

UNDERSEA FEATURE NAME PROPOSAL
(Sea NOTE overleaf)

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

Name Proposed:	Falkor Seamount	Ocean or Sea:	North Pacific
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*List of supporting documentation is included at the end of this document.

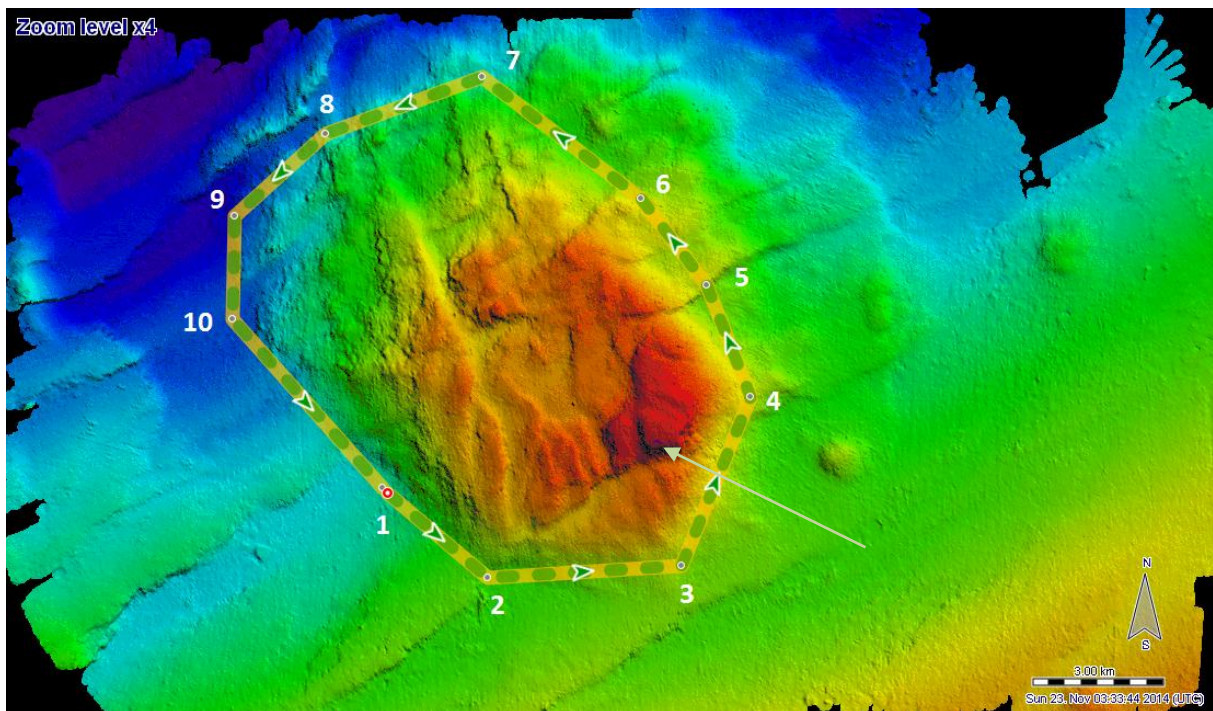
Supporting documentation is available from the Schmidt ocean Institute cloud folder – it was too large to include as an email attachment, the direct link to this folder is:

<https://schmidtocean.box.com/s/mqrp4at6zwuklu1cp7of>

Geometry that best defines the feature (Yes/No) :						
Point	Line	Polygon	Multiple points	Multiple lines*	Multiple polygons*	Combination of geometries*
		Yes				

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

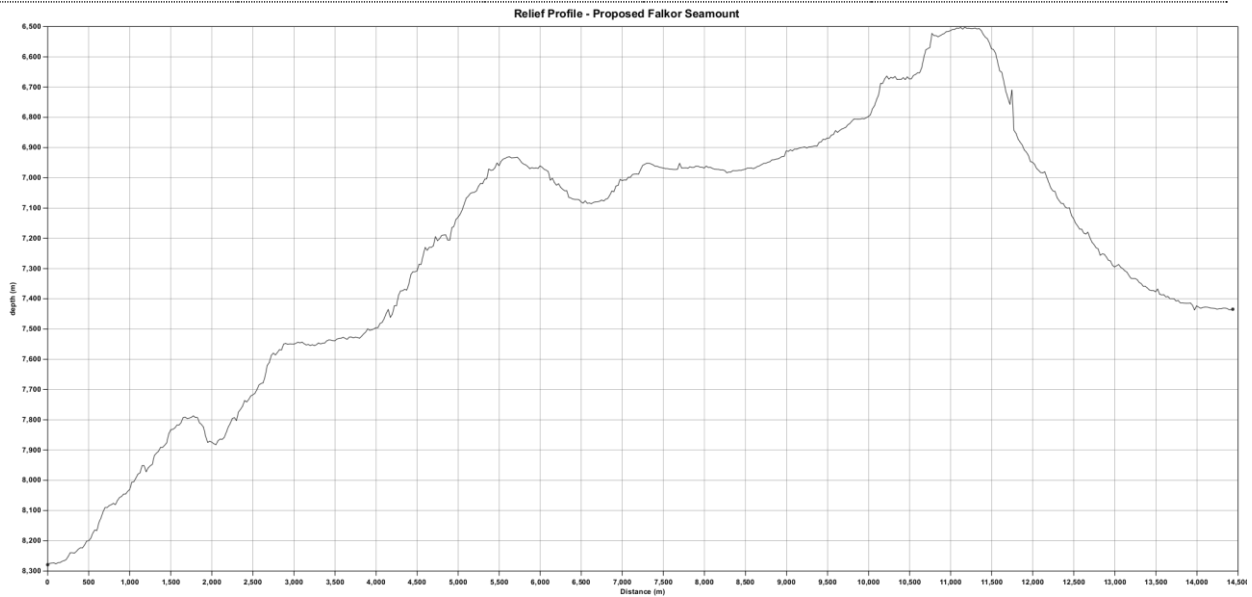
	Lat. (e.g. 63°32.6'N)			Long. (e.g. 046°21.3'W)		
	Lat DD MM.MMM	Lon DD MM.MMM	Lon DD.DDD	Lat DD.DDD	Lat DD MM SS.SS	Lon DD MM SS.SS
Summit of Feature	N 11° 51.259	E 144° 52.415	11.854322	144.873578	N 11 51 15.56	E 144 52 24.88
Point 1	N 11° 50.607	E 144° 49.049	11.843450	144.817483	N 11 50 36.42	E 144 49 02.94
Point 2	N 11° 49.589	E 144° 50.284	11.826483	144.838067	N 11 49 35.34	E 144 50 17.04
Point 3	N 11° 49.756	E 144° 52.654	11.829267	144.877567	N 11 49 45.36	E 144 52 39.24
Point 4	N 11° 51.800	E 144° 53.496	11.863333	144.891600	N 11 51 48.00	E 144 53 29.76
Point 5	N 11° 53.155	E 144° 52.947	11.885917	144.882450	N 11 53 09.30	E 144 52 56.82
Point 6	N 11° 54.192	E 144° 52.132	11.903200	144.868867	N 11 54 11.52	E 144 52 07.92
Point 7	N 11° 55.651	E 144° 50.169	11.927517	144.836150	N 11 55 39.06	E 144 50 10.14
Point 8	N 11° 54.941	E 144° 48.241	11.915683	144.804017	N 11 54 56.46	E 144 48 14.46
Point 9	N 11° 53.938	E 144° 47.139	11.898967	144.785650	N 11 53 56.28	E 144 47 08.34
Point 10	N 11° 52.696	E 144° 47.116	11.878267	144.785267	N 11 52 41.76	E 144 47 06.96
Point 11	N 11° 50.673	E 144° 48.982	11.844550	144.816367	N 11 50 40.38	E 144 48 58.92



Above: Multibeam bathymetry of proposed *Falkor Seamount* with points used to determine boundary of feature.

The arrow indicates the summit of the feature (6495m)

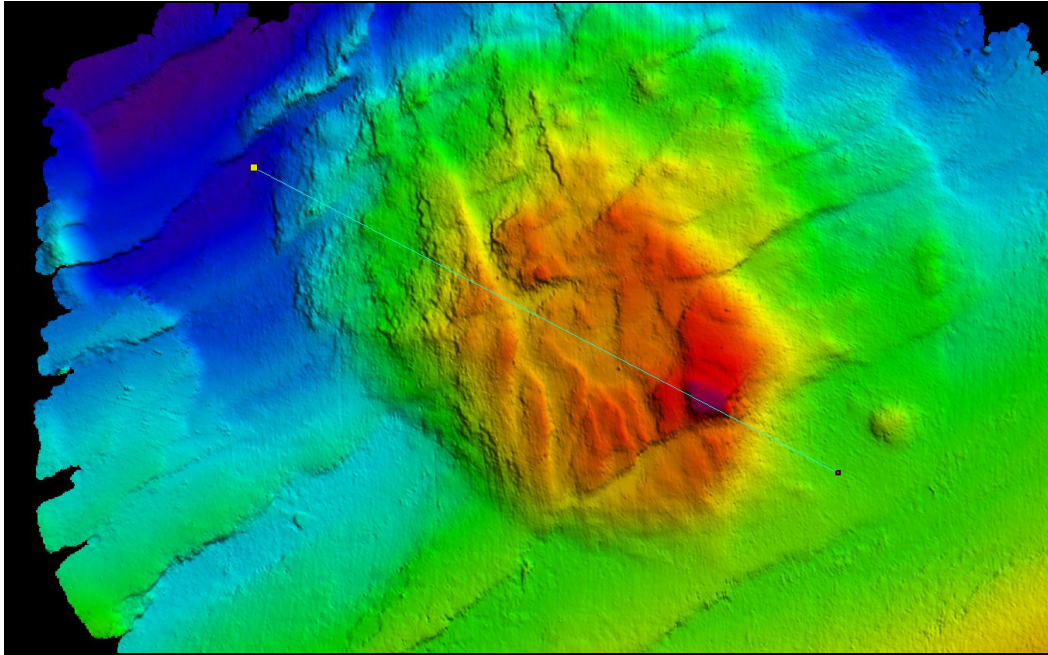
Feature Description:	Maximum Depth:	8279m	Steepness :	
	Minimum Depth :	6495m	Shape :	Conical
	Total Relief :	1778m	Dimension/Size :	See below roughly 12km



Above: Profile of proposed Falkor Seamount showing elevation from the deepest isobath. Statistics of this profile are given below.

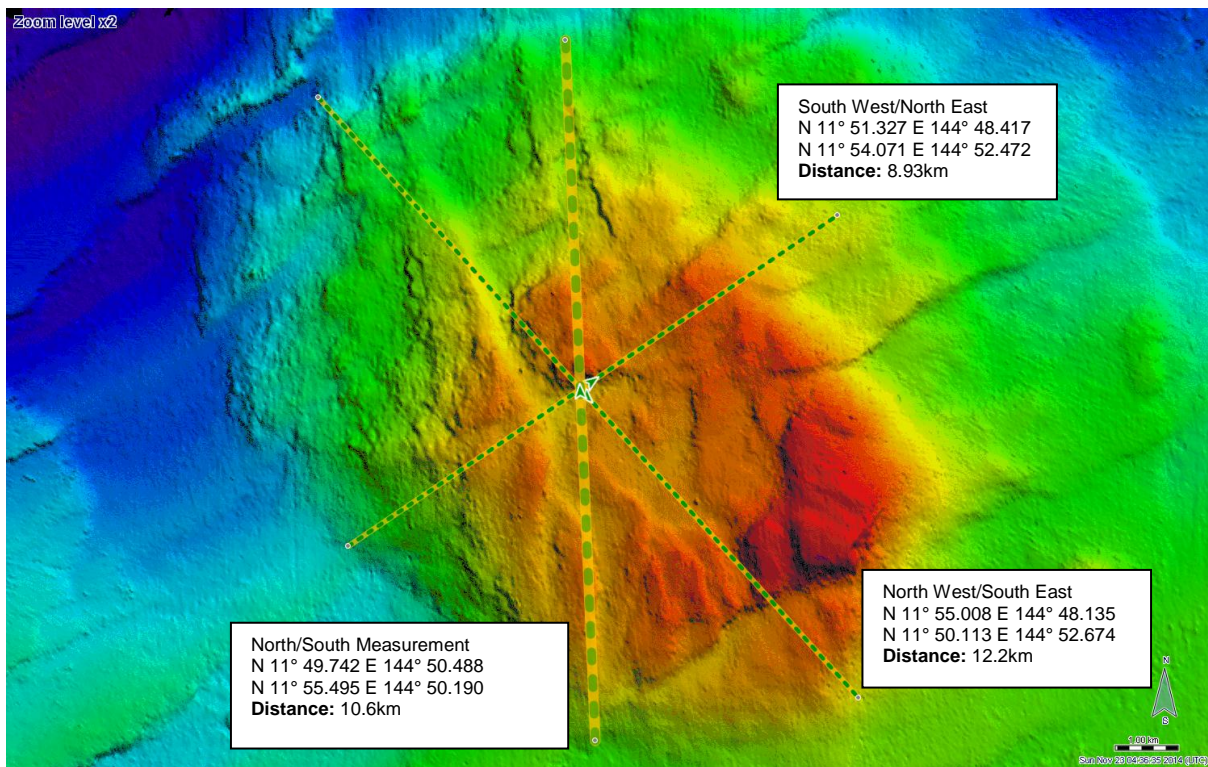
Start Position	144-46.8852900E 11-54.0682380N
Depth	8279m
Shallowest point	6501.941m
End Position	144-53.9587080E 11-50.4940980N
Depth	7436m
Line length	14420m
Deepest isobath to summit (shallowest isobaths)	1778m

Additional profiles of feature have been included in the supporting documentation relating to this proposal.



Above: Image showing the profile line drawn across the proposed *Falkor Seamount*

Proposed *Falkor Seamount* size



Above: Distance tool used to define the size of the proposed *Falkor Seamount*.

Associated Features:	
Chart/Map References:	Shown Named on Map/Chart: No
	Shown Unnamed on Map/Chart: No
	Within Area of Map/Chart:
Reason for Choice of Name (if a	This proposed <i>Falkor Seamount</i> was identified and extensively mapped using R/V

person, state how associated with the feature to be named):

Falkor's EM302 Multibeam system as part of science cruise FK0141109. Mapping of this feature was conducted prior to the deployment of scientific landers equipped with various sensors.

This feature conforms with the definition of Seamount ("A distinct generally equidimensional elevation greater than 1000m above the surrounding relief as measured from the deepest isobath that surrounds most of the feature.."), as per 2-14 STANDARDIZATION OF UNDERSEA FEATURE NAMES GUIDELINES PROPOSAL FORM TERMINOLOGY Publication B-6 Edition 4.1.0 - INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION

In addition I have chosen to name this after the discovering/verifying vessel, R/V *Falkor*, as per section II. PRINCIPLES FOR NAMING FEATURES (2-2), Publication B-6 Edition 4.1.0 - INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION

"Where a ship name is used, it should be that of the discovering ship, or if that has been previously used for a similar feature, it should be the name of the ship verifying the feature, e.g.: San Pablo Seamount, Atlantis II Seamounts."

This is the only feature we have submitted containing *Falkor* (vessels name) as the proposed name. I am not aware of any other seamounts or undersea features with this name.

Principle Scientists for FK141109 was Jeff Drazen (contact details supplied below). Science cruise with NOAA permits.

RV *Falkor* is an oceanographic research vessel, the flagship vessel of the Schmidt Ocean Institute.

RV *Falkor* was originally built as *Seefalke* in 1981 in Lübeck, Germany as a fishery protection vessel. During an extensive refit at Peters Schiffbau shipyard in Wewelsfleth, Germany, from 2009 to early 2012, she was converted to an oceanographic research vessel. The conversion was funded by Eric and Wendy Schmidt with the intent of allowing researchers to use it free of charge, provided they make their findings free to the public within two months of the research.

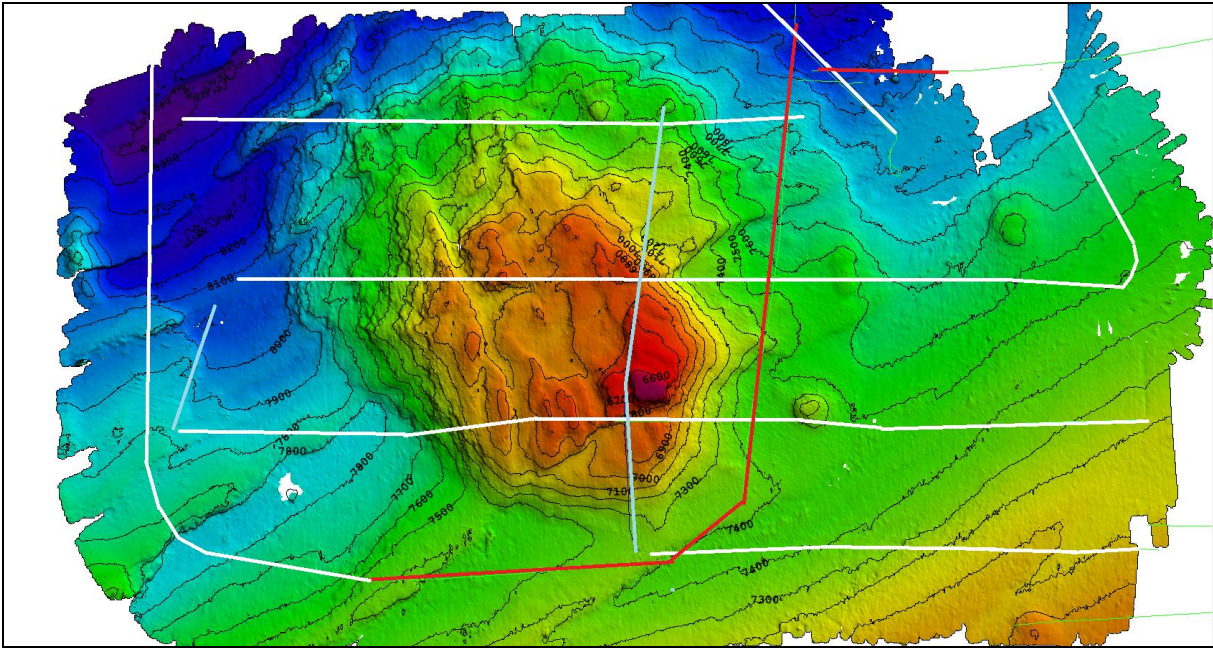
Name:	RV <i>Falkor</i> <i>Seefalke</i> (Sea Hawk) (until July 2009)
Namesake:	<i>Falkor</i> (luckdragon)
Operator:	Schmidt Ocean Institute
Port of registry:	George Town, Cayman Islands Hamburg (until 2009)
Builder:	Orenstein & Koppel AG, Lübeck, Germany
Cost:	\$94 million (refit/conversion)
Yard number:	760
Launched:	22 December 1980
Completed:	8 September 1981
Refit:	2010-2012
Identification:	IMO number: 7928677 MMSI number: 319005600 Call sign: ZCYL5
Status:	in service

General characteristics	
Tonnage:	2,088 GRT ; 627 NRT
Displacement:	2,260 m ³
Length:	82.9 metres (272 ft)
Beam:	13 metres (43 ft)
Draft:	4.8 metres (16 ft)
Depth:	6.67 metres (21.9 ft)
Speed:	12kn (cruising); 19.8kn (max)
Endurance:	40 days
Capacity:	18 scientists
Crew:	19+2 technicians

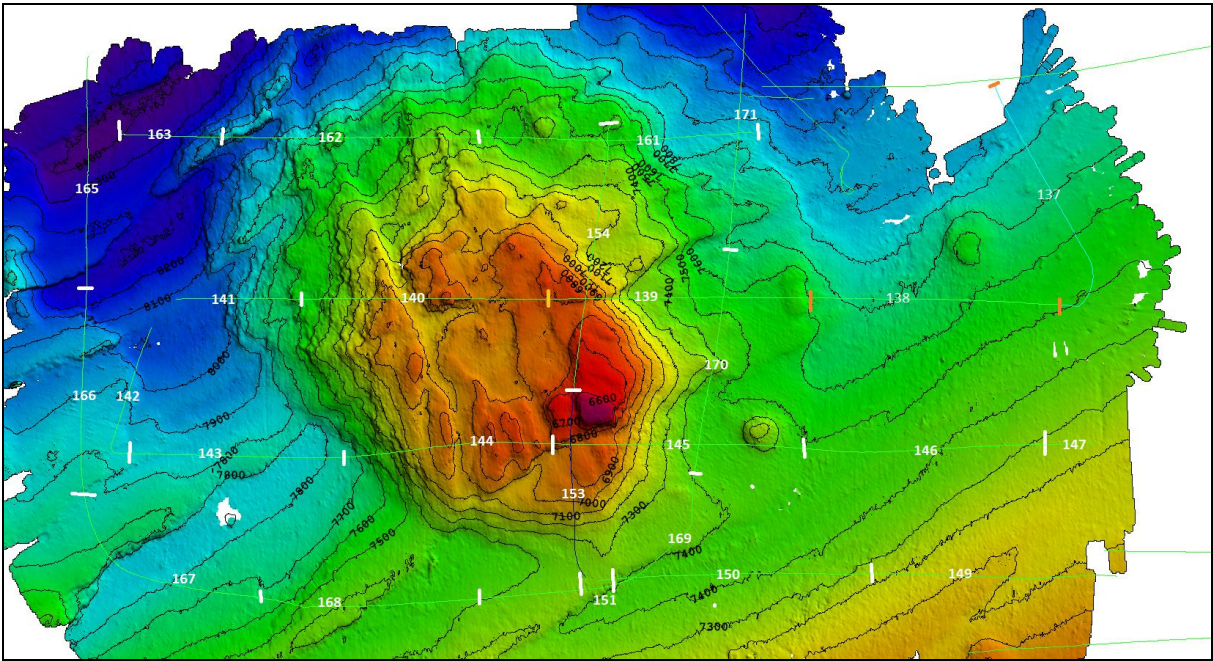
Discovery Facts:	Discovery Date:	21 st – 22 nd November 2014
	Discoverer (Individual, Ship):	Leighton Rolley (Hydrographer) – (Employee of Schmidt Ocean Institute)

Supporting Survey Data, including Track Controls:	Date of Survey:	21 st – 22 nd November 2014
	Survey Ship:	Vessel: R/V <i>Falkor</i> Call Sign: ZCYL5 IMO: 7928677 MMSI: 319005600 Home Port: George Town, Gran Cayman Class: GL Operator: Schmidt Ocean Institute
	Sounding Equipment:	Kongsberg EM302 Multibeam Serial No: 105 Survey ID: FK141109 SIS Version: 4.1.3 Build: 14 DB Version: 24.0 Post Processing: Caris Hips & Sips 8.1.6 Build 2014-02-20_22-35-19
	Type of Navigation:	POS MV – Primary Science GPS Fully Surveyed: 08/2014 DGPS Corrections Model: C-NAV 3050 Alignment Survey: 08/2014 NTP S350 Timing Sync Server
	Estimated Horizontal Accuracy (nm):	HDOP (Horizontal Dilution of Precision) throughout the survey of proposed <i>Falkor Seamount</i> was 0.8m

	<p>Survey Track Spacing:</p>	<p>Multiple survey lines were run over proposed <i>Falkor Seamount</i></p> <p>Line spacing was 3500m although a detailed account with swath width and start/end positions is given below</p>
<p>Survey Lines: A detailed breakdown and overview of survey lines over the proposed Falkor Seamount are given below. Additional GEOTIFF's and documentation have been included in the supporting documentation</p>		



Above: Image showing survey area with individual survey lines across the proposed *Falkor Seamount*



Above: chart showing Em302 survey line ID's across the proposed *Falkor Seamount*. A detailed overview of each survey line is given in the table below

Line ID	Line Start	Line End	Time Start	Time End	Distance	Avg HDG	Avg Swath Width
137	N11°55'41.05" E144°57'42.00"	N11°52'47.85" E144°58'32.71"	2014.11.21 07:18:06	2014.11.21 07:56:31	11923 m	157.50 deg.	4555.48 m
138	N11°52'47.85" E144°58'32.65"	N11°52'51.85" E144°55'08.74"	2014.11.21 07:56:32	2014.11.21 08:56:35	635 m	271.14 deg.	4543.18 m
139	N11°52'51.85" E144°55'08.69"	N11°52'49.20" E144°51'42.23"	2014.11.21 08:56:36	2014.11.21 09:56:34	606 m	267.51 deg.	4595.74 m
140	N11°52'49.20" E144°51'42.17"	N11°52'47.75" E144°48'32.93"	2014.11.21 09:56:35	2014.11.21 10:56:38	600 m	267.65 deg.	4656.33 m
141	N11°52'47.74" E144°48'32.89"	N11°52'47.06" E144°46'44.23"	2014.11.21 10:56:39	2014.11.21 11:34:51	411 m	270.54 deg.	4729.24 m
142	N11°52'23.96" E144°46'25.17"	N11°50'44.84" E144°46'01.78"	2014.11.21 11:41:03	2014.11.21 11:55:42	6725 m	187.37 deg.	4650.54 m
143	N11°50'44.83" E144°46'01.84"	N11°50'43.27" E144°49'02.90"	2014.11.21 11:55:43	2014.11.21 12:55:44	683 m	86.91 deg.	4522.80 m
144	N11°50'43.28" E144°49'02.95"	N11°50'54.79" E144°51'56.61"	2014.11.21 12:55:45	2014.11.21 13:55:46	1095 m	82.96 deg.	4566.35 m
145	N11°50'54.79" E144°51'56.67"	N11°50'52.15" E144°55'18.12"	2014.11.21 13:55:47	2014.11.21 14:55:44	718 m	87.45 deg.	4307.45 m
146	N11°50'52.14" E144°55'18.18"	N11°50'57.65" E144°58'34.97"	2014.11.21 14:55:45	2014.11.21 15:55:4	908 m	85.35 deg.	4299.08 m
147	N11°50'57.65" E144°58'35.02"	N11°50'58.83" E144°59'03.53"	2014.11.21 15:55:41	2014.11.21 16:04:54	151 m	85.71 deg.	4833.45 m
149	N11°49'13.77" E144°59'21.39"	N11°49'13.83" E144°56'02.86"	2014.11.21 16:26:21	2014.11.21 17:26:18	892 m	271.61 deg.	4149.83 m
150	N11°49'13.83" E144°56'02.80"	N11°49'08.38" E144°52'37.48"	2014.11.21 17:26:19	2014.11.21 18:26:28	818 m	270.10 deg.	4415.10 m
151	N11°49'08.37" E144°52'37.42"	N11°49'07.24" E144°52'24.89"	2014.11.21 18:26:29	2014.11.21 18:30:07	78 m	269.41 deg.	4523.81 m
153	N11°49'09.63" E144°52'15.39"	N11°51'36.58" E144°52'04.32"	2014.11.21 18:34:10	2014.11.21 19:16:18	9963 m	11.22 deg.	4460.97 m
154	N11°51'36.68" E144°52'04.33"	N11°55'07.59" E144°52'35.81"	2014.11.21 19:16:19	2014.11.21 19:49:45	14585 m	19.29 deg.	4663.77 m
161	N11°55'02.13" E144°54'26.37"	N11°54'56.58" E144°50'44.35"	2014.11.22 08:06:13	2014.11.22 09:06:12	1080 m	268.42 deg.	4747.44 m
162	N11°54'56.58" E144°50'44.29"	N11°54'55.02" E144°47'17.00"	2014.11.22 09:06:13	2014.11.22 10:06:24	822 m	267.84 deg.	4641.17 m
163	N11°54'55.02" E144°47'16.94"	N11°54'56.62" E144°45'57.74"	2014.11.22 10:06:25	2014.11.22 10:06:25	290 m	267.57 deg.	4256.22 m
165	N11°55'58.18" E144°45'32.60"	N11°52'52.80" E144°45'32.83"	2014.11.22 10:43:36	2014.11.22 11:43:30	12563 m	161.23 deg.	4829.31 m
166	N11°52'52.76" E144°45'32.83"	N11°49'47.53" E144°45'38.75"	2014.11.22 11:43:31	2014.11.22 12:43:34	12555 m	155.21 deg.	4700.92 m
167	N11°49'47.49" E144°45'38.77"	N11°48'52.05" E144°47'52.07"	2014.11.22 12:43:35	2014.11.22 13:43:27	3768 m	105.48 deg.	4389.88 m
168	N11°48'52.04" E144°47'52.12"	N11°48'53.55" E144°51'05.11"	2014.11.22 13:43:28	2014.11.22 14:43:28	1374 m	91.42 deg.	4508.36 m
169	N11°48'53.55" E144°51'05.16"	N11°50'26.98" E144°53'41.18"	2014.11.22 14:43:29	2014.11.22 15:43:29	6368 m	70.54 deg.	4469.75 m
170	N11°50'27.04" E144°53'41.19"	N11°53'53.79" E144°54'10.13"	2014.11.22 15:43:30	2014.11.22 16:43:29	14014 m	28.13 deg.	4390.69 m
171	N11°53'53.85" E144°54'10.14"	N11°56'36.48" E144°54'20.35"	2014.11.22 16:43:30	2014.11.22 17:28:18	11025 m	23.13 deg.	4185.94 m

Raw line files from the Kongsberg EM302 have also been included as supporting documentation

Proposer(s):	Name(s):	Leighton Rolley 156 St. Fagan's Road Fairwater, Cardiff Wales, UK CF5 3EU Tel: UK (+44) 07886784890 Landline: UK (+44) 2920560389
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	Date:	23rd November 2014
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	Organization and Address:	Schmidt Ocean Institute 555 Bryant Street, #374 Palo Alto, CA 94301 Phone: (415) 975-4080 Fax: (415) 975-4081
	Concurren (name, e-mail, organization and address):	Jeff Drazen Department of Oceanography, University of Hawai'i at Manoa, 1000 Pope Road, Marine Sciences Building, Honolulu, HI 96822 Phone: (808) 956-6567 Fax: (808) 956-8668 E-mail: jdrazen@hawaii.edu

Remarks:	Supporting Evidence Include With Submission
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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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Supporting Documentation

<https://schmidtocean.box.com/s/mqrp4at6zwuklu1cp7of>

Folder Name: Multibeam with GEBCO Background

Overview: Survey overlaid on GEBCO data and saved as Geotiff

Folder Name: EM302 Raw Multibeam Data Files

Overview: Raw .all lines files from the Kongsberg EM302 system

Folder Name: Profiles of proposed Falkor Seamount

Overview: Elevation profiles of feature in PDF/TIFF formats with supporting ASCII txt file and PNG of profile

Folder Name: SVP Profile

Overview: The Sound Velocity profile used by the vessel whilst conducting the survey of proposed feature

Folder Name: 3d images of feature

Overview: A selection of Tiff images showing the proposed feature including images with contours

Folder Name: 2d images of feature

Overview: Elevation profiles of feature in PDF/TIFF formats with supporting ASCII txt file and PNG of profile

Folder Name: GEOTIFFS with survey lines

Overview: Geotiff showing the survey lines over proposed feature

Folder Name: Contour map of Feature

Overview: Images of proposed feature with contour lines overlaid

Folder Name: XY Files of Feature

Overview: XY files of proposed feature – both comma and space separated files. These should make the import of this feature easy into other software

Folder Name: Line Files

Overview: Survey Line File information – this contains start/stop information for each survey line

Folder Name: 3d Video of Feature

Overview: Video showing the feature