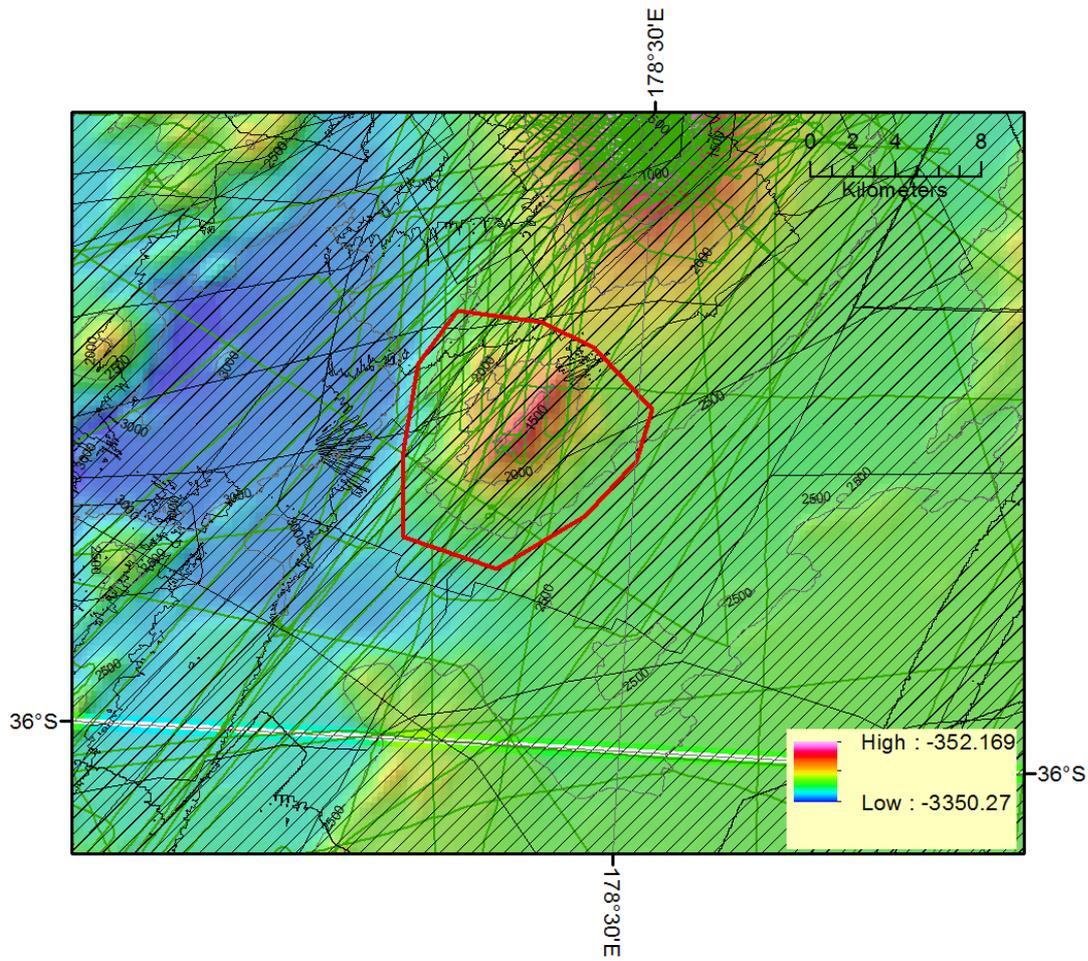
Bathymetry of Lillie Seamount (250m grid) and polygon around the feature. Rumble III Seamount is located to the north of Lillie Seamount



Bathymetry contours on hillshade background



Profiles of Lillie Seamount (dimensions in metres)



Data coverage

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