INTERNATIONAL HYDROGRAPHIC ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

UNDERSEA FEATURE NAME PROPOSAL

Replacement for the name proposal "Krarup Knoll"

(Sea NOTE overleaf)

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

Name Proposed:	Paul Melchior Seamount	Ocean or Sea:	Scotia Sea

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

** 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:	(summit) 55° 51' 54" S -55.88547741° W -55.84733810° W -55.83362179° W -55.89345308° W -55.89070128° W	(summit) 042° 43' 26" W -42.42840861° S -42.42124797° S -42.34093490° S -42.31045446° S -42.37907673° S

Feature Description:	Maximum Depth:	**3985 m**	Steepness :	**14%**
	Minimum Depth :	**2860 m**	Shape :	**Circular conical shape**
	Total Relief :	**1515 m**	Dimension/Size :	**10 - 12 km**

Associated Features:	

Chart/Map References:	Shown Named on Map/Chart:	
	Shown Unnamed on Map/Chart:	
	Within Area of Map/Chart:	

Reason for Choice of Name (if a person, state how associated with the feature to be named):

Baron Paul Melchior

Baron Paul Melchior (1926 to 2004) was an exceptional person. He contributed immensely to the development of geophysics not only as an outstanding scientist but also as a great leader. From 1973 to 1991, he served as Secretary General of International Union of Geodesy and Geophysics (IUGG), and was the Honorary Secretary General of IUGG until his death. His tenure lasted so long because he had an extraordinary ability to meet the expectations of his colleagues. One of his successes as Secretary General was the adhesion of China as member of IUGG, for which he showed all his skill in diplomatic matters. During his long and fruitful scientific career, Paul Melchior had been Director of the International Center for Earth Tides (1958-

	1995), President of the Commission of Earth Rotation of the International Astronomical Union (1967-1970), and President of CODATA (1974-1978). **Paul Melchior studied mathematics at the Free University of Brussels. His professional career started as assistant at the Royal Observatory of Belgium in 1949. He became the Director in 1981 and served in that capacity until his retirement in 1990. Paul Melchior had a profound attachment to the Observatory. His contributions to the development of geophysics and geodesy at the Observatory are countless and brought great renown to his grateful Institute. For his dedication for science and his international reputation, in 1993 King Baudouin bestowed upon him the title of Baron. Paul Melchior began his career as an astronomer. Between 1950-1957, he spent long nights observing at the Askania Great Meridian Circle in Uccle. After compiling the data, he published the most precise star catalogue of that time. Soon, he was interested in the Earth's rotation. He then developed the complete theory of the motions of the Earth's rotational axis and its link to Earth's tides. This became his main subject of research. He began measuring Earth tides in 1957 with the Verbaandert-Melchior quartz tiltmeters.** **In 1958, he was the first to analyze Earth tide observations using an electronic computer, the famous IBM 650. In 1968, Paul Melchior founded, with Johnny Flick, the Underground Laboratory of Walferdange in Luxembourg. In 1969, with Prof. Manfred Bonatz, they installed tiltmeters, gravimeters and a satellite camera in Spitzbergen (Norway). Thanks to his growing scientific reputation, the US Navy supported him to set up the first permanent Transit Satellite Doppler recording station in Europe, which operated until 1993. In 1973, his skillful and accurate interpretation of Earth tide gravity observations led the US Air Force to entrust his team to carry out Trans World Tidal Gravity Profiles. A total of 127 stations were observed worldwide for at least 6 months. This exceptional data set was used to assess the precision of the oceanic tidal models derived from Topex-Poseidon a few years ago. Always looking for more precise observations in gravimetry, Paul Melchior succeeded in raising funds to install the first superconducting gravimeter in Europe in Uccle. In his last years, he was deeply involved in the development of the European Center for Geodynamics and Seismology (ECGS) in Luxembourg. Paul Melchior, one of the founders of the ECGS, was the most active member of the scientific committee.**

Discovery Facts:	Discovery Date:	**14 April 2005 – 17 May 2005**
	Discoverer (Individual, Ship):	Dr. Hans Werner Schenke German RV Polarstern Expedition ANT XXII/4

Supporting Survey Data, including Track Controls:	Date of Survey:	May 10, 2005
	Survey Ship:	German RV Polarstern Expedition ANT XXII/4
	Sounding Equipement:	MBES HYDROSWEEP DS -2
	Type of Navigation:	GPS

	Estimated Horizontal Accuracy (nm):	0.01
	Survey Track Spacing:	Full coverage
	Supporting material submitted as Annex in analog or digital form. 3D-Visualisations with Fledermaus, based on a DTM, 100m Raster. Published report: Schenke, HW. (ed), Zenk, W. (ed)(2006). The Expeditions ANTARKTIS-XXII/4 and ANTARKTIS-XXII/5 of the Research Vessel "Polarstern" in 2005, Berichte zur Polar- und Meeresforschung = Reports on polar and marine research, 537, 133 pp.	

Proposer(s):	Name(s):	Prof. Dr. Hans Werner Schenke
	Date:	25 August 2011
	E-mail:	Hans-Werner.Schenke@AWI.de
	Organization and Address:	Alfred Wegener Institute for Polar and Marine Reasearch POB 120161 27515 Bremerhaven Germany
	Concurrer (name, e-mail, organization and address):	

Remarks:	

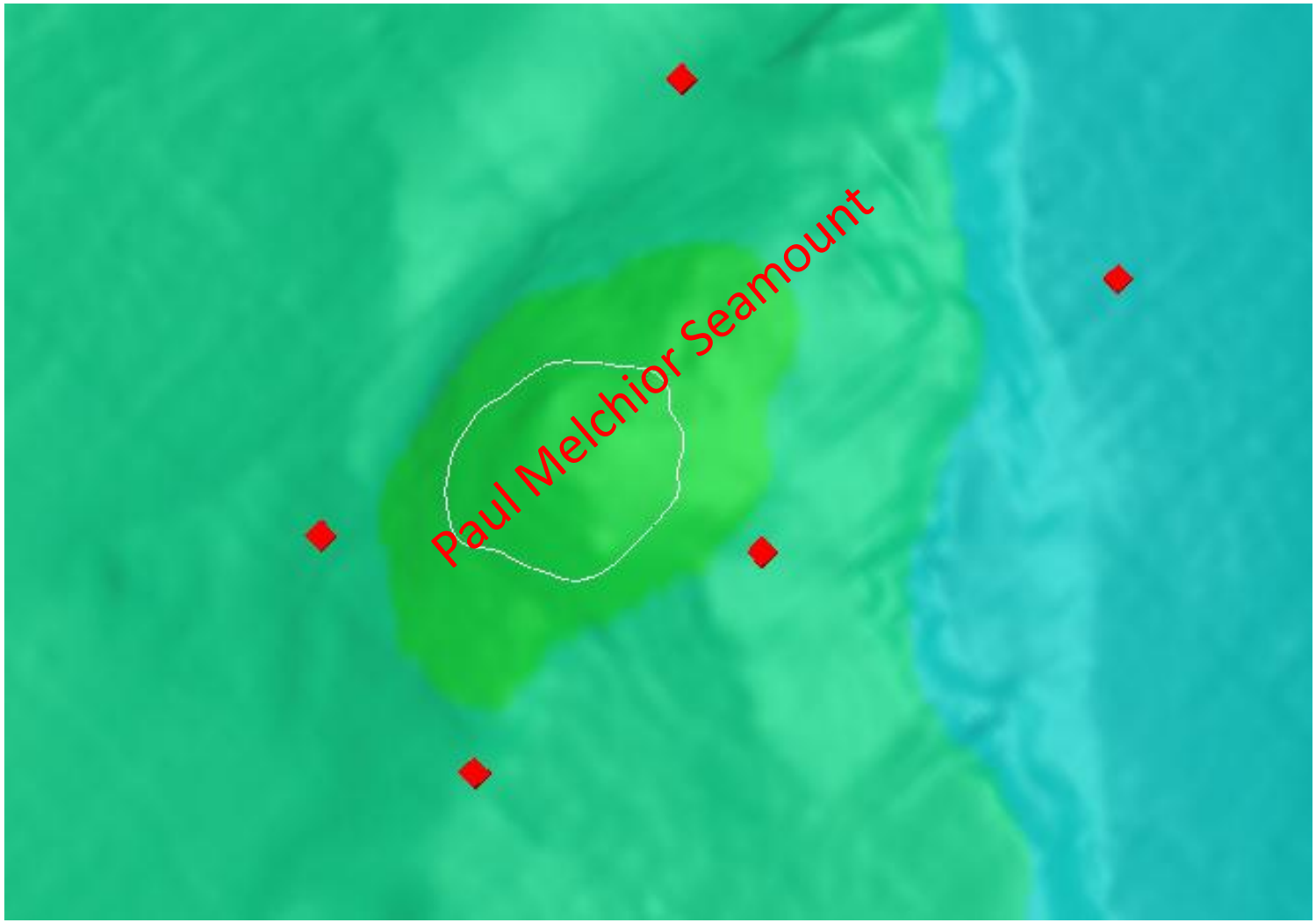
NOTE : This form should be forwarded, when completed :

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

SCUFN Action Item 23/70 Paul Melchior Seamount

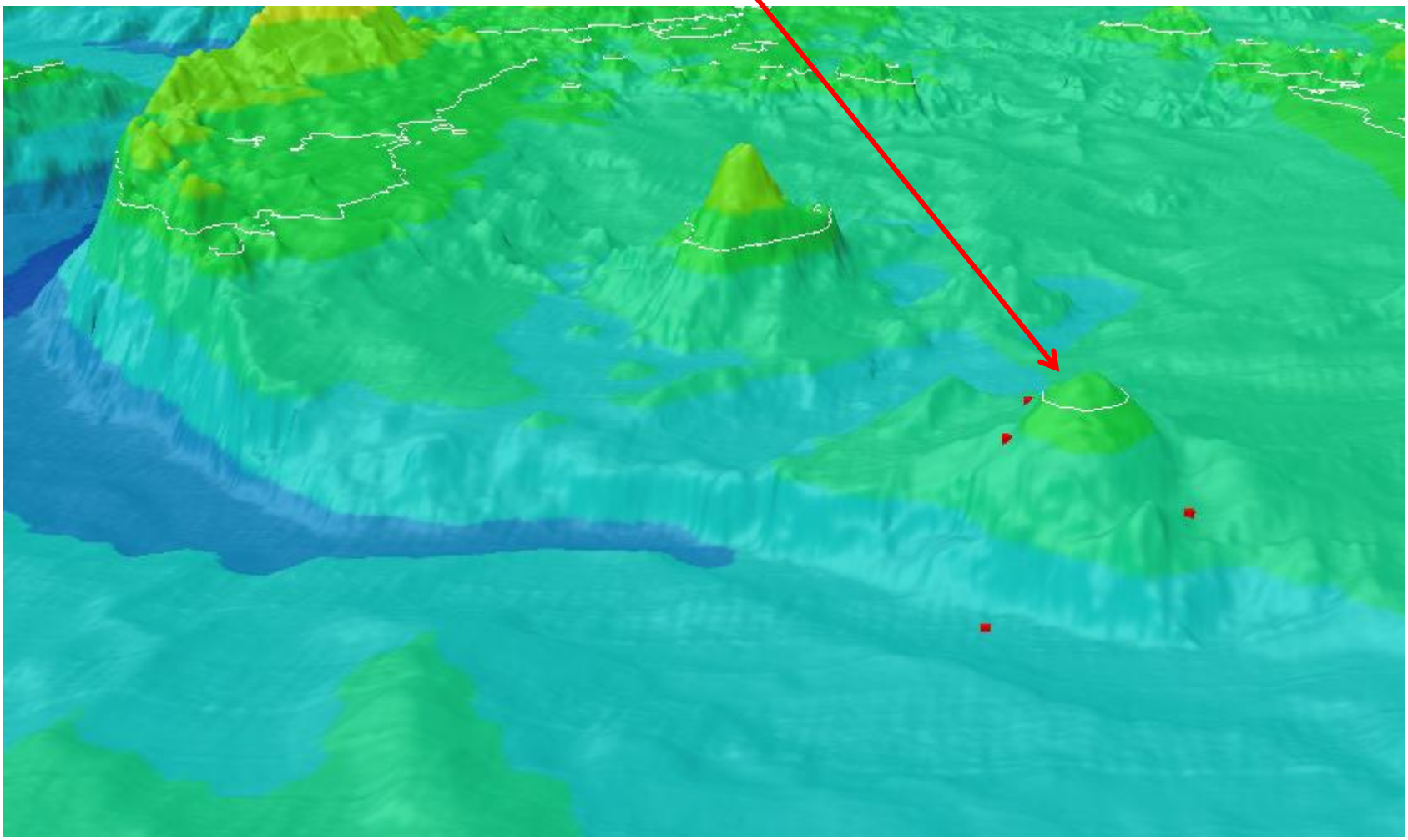


Polygon: Paul Melchior Seamount

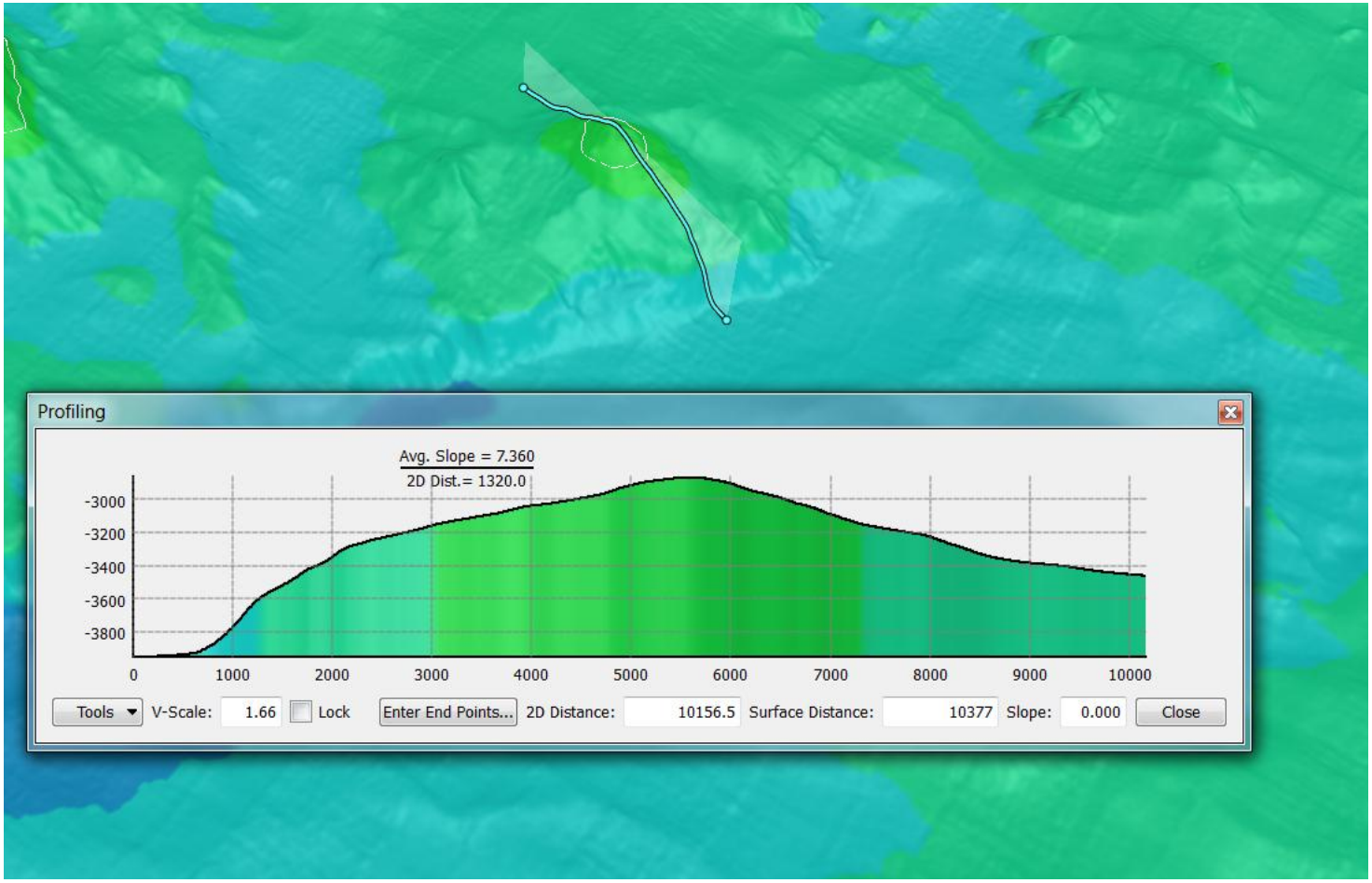
-42.42840861	-55.88547741	-3225.44
-42.42124797	-55.84733810	-3238.12
-42.34093490	-55.83362179	-3426.83
-42.31045446	-55.89345308	-3959.65
-42.37907673	-55.89070128	-3219.35

Polygon: Paul Melchior Seamount

Paul Melchior Seamount

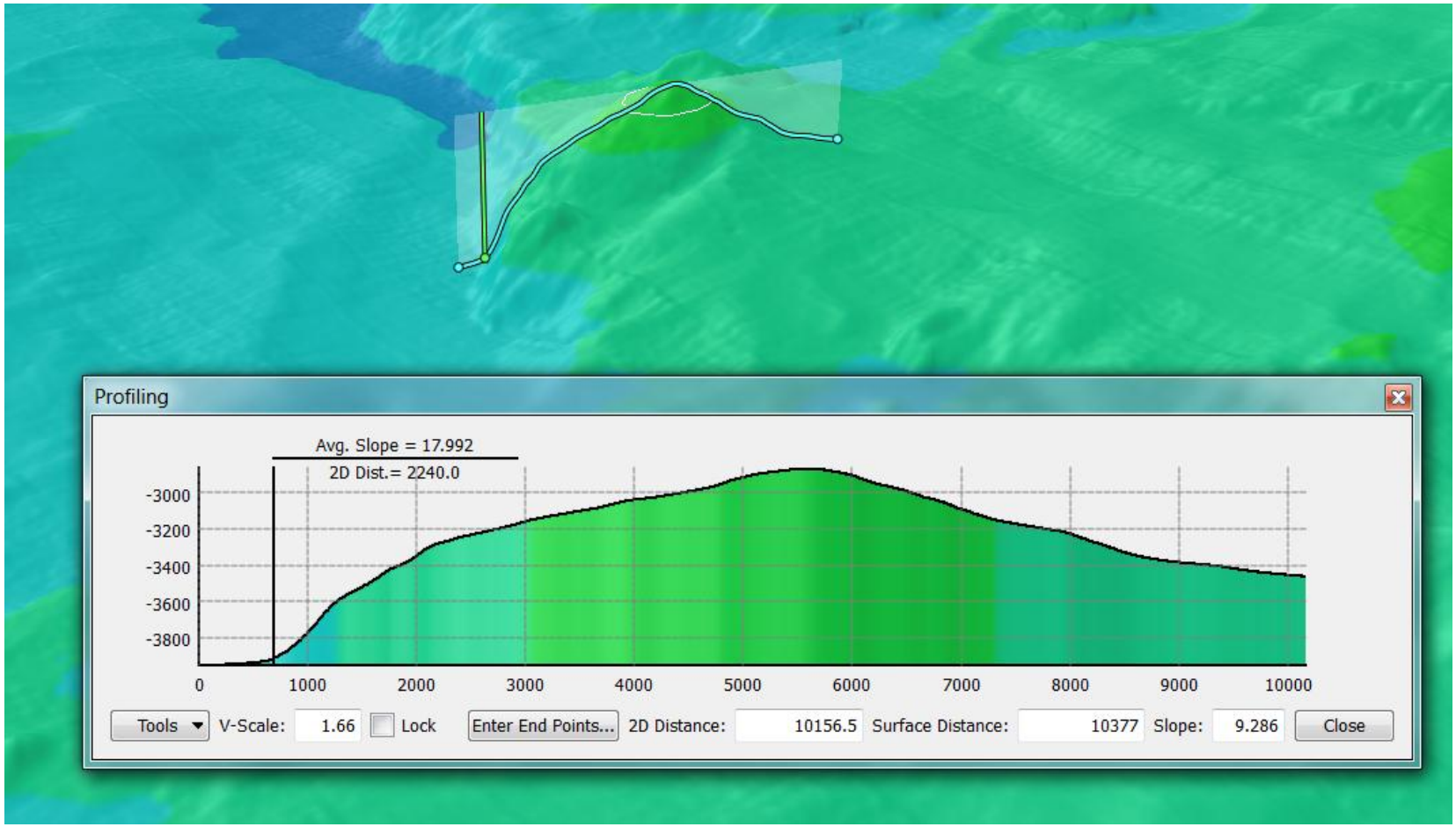


Paul Melchior Seamount



Cross profile and slope

Paul Melchior Seamount



Cross profile and slope