INTERNATIONAL HYDROGRAPHIC ORGANIZATION

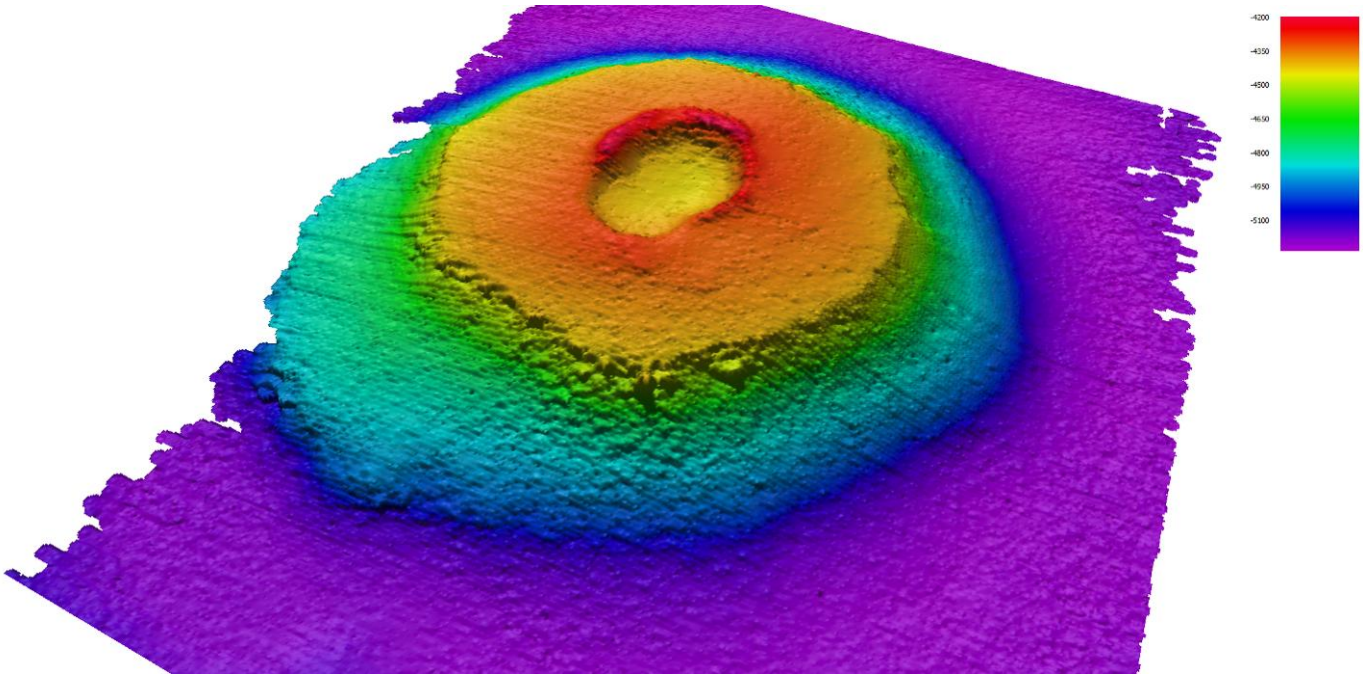
INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

UNDERSEA FEATURE NAME PROPOSAL

(Sea **NOTE** overleaf)

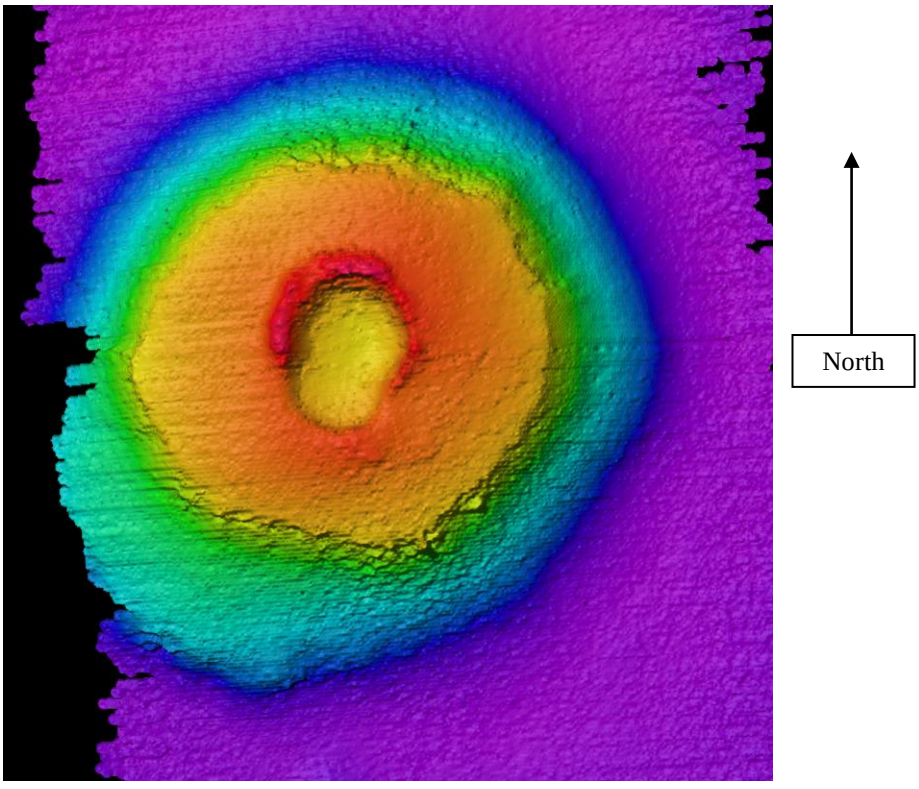
Note: The boxes will expand as you fill the form.

Name Proposed:	**Colosseum Guyot**	**Ocean or Sea:**	North Western Pacific



Above: 3D rendering of the proposed ***Colosseum Guyot*** feature detailed in the following proposal [Fledermaus]

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- 3D image 001 .tif]

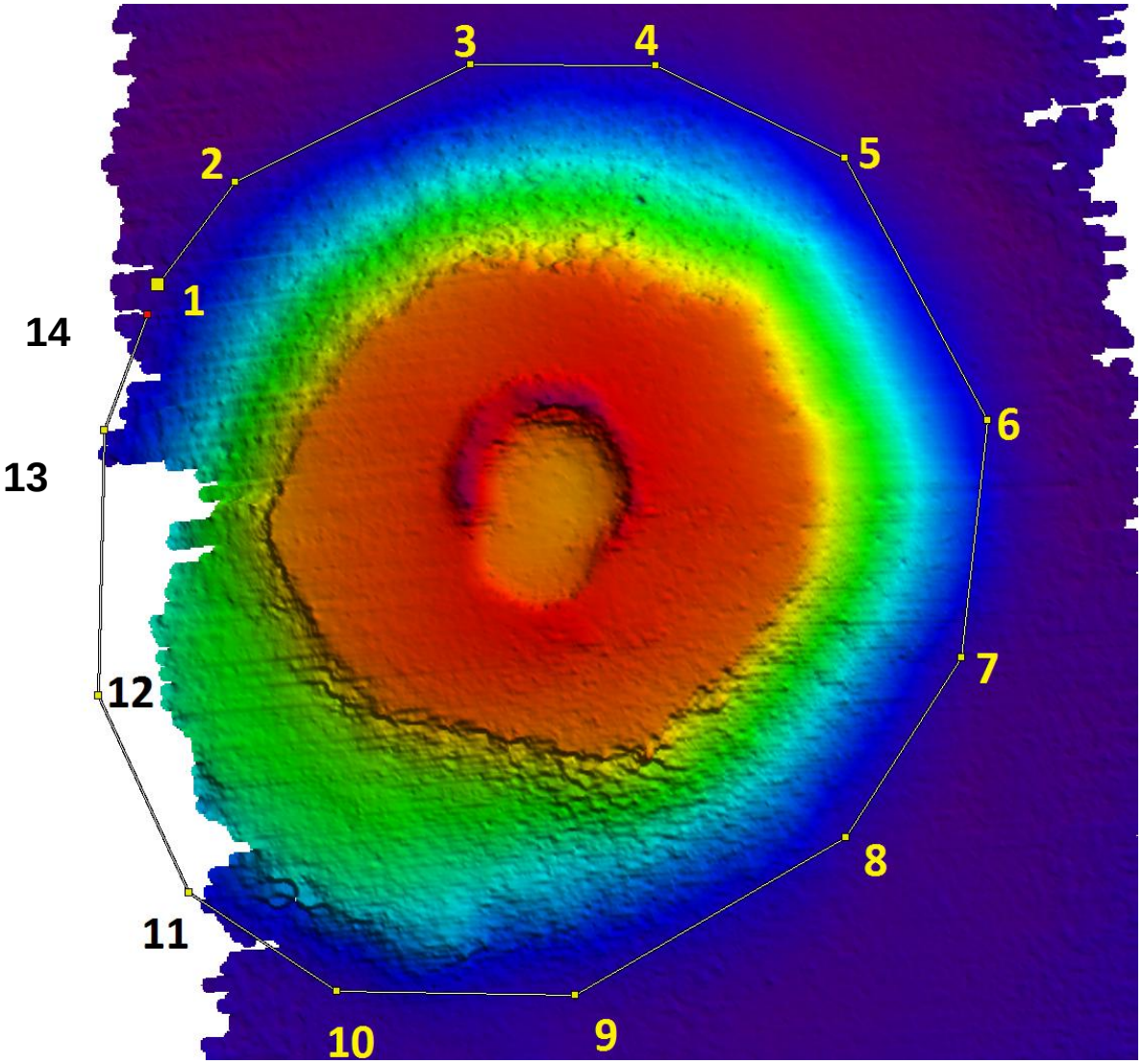


Above: Plan view of proposed ***Colosseum Guyot*** feature

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Plot Overview 001.png]

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.*



Above: Boundary perimeter of the proposed **Colosseum Guyot** with defining points. Coverage of the western slope is not 100% complete. Available historical/satellite data included below does not indicate an extension of or any other existing features around the proposed **Colosseum Guyot** feature

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- boundary Perimeter 001.png]

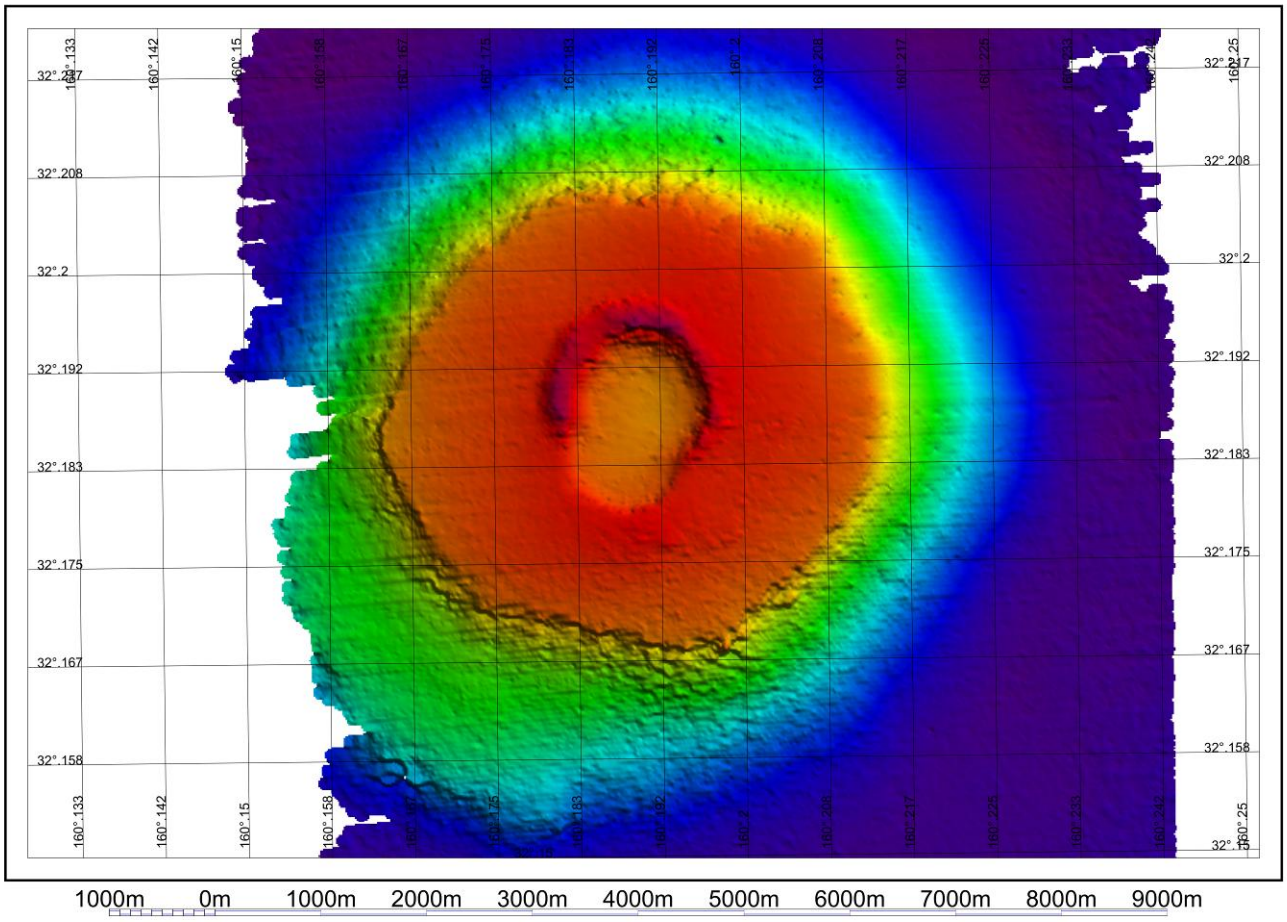
Points defining the proposed ***Colosseum Guyot*** *feature*

	Lat DD MM.MMM	Lon DD MM.MMM	Lon DD.DDD	Lat DD.DDD	Lat DD MM SS.SS	Lon DD MM SS.SS	Total Distance
Position 1	32 12.288516N	160 09.213886E	32.204809	160.153565	N 32 12 17.31	E 160 09 12.83	0
Position 2	32 12.762645N	160 09.644376E	32.212711	160.160740	N 32 12 45.76	E 160 09 38.66	1106.9
Position 3	32 13.298995N	160 10.941366E	32.221650	160.182356	N 32 13 17.94	E 160 10 56.48	3373.08
Position 4	32 13.284752N	160 11.955672E	32.221413	160.199261	N 32 13 17.09	E 160 11 57.34	4966.86
Position 5	32 12.843707N	160 12.986341E	32.214062	160.216439	N 32 12 50.62	E 160 12 59.18	6779.78
Position 6	32 11.613013N	160 13.752642E	32.193550	160.229211	N 32 11 36.78	E 160 13 45.16	9353.4
Position 7	32 10.508436N	160 13.594520E	32.175141	160.226575	N 32 10 30.51	E 160 13 35.67	11409.91
Position 8	32 09.675700N	160 12.949725E	32.161262	160.215829	N 32 09 40.54	E 160 12 56.98	13252.75
Position 9	32 08.954034N	160 11.458175E	32.149234	160.190970	N 32 08 57.24	E 160 11 27.49	15950.56
Position 10	32 08.984954N	160 10.152891E	32.149749	160.169215	N 32 08 59.10	E 160 10 09.17	18003.68
Position 11	32 09.451665N	160 09.348923E	32.157528	160.155815	N 32 09 27.10	E 160 09 20.94	19533.98
Position 12	32 10.379410N	160 08.864680E	32.172990	160.147745	N 32 10 22.76	E 160 08 51.88	21410
Position 13	32 11.611644N	160 08.913215E	32.193527	160.148554	N 32 11 36.70	E 160 08 54.79	23688.65
Position 14	32 12.148426N	160 09.156994E	32.202474	160.152617	N 32 12 08.91	E 160 09 09.42	24752.11

POLYGON ((160.153565 32.204809, 160.160740 32.212711, 160.182356 32.221650, 160.199261 32.221413, 160.216439 32.214062, 160.229211 32.193550, 160.226575 32.175141, 160.215829 32.161262, 160.190970 32.149234 , 160.169215 32.149749, 160.155815 32.157528 , -160.147745 32.172990, 160.148554 32.193527, 160.152617 32.202474))

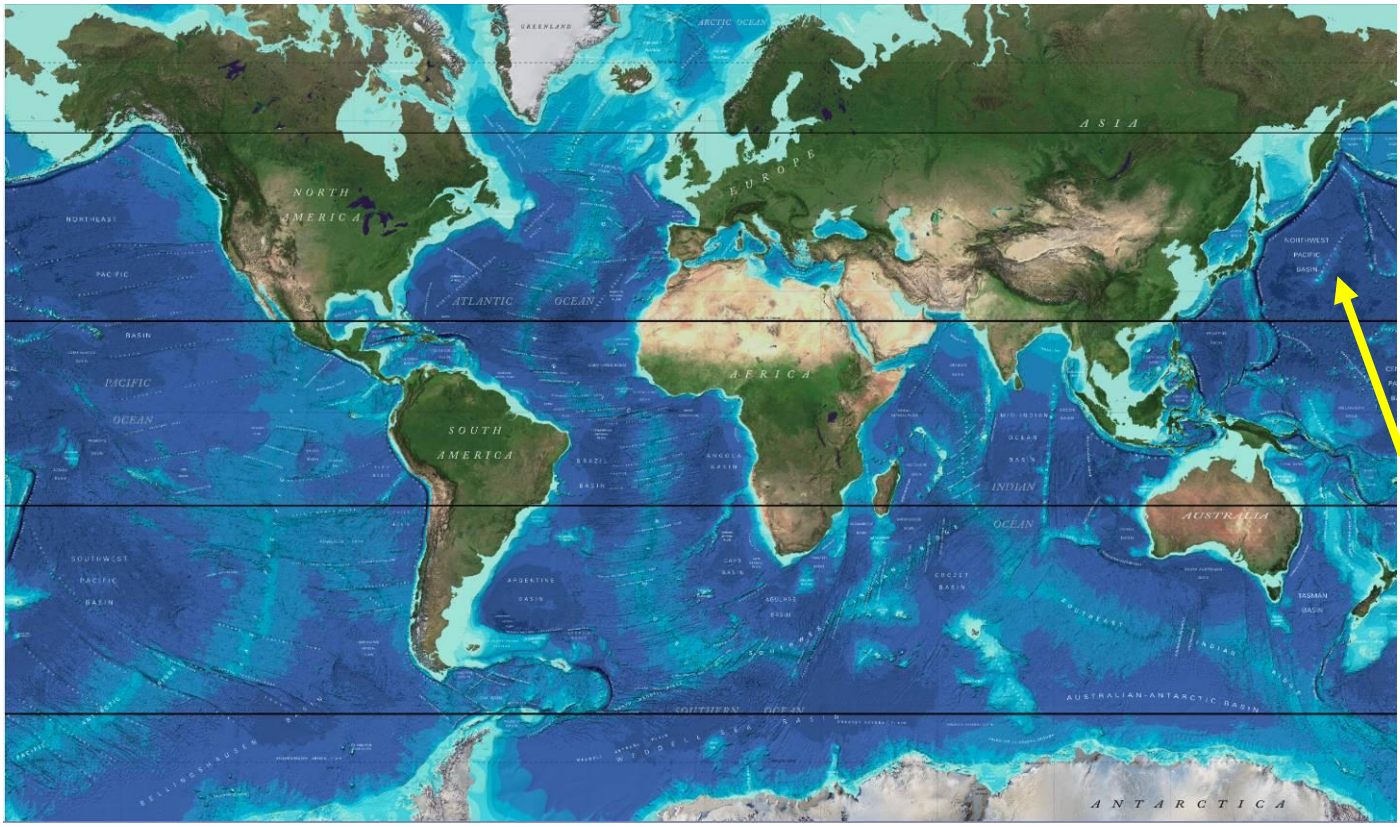
GPS coordinates for summit of the proposed ***Colosseum Guyot*** feature

	Summit	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	4198m	32 11.746989N	160 11.356480E	32.195783	160.189275	N 32 11 44.82	E 160 11 21.39

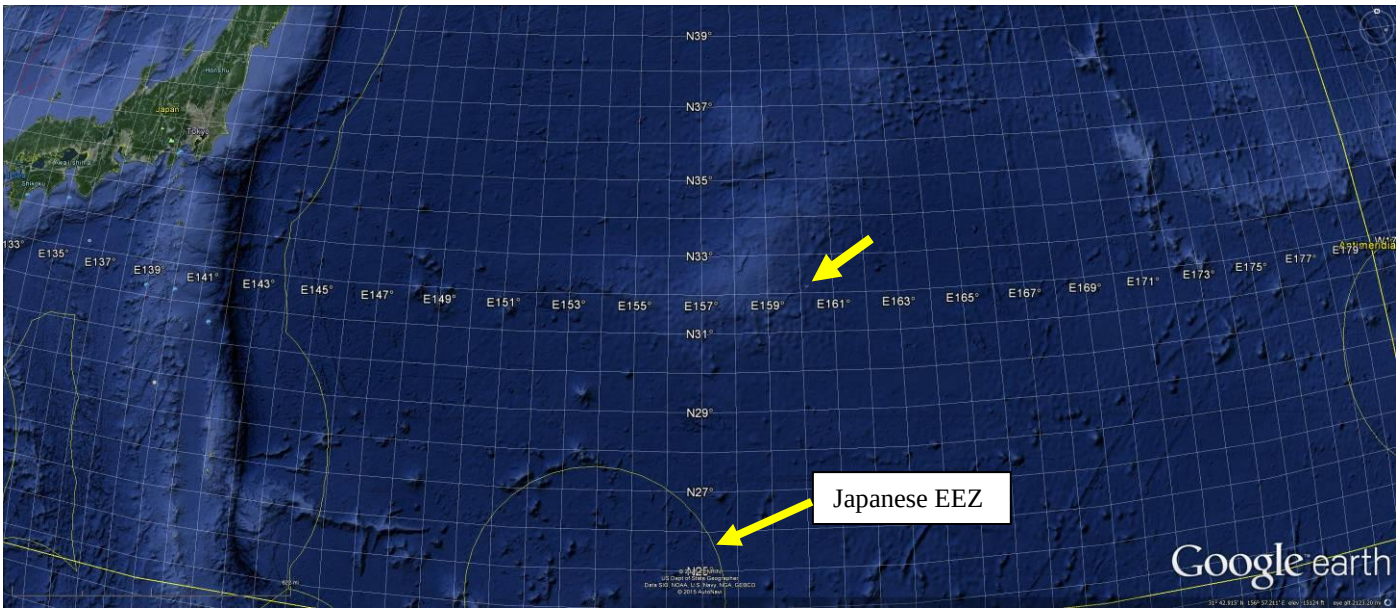


Above: Proposed ***Colosseum Guyot*** *feature with latitude and longitude in DD MMM*

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Chart Overview 001.tif]

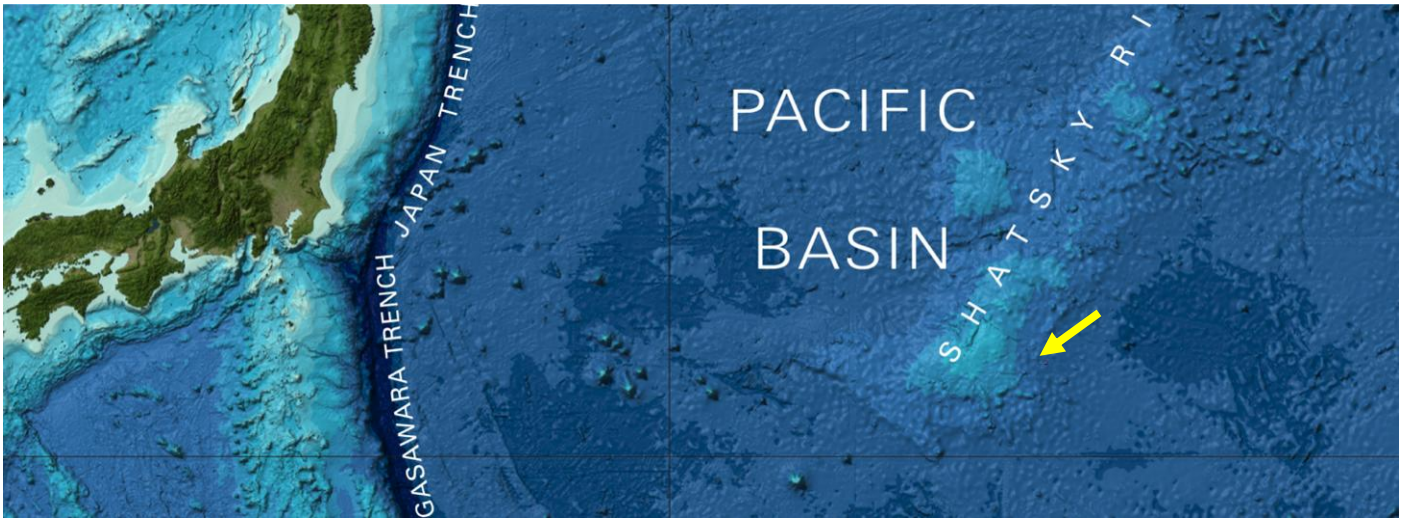


Above: Overview showing location of proposed ***Colosseum Guyot*** overlaid on Gebco World Map 2014



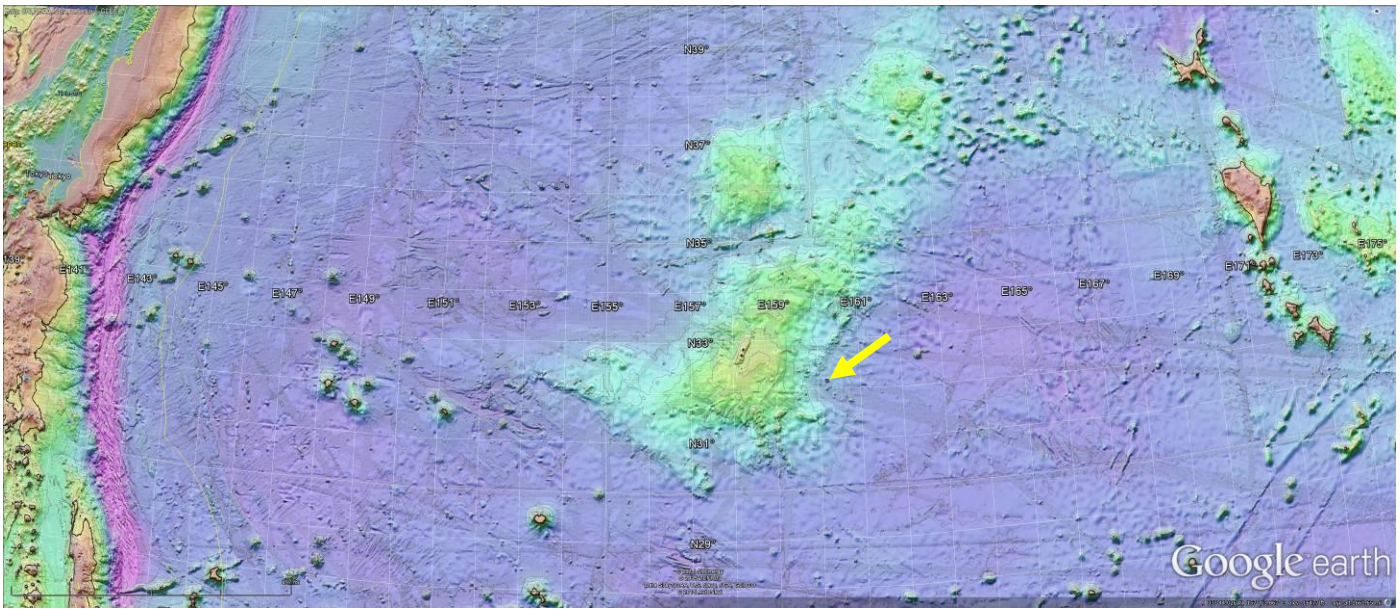
Above: Location of the proposed ***Colosseum Guyot.*** The proposed feature is approximately **375 nm** (bearing **35***) from the boundary of the nearest EEZ which surrounds the Japanese island of **Minami-Tori-Shima** (24°17′12″N 153°58′50″E). The feature is located on the Tamu Massif, Northwest Pacific Ocean (**33°N 158°E**) part of the Shatsky Rise. The entire feature falls within international waters.

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal - EEZs.jpg]



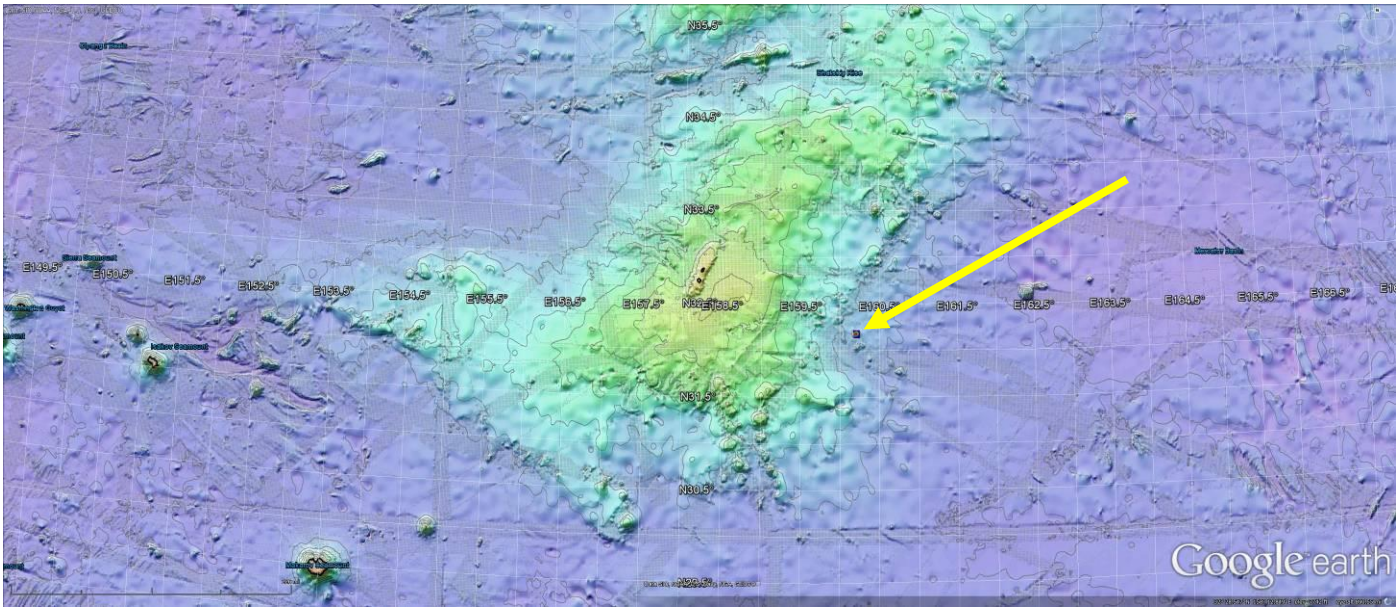
Above: GEBCO World Map 2014 showing the location of the proposed ***Colosseum Guyot***

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Location Overview 001.tif]



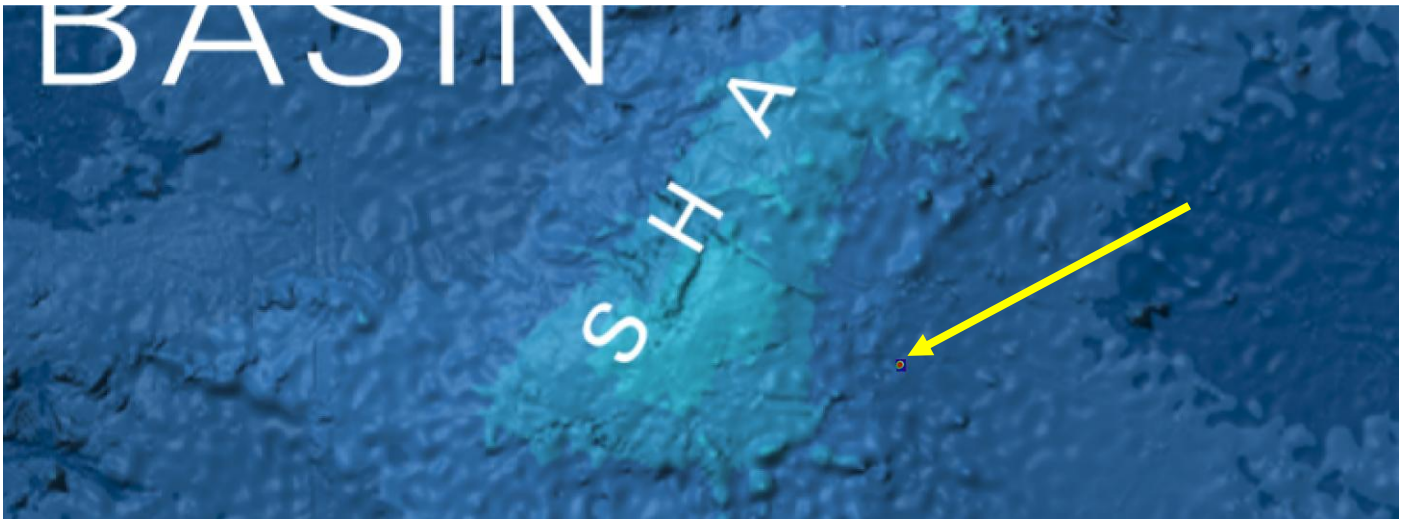
Above: Location of proposed ***Colosseum Guyot*** overlaid on SRTM30_PLUS V7 (Global Bathymetry and Elevation Data at 30 Arc Seconds Resolution: SRTM30 PLUS). This particular data set includes 290 million, depth soundings compiled and edited by investigators at SIO, NOAA, NGA, U.S. Navy, and GEBCO. The details are included in the following publication: http://topex.ucsd.edu/sandwell/publications/124_MG_Becker.pdf

[Supporting File : Leighton Rolley - SOI - Colosseum Guyot Proposal- SRTM30 Overview 001.jpg]



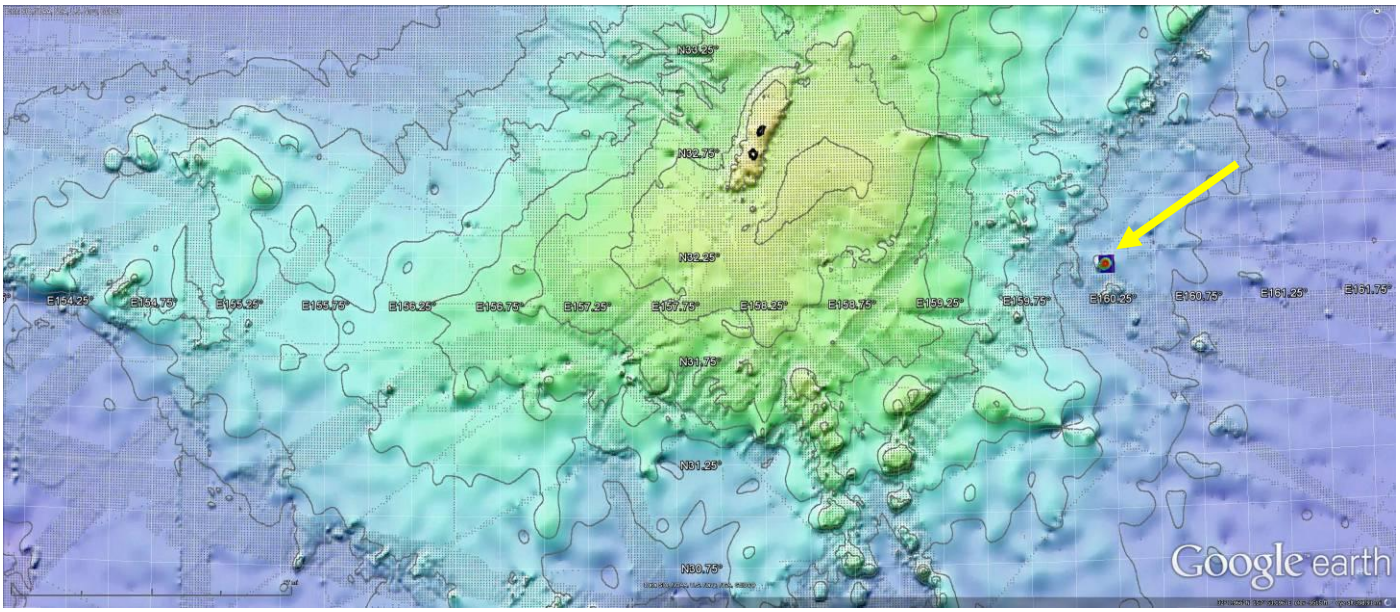
Above: yellow arrow indicates the location of the proposed ***Colosseum Guyot*** overlaid on SRTM30_PLUS V7 data

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- SRTM30 Overview 002.jpg]



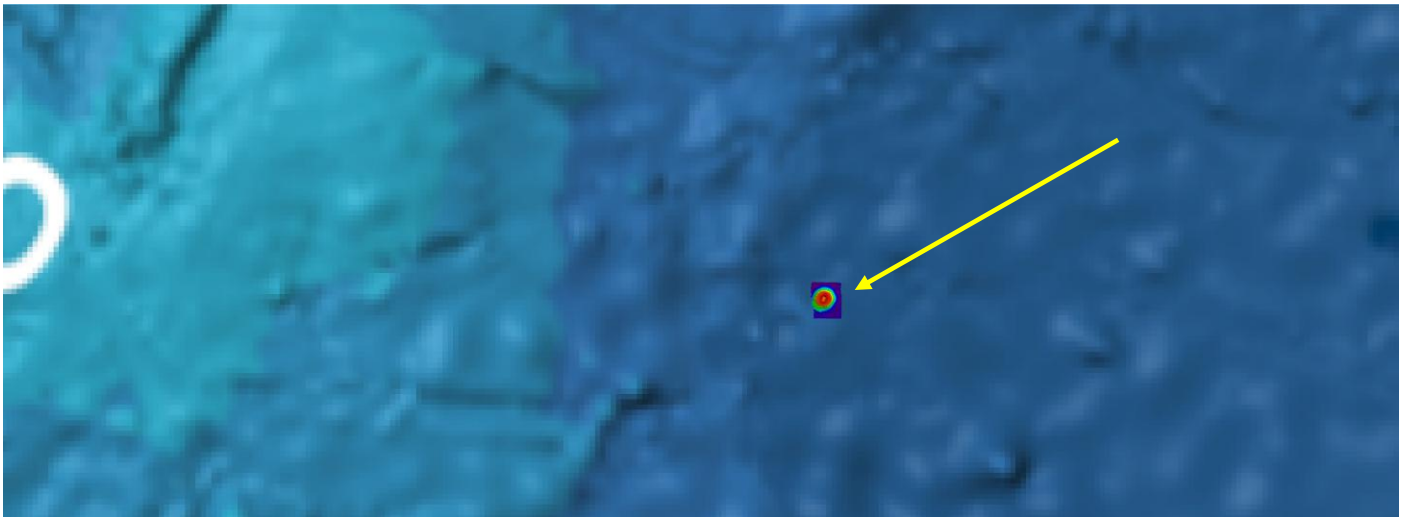
Above: GEBCO World Map 2014 showing the location of the proposed ***Colosseum Guyot*** *in the vicinity of Shatsky Rise*

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Location Overview 002.tif]



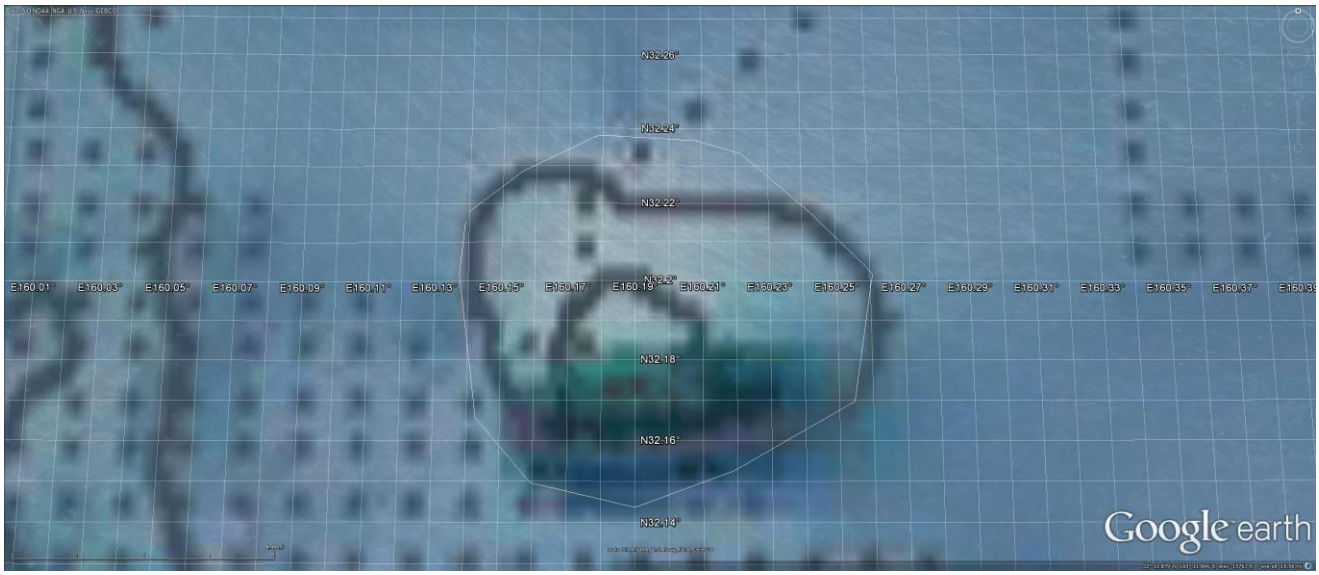
Above: Location of proposed ***Colosseum Guyot*** overlaid on SRTM30_PLUS V7

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- SRTM30 Overview 003.jpg]



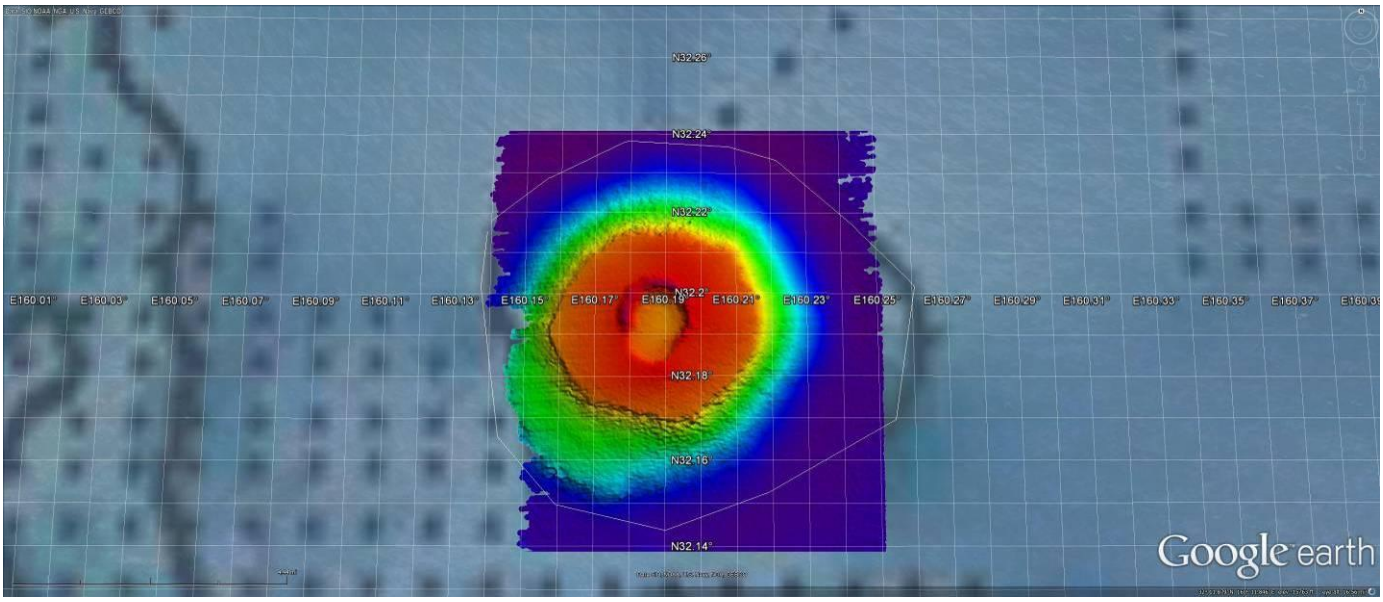
Above: Proposed ***Colosseum Guyot*** featured overlaid on GEBCO World Map 2014

[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Location Overview 003.tif]



Above: Existing data from the SRTM30_PLUS V7 dataset that shows satellite derived data for the proposed ***Colosseum Guyot***

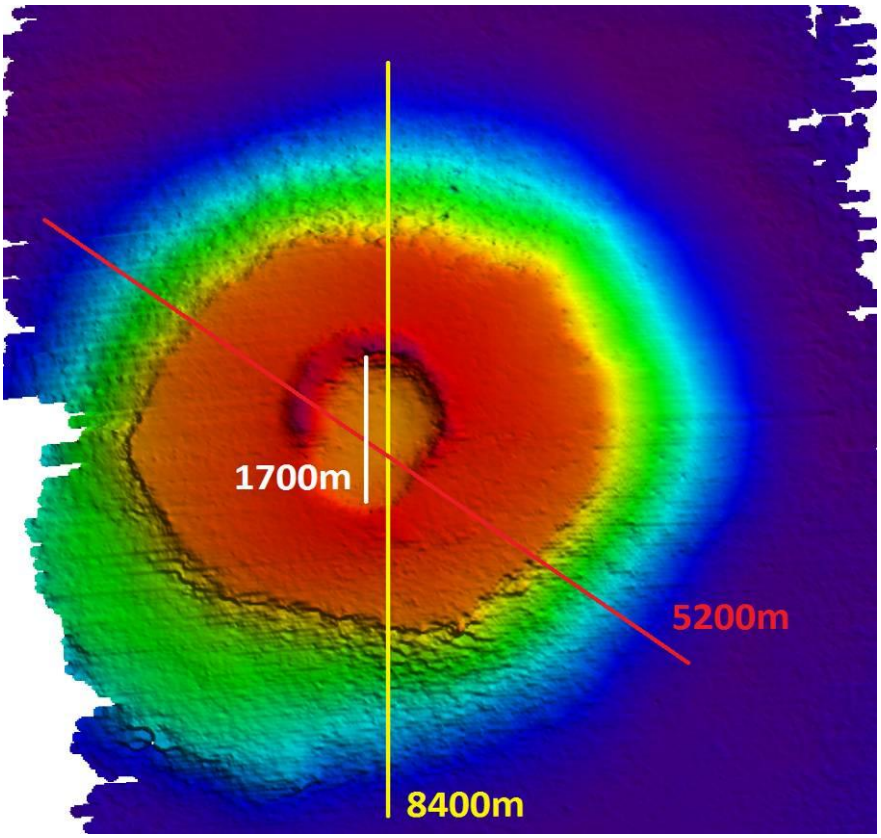
[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- SRTM30 Overview Wthout Feature.jpg]



Above: proposed ***Colosseum Guyot*** overlaid on SRTM30_PLUS V7 data. This shows the absence of any additional features to the west of the feature where the data coverage is not 100%

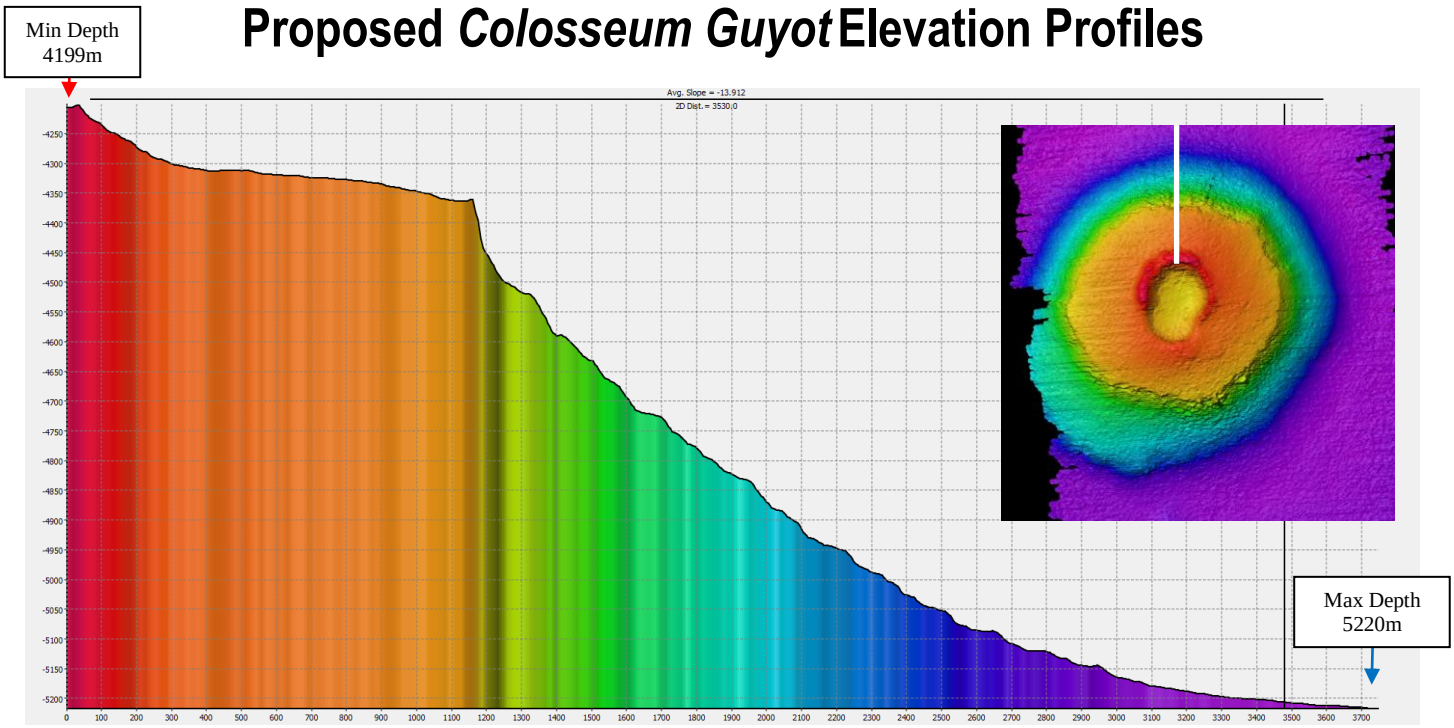
[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- SRTM30 Overview With Feature.jpg]

Feature Description:	Maximum Depth:	5220m	Steepness :	Average Slope 19°
	Minimum Depth :	4198m	Shape :	Circular
	Total Relief :	1022m	Dimension/Size :	8400m (North/South)



Above: Quick reference dimensions for the proposed ***Colosseum Guyot*** *feature*

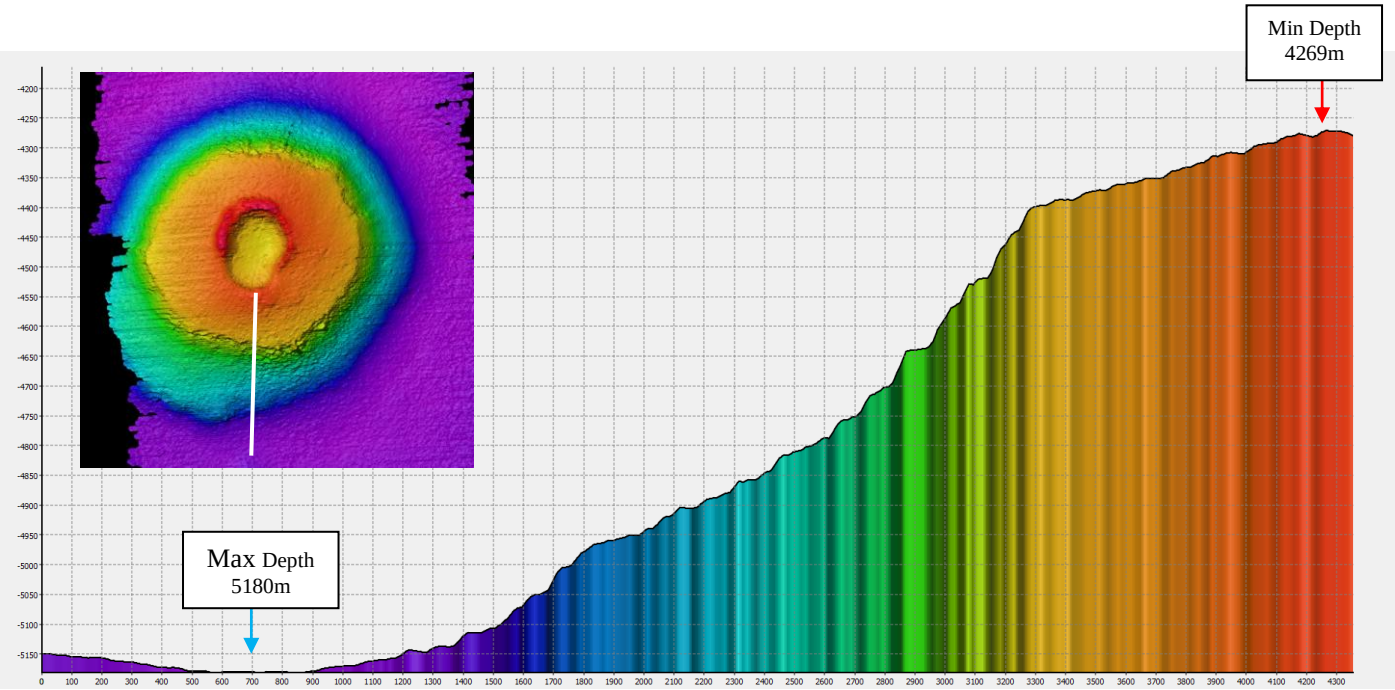
[Supporting File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Quick Dimensions.png]



Above**: Profile line of the proposed **Colosseum Guyot** showing the Northern slope of the feature. The Profile line is approximately **3745m** long starting at N **32 11.728, E 160 11.351** and ending at **N 32 13.750, E 160 11.466**. This profile has a minimum depth of **4199m** (N 32 11.745, E 160 11.353) and a maximum depth of **5220m** (N 32 13.752, E 160 11.466). The average slope is **13.6 to the rampart of the crater.*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Northern Elevation Profile.tif]

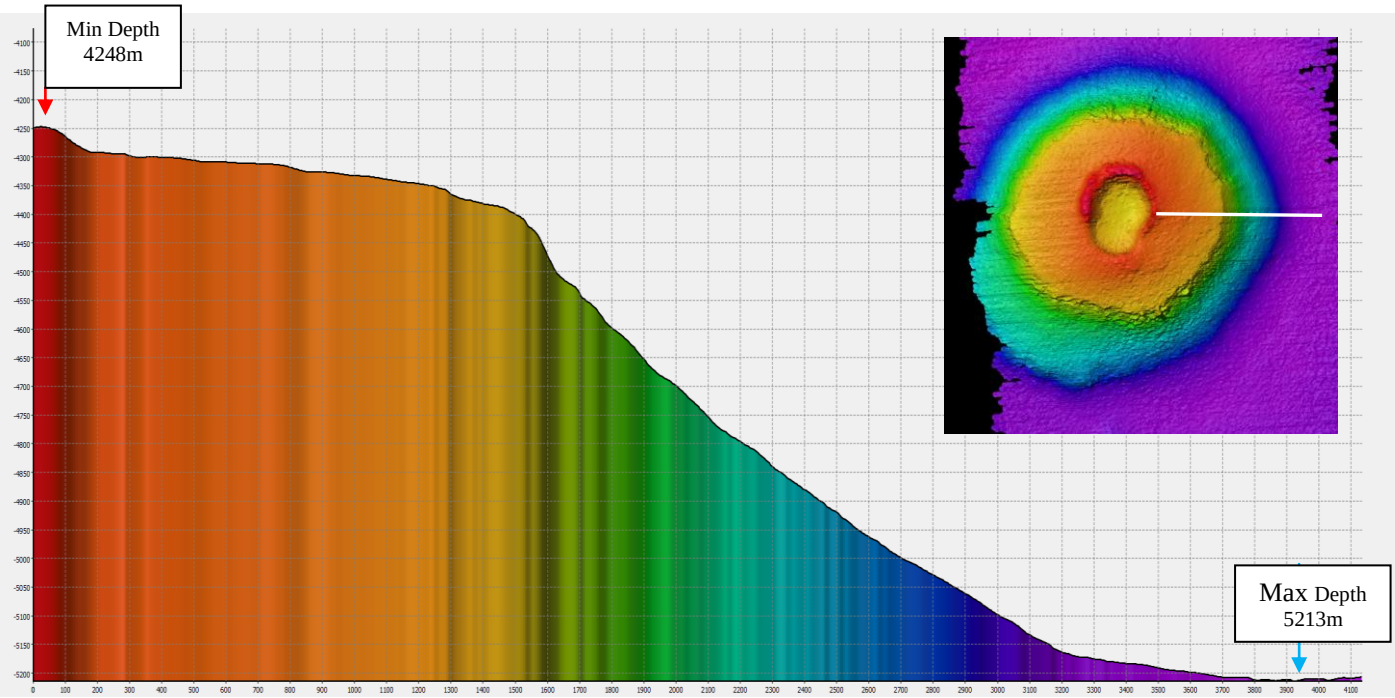
[Supporting Caris Profile Line : Leighton Rolley - SOI - Colosseum Guyot Proposal- Northern Elevation Profile.txt]



Above**: Southern Slope of the proposed **Colosseum Guyot.** The profile line is approximately **4353m** long starting at **N 32 08.374, E 160 11.342** and ending at **N 32 10.730, E 160 11.342** with a minimum depth of **4269m** (N 32 10.683, E 160 11.342) and a maximum depth of **5180m** (N 32 08.840, E 160 11.342). The average slope of the surface up to the edge of the crate is **12.69

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Southern Elevation Profile.tif]

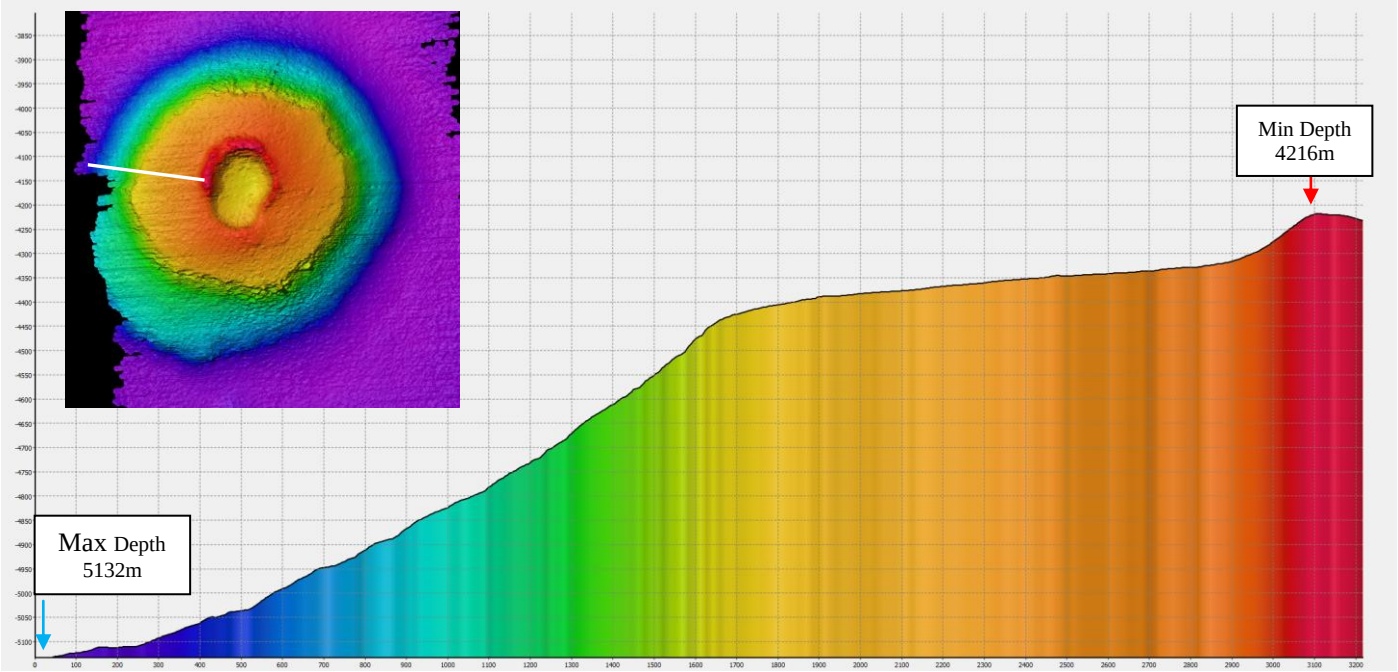
[Supporting Caris Profile Line : Leighton Rolley - SOI - Colosseum Guyot Proposal- Southern Elevation Profile.txt]



Above**: Eastern Slope of the proposed **Colosseum Guyot.** The profile line is approximately **4131m** long starting at **N 32 11.238, E 160 11.805** and ending at **N 32 11.223, E 160 14.434** with a minimum depth of **4248m** (N 32 11.238, E 160 11.805) and a maximum depth of **5213m** (N 32 11.224, E 160 14.303). The average slope of the Eastern Flank is **13.9 to the edge of the crater*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- EasternElevation Profile.tif]

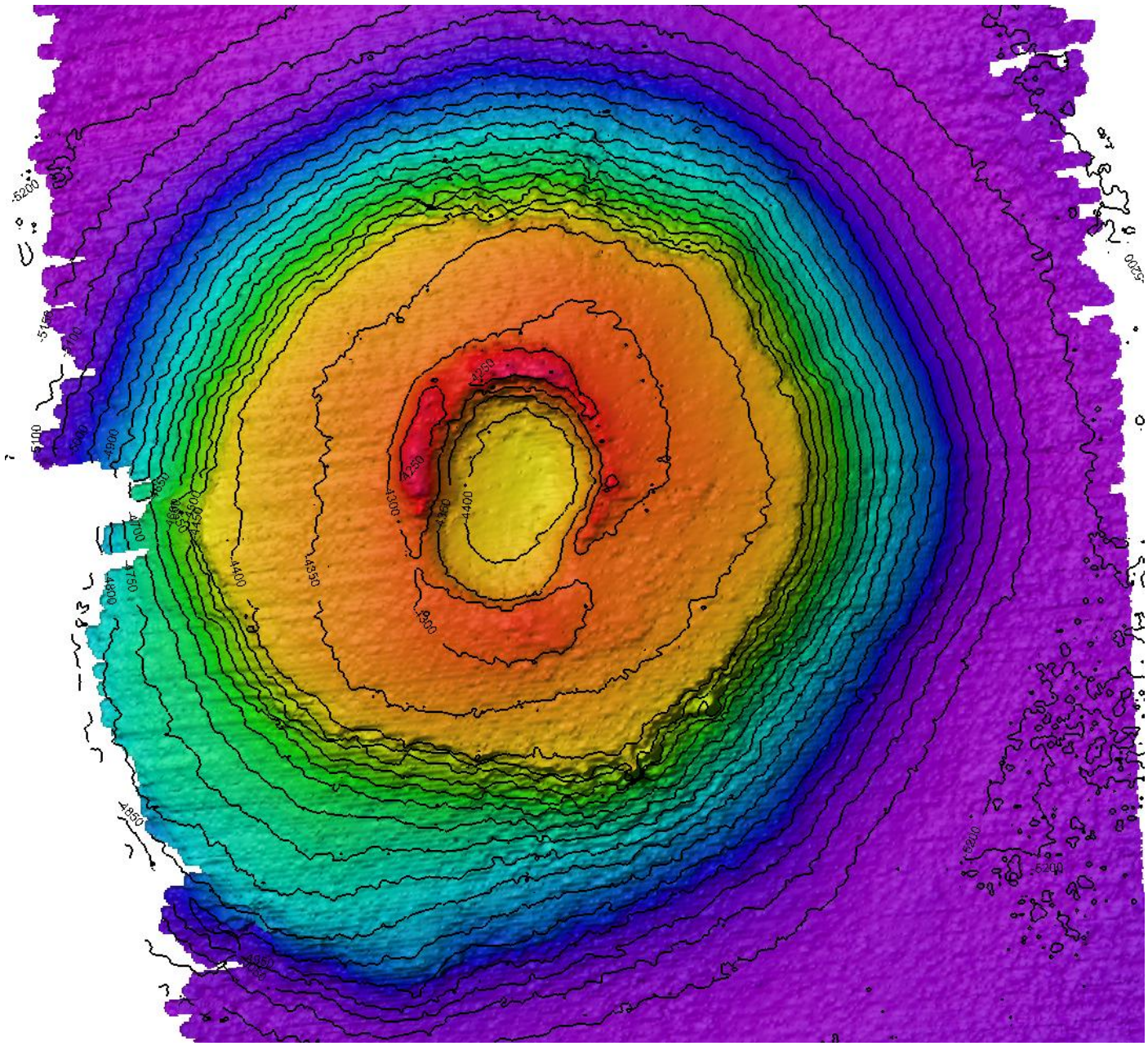
[Supporting Caris Profile Line : Leighton Rolley - SOI - Colosseum Guyot Proposal- EasternElevation Profile.txt]



Above**: Western Slope of the proposed **Colosseum Guyot.** The profile line is approximately **3216m** long starting at **N 32 11.512, E 160 08.900** and ending at **N 32 11.511, E 160 08.913** with a minimum depth of **4216m** (N 32 11.366, E 160 10.873) and a maximum depth of **5132.51m** (N 32 11.512, E 160 08.900). The average slope of the Eastern Flank is **14.8 to the edge of the crater*

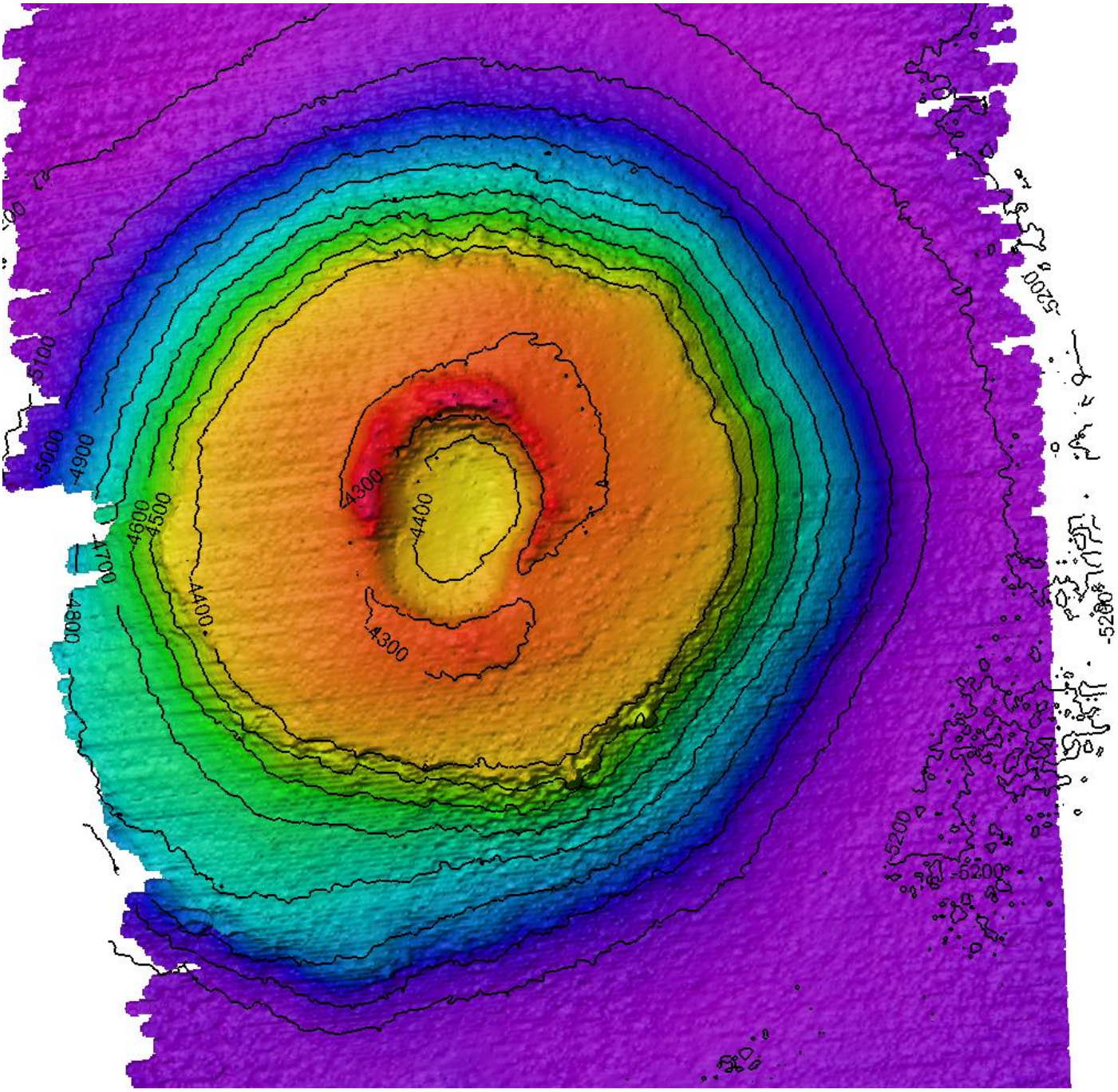
[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Western Elevation Profile.tif]

[Supporting Caris Profile Line : Leighton Rolley - SOI - Colosseum Guyot Proposal- Western Elevation Profile.txt]



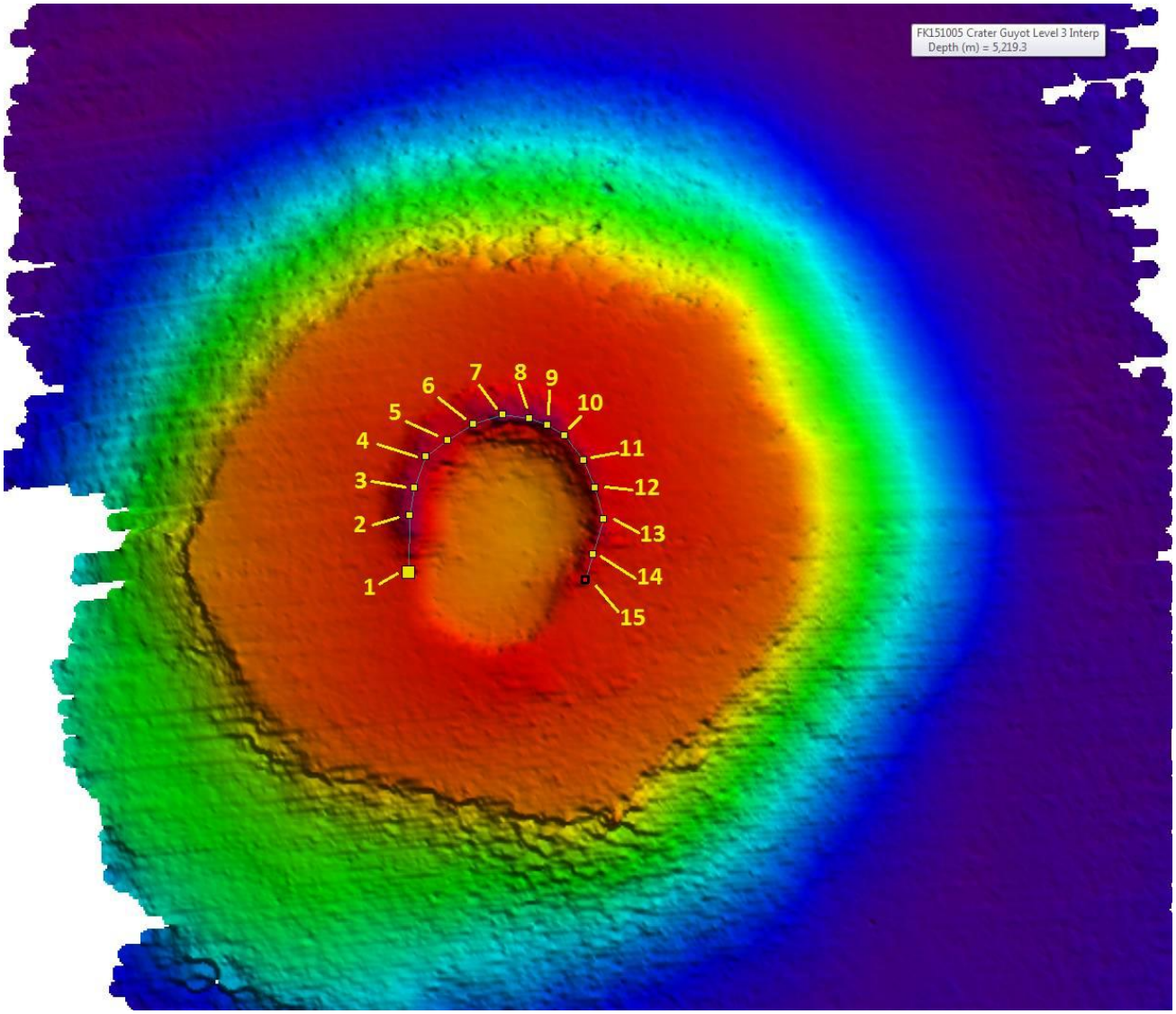
***Above**: Contour image of proposed Colosseum Guyot with 50m depth spacing's between contours*

[Leighton Rolley - SOI - Colosseum Guyot Proposal- Contour 50m.tif]



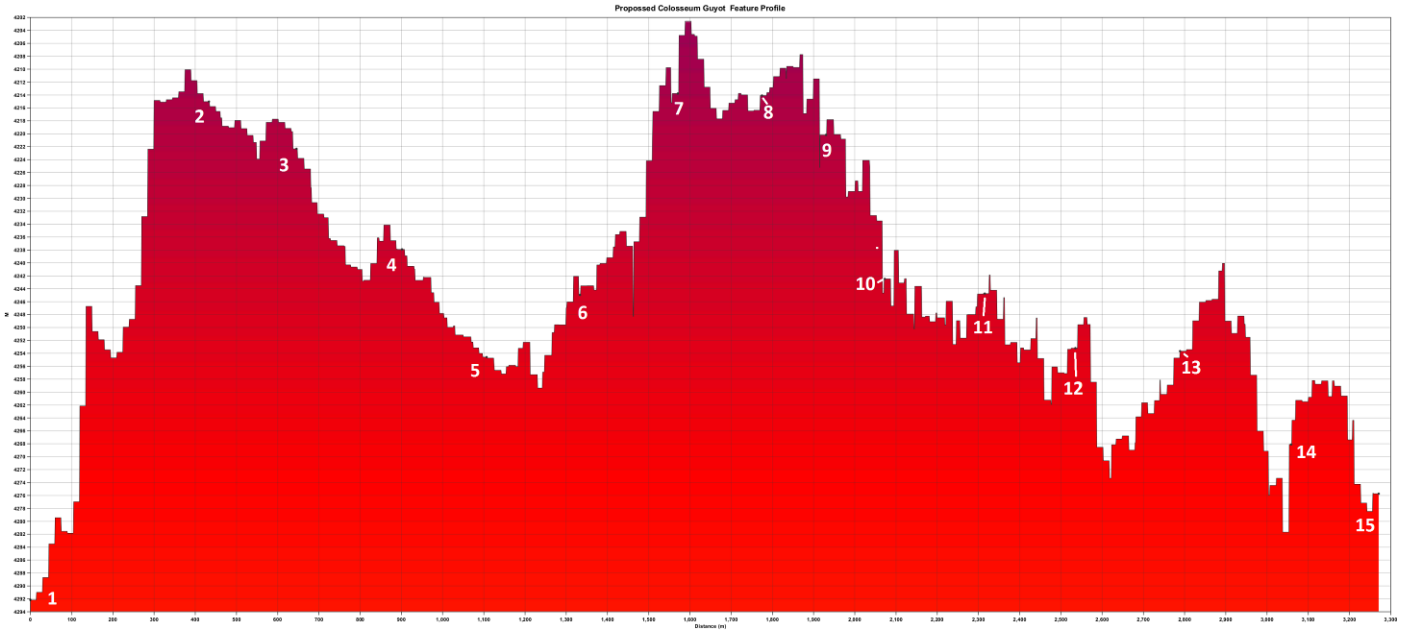
***Above**: Contour image of proposed Colosseum Guyot with 100m depth spacing's between contours*

[Leighton Rolley - SOI - Colosseum Guyot Proposal- Contour 100m.tif]



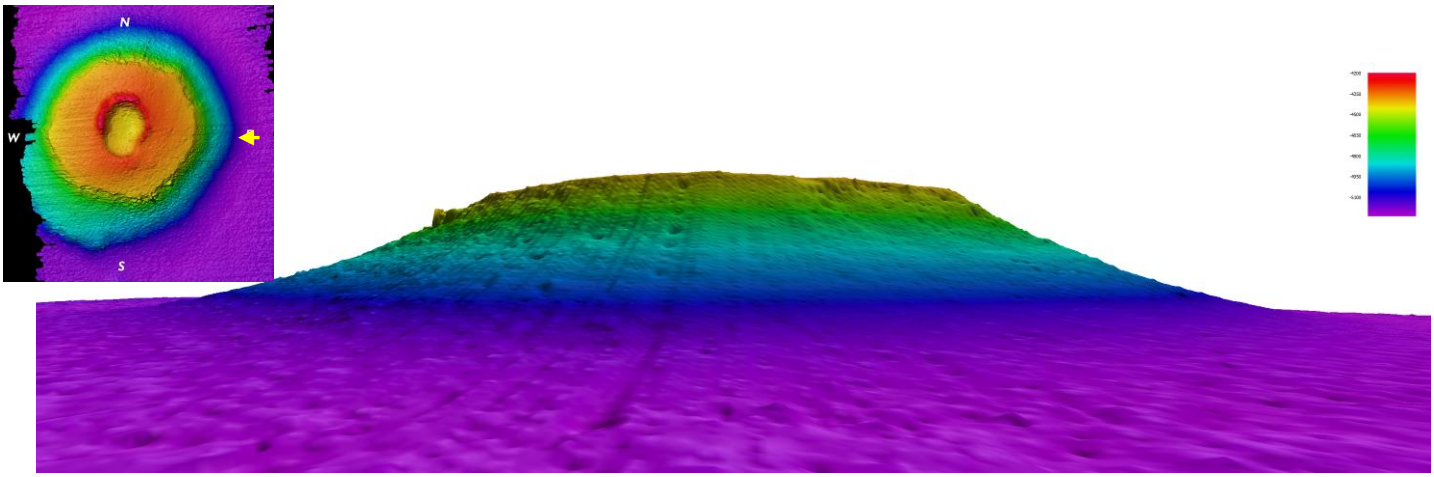
Above**: Profile line of the rampart on the northern wall which represents the highest point on the proposed **Colosseum Guyot

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Northern crater Rampart.png]



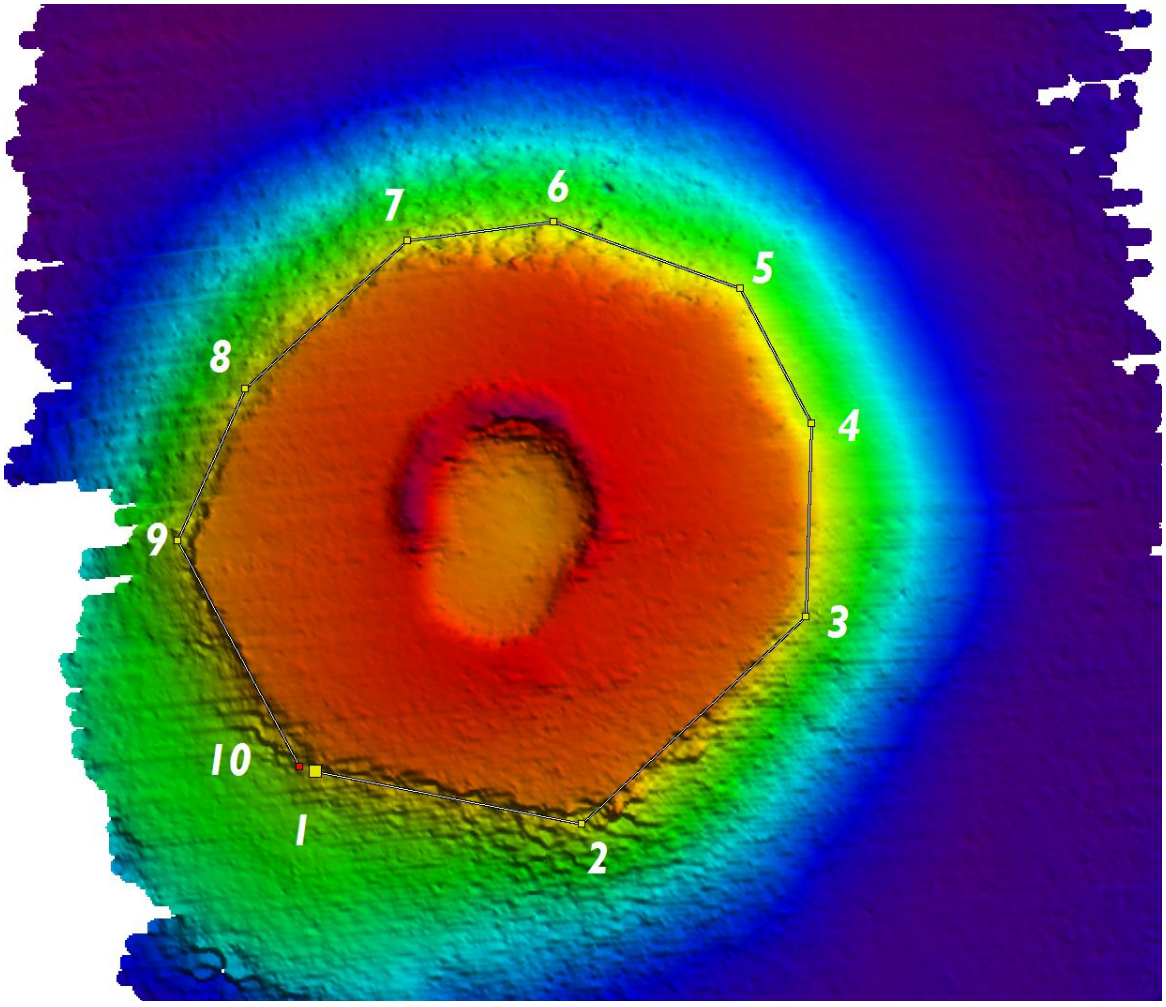
Above**: Elevation profile of the rampart located on the northern wall of the crater which represents the highest point on the proposed **Colosseum Guyot.** The profile line starts at **N 32 11.089, E 160 10.887** and ends at **N 32 11.050, E 160 11.736.** The minimum elevation of the northern rampart in this profile is **4203m (The absolute minimum depth of this feature is 4198m)

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Northern crater Rampart Profile.tif]



***Above**: Flat summit of the proposed **Colosseum Guyot.** This image supports the choice of the generic term **Guyot** as per Undersea Feature Terms and Definitions "A seamount with a comparatively smooth top"*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- view of Summit.tif]



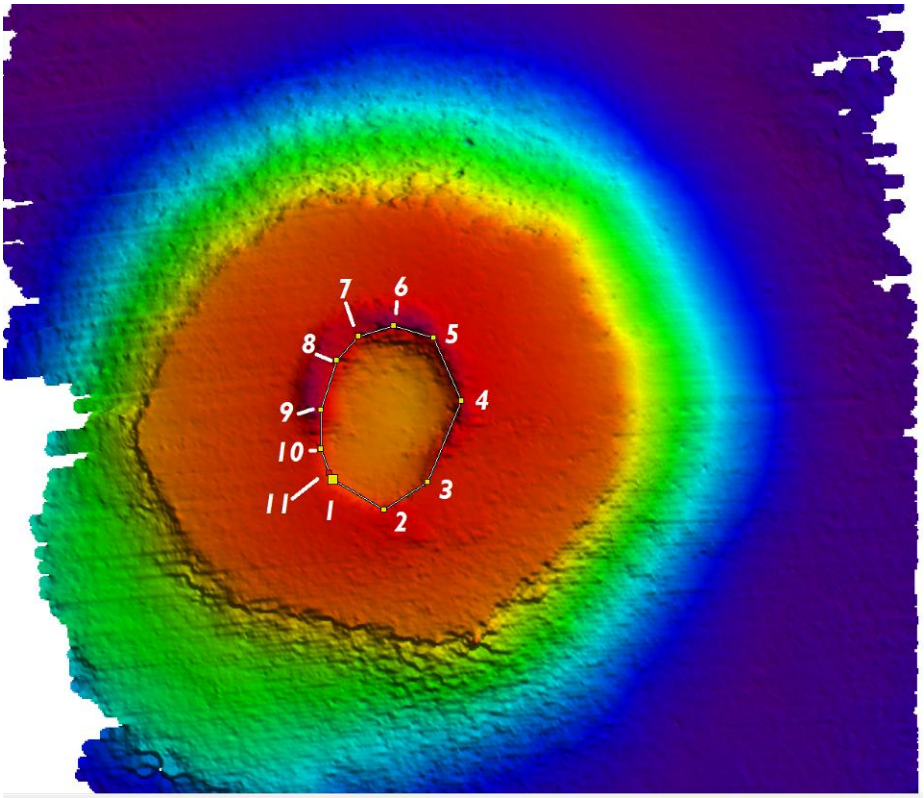
Above**: Defining boundary of the flat summit of the proposed **Colosseum Guyot

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Summit Perimeter.png]

Leighton Rolley - SOI - Colosseum Guyot Proposal- Summit Perimeter.txt

	Latitude	Longitude	Distance (m)	Total Distance (m)
1	32-10.245952N	160-10.398295E	2089.42	0
2	32-10.015048N	160-11.699429E	2349.61	2089.42
3	32-10.867671N	160-12.808191E	1487.55	4439.03
4	32-11.671892N	160-12.846422E	1175.28	5926.58

5	32-12.237595N	160-12.504813E	1525.08	7101.86
6	32-12.523552N	160-11.594395E	1135.24	8626.95
7	32-12.452176N	160-10.876812E	1691.16	9762.19
8	32-11.842517N	160-10.074272E	1279.63	11453.35
9	32-11.212899N	160-09.735542E	1976.52	12732.98
10	32-10.266203N	160-10.320489E		14709.5

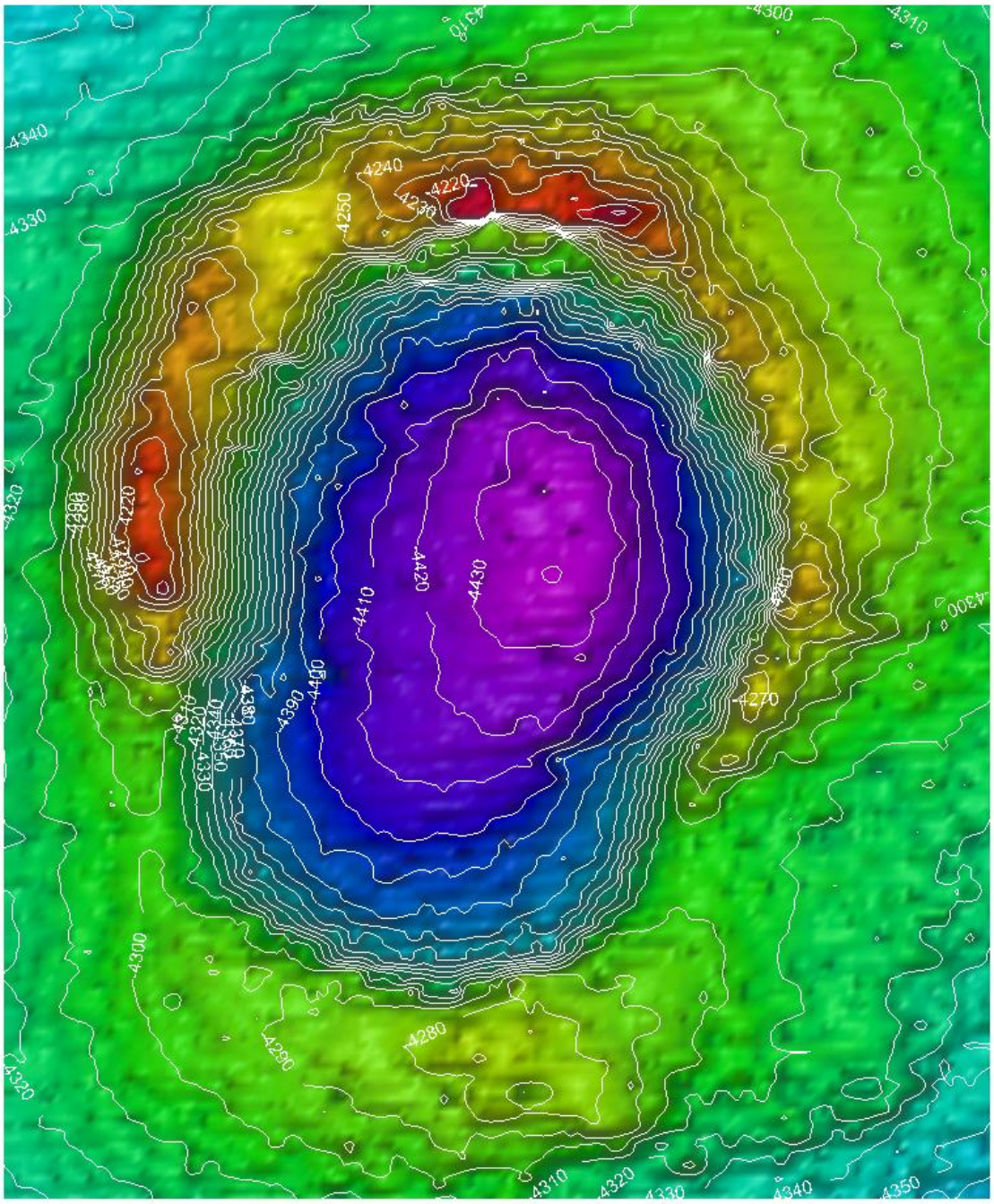


Above: *Boundary of the crater/caldera feature on the summit of the proposed* ***Colosseum Guyot***

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- Crater perimeter.png]

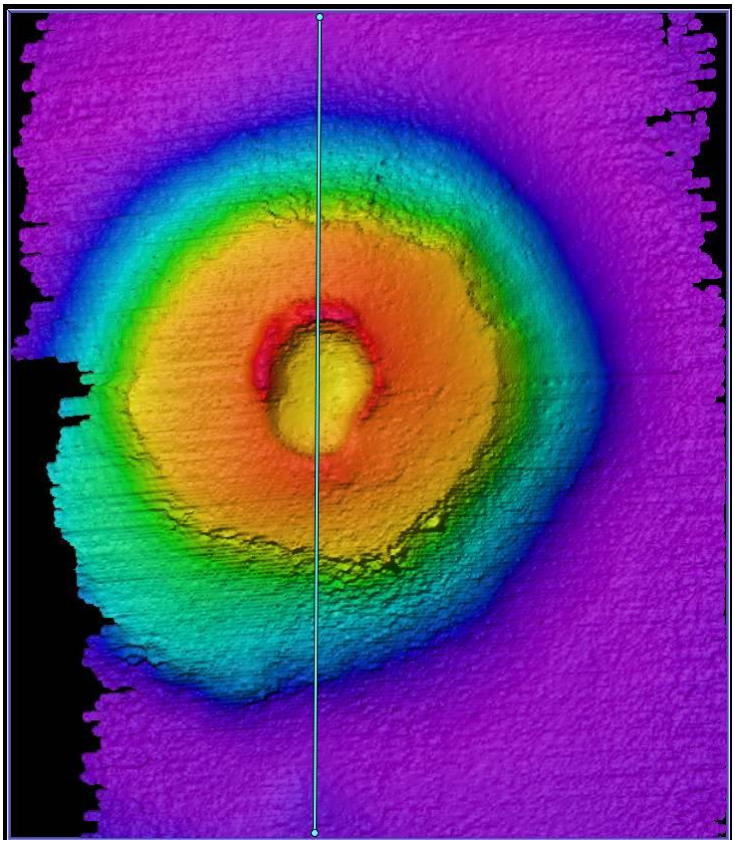
Leighton Rolley - SOI - Colosseum Guyot Proposal- Crater perimeter.txt

	Latitude	Longitude	Distance (m)	Total Distance (m)
1	32-10.915970N	160-11.008523E	569.45	0
2	32-10.756830N	160-11.318754E	496.58	569.45
3	32-10.898818N	160-11.586971E	844.52	1066.04
4	32-11.318638N	160-11.799131E	662.53	1910.55
5	32-11.648290N	160-11.633495E	399.61	2573.09
6	32-11.713069N	160-11.390897E	353.98	2972.7
7	32-11.660422N	160-11.174329E	311.72	3326.68
8	32-11.536701N	160-11.039522E	499.93	3638.4
9	32-11.279852N	160-10.939745E	375.34	4138.33
10	32-11.076776N	160-10.937120E	244.25	4513.67
11	32-10.951333N	160-10.986017E		4757.92



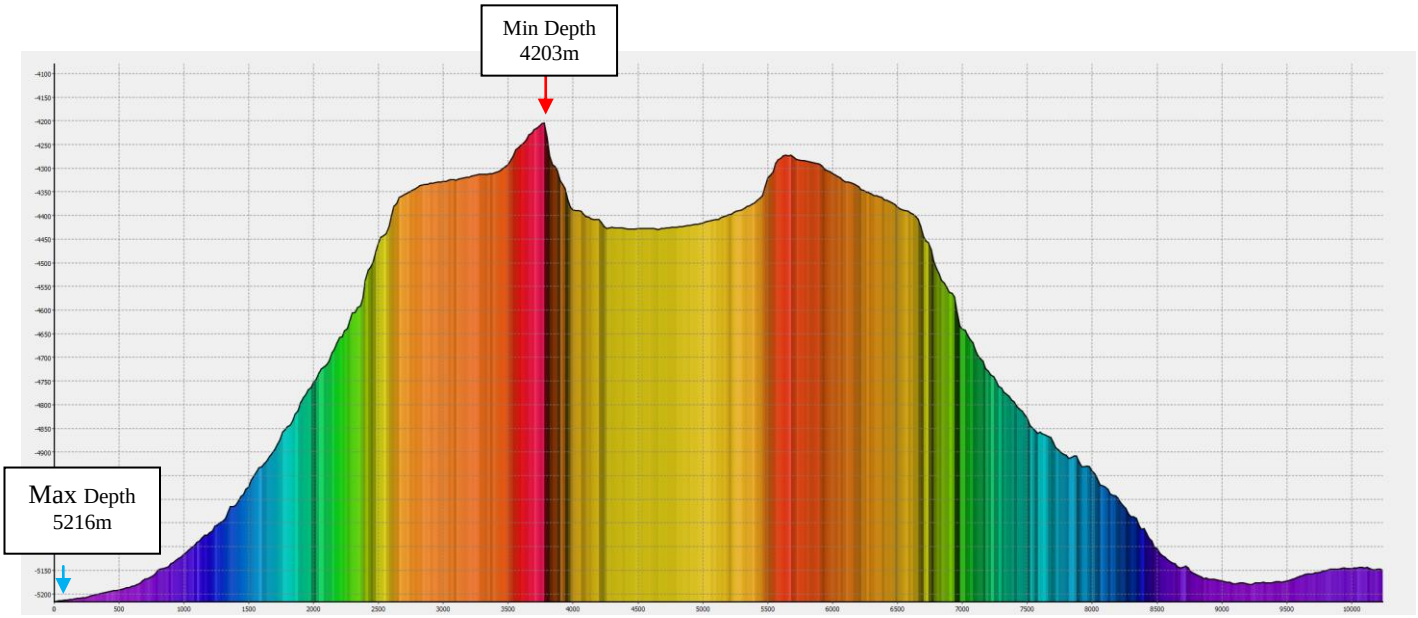
Above: 10m contour chart of the crater/caldera located in the centre of the summit of the proposed ***Colosseum Guyot***

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- 10m Crater Contour Line .tif]



***Above**: North/South Profile line across the top of the proposed **Colosseum Guyot** feature*

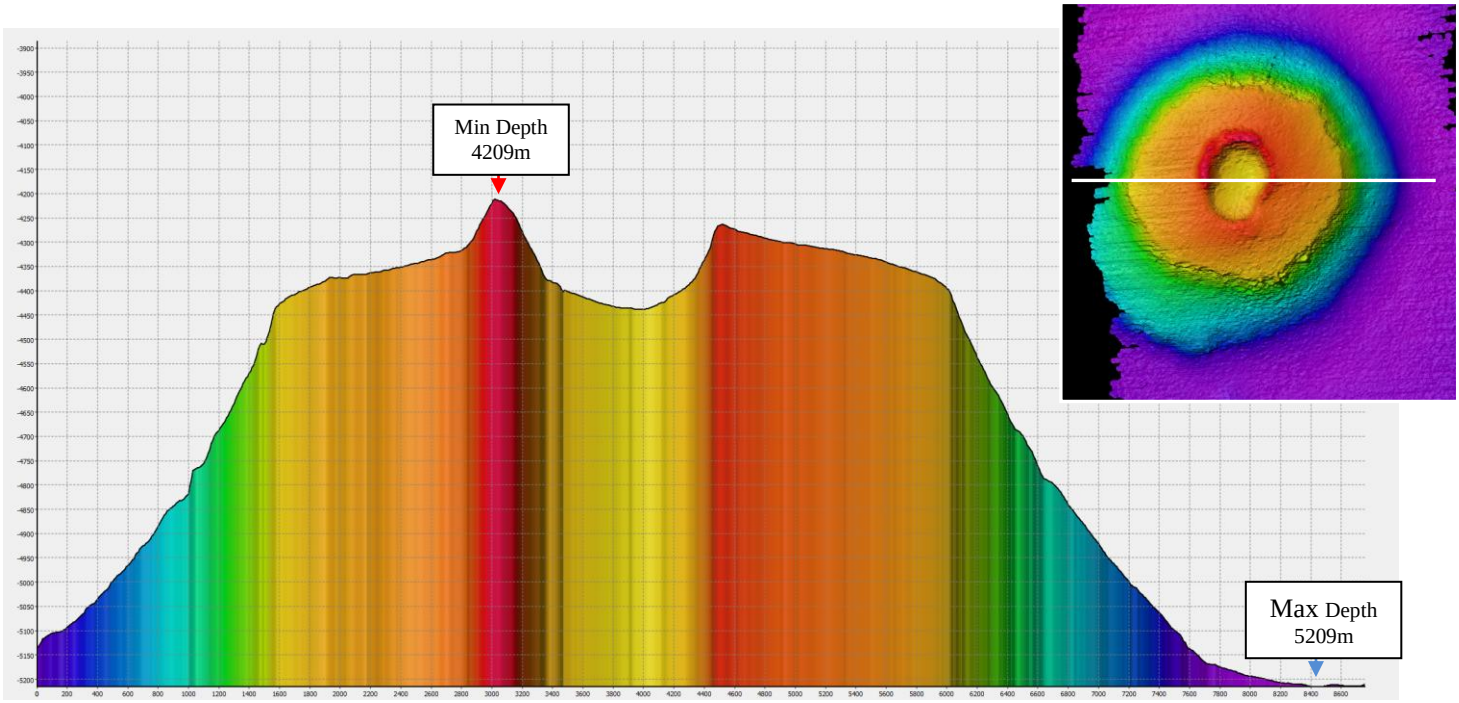
[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- North South Full Profile.png]



***Above**: North/South Profile line across the entire proposed **Colosseum Guyot** starting at **N 32 13.755, E 160 11.382** and ending at **N 32 08.216, E 160 11.270.** This profile line is approximately **10240m** long with a minimum depth of **4203m** (N 32 11.705, E 160 11.341) and a maximum depth **5216m** (N 32 13.754, E 160 11.382). The image clearly shows the crater/caldera feature in the centre of the feature.*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- North South Crater Profile.tif]

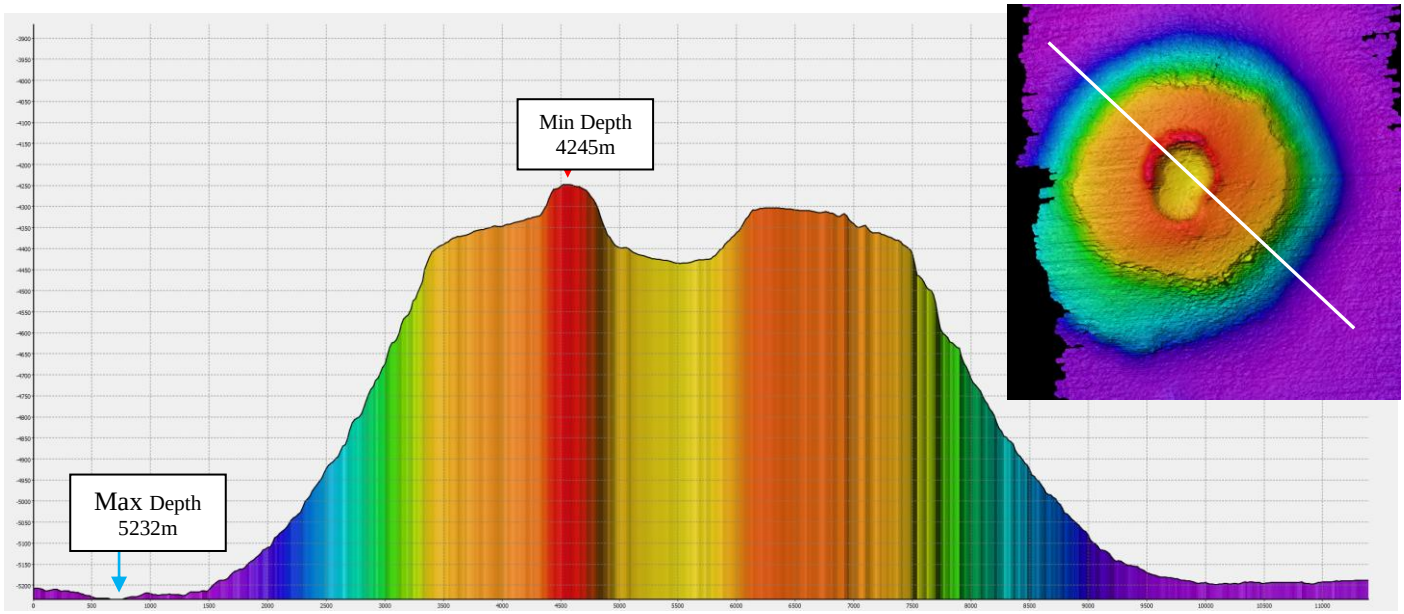
Leighton Rolley - SOI - Colosseum Guyot Proposal- North South Full Profile.txt



***Above**: West/East line across the proposed **Colosseum Guyot** starting at **N 32 11.543, E 160 08.958** and ending at **N 32 11.140, E 160 14.508**. This profile line is approximately **8753m** long with a minimum depth of **4209m** (N 32 11.405, E 160 10.872) and a maximum depth **5209m** (N 32 11.140, E 160 14.508). The image clearly shows the crater/caldera feature in the centre of the feature.*

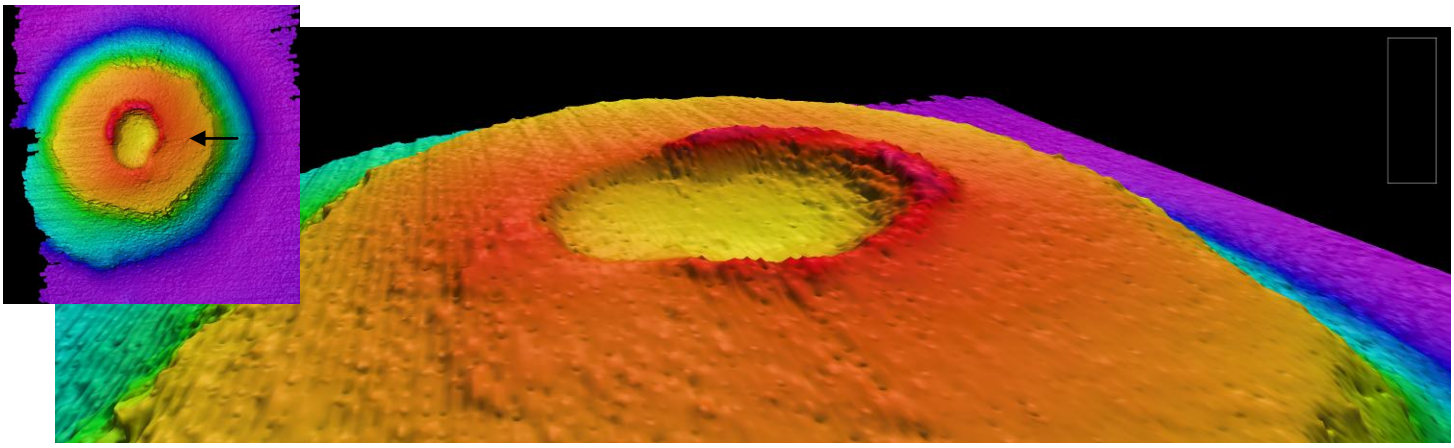
[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- West East Crater Profile.tif]

Leighton Rolley - SOI - Colosseum Guyot Proposal- West East Crater Profile.txt



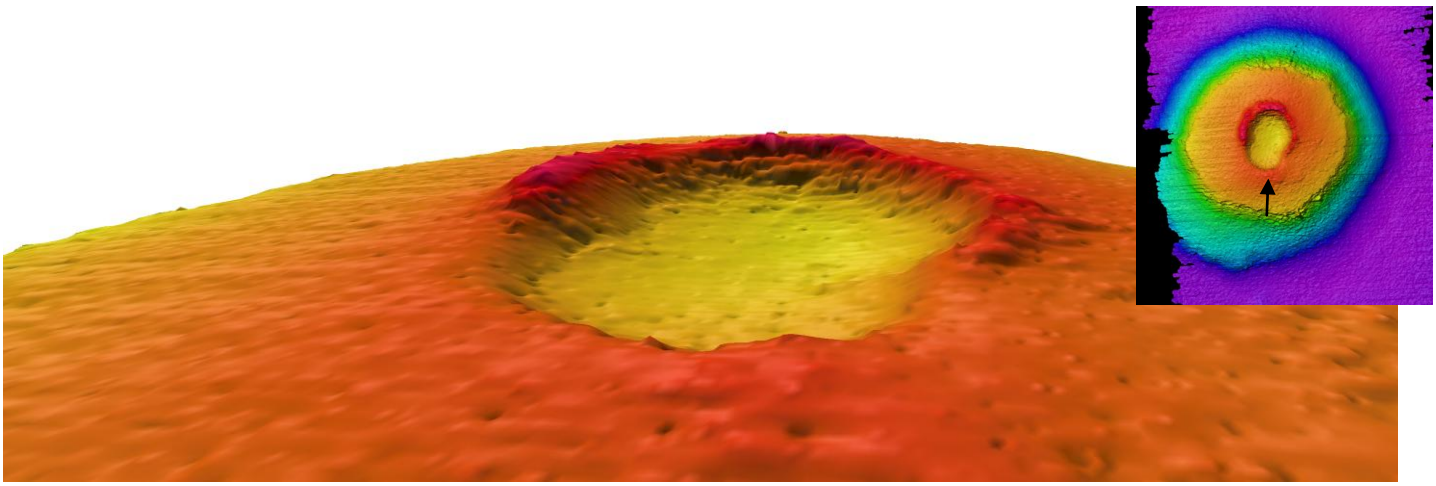
***Above**: NNW to SSE profile line across the proposed **Colosseum Guyot** starting at N **32 13.640, E 160 09.310** and ending at **N 32 02.783, E 153 52.363.** This profile line is approximately **11388m** long with a minimum depth of **4245m** (N 32 11.662, E 160 11.009**)** and a maximum depth **5232m** (N 32 13.333, E 160 09.574). The image clearly shows the crater/hole feature in the centre of the feature.*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal- NNW to SSE Crater Profile.tif]



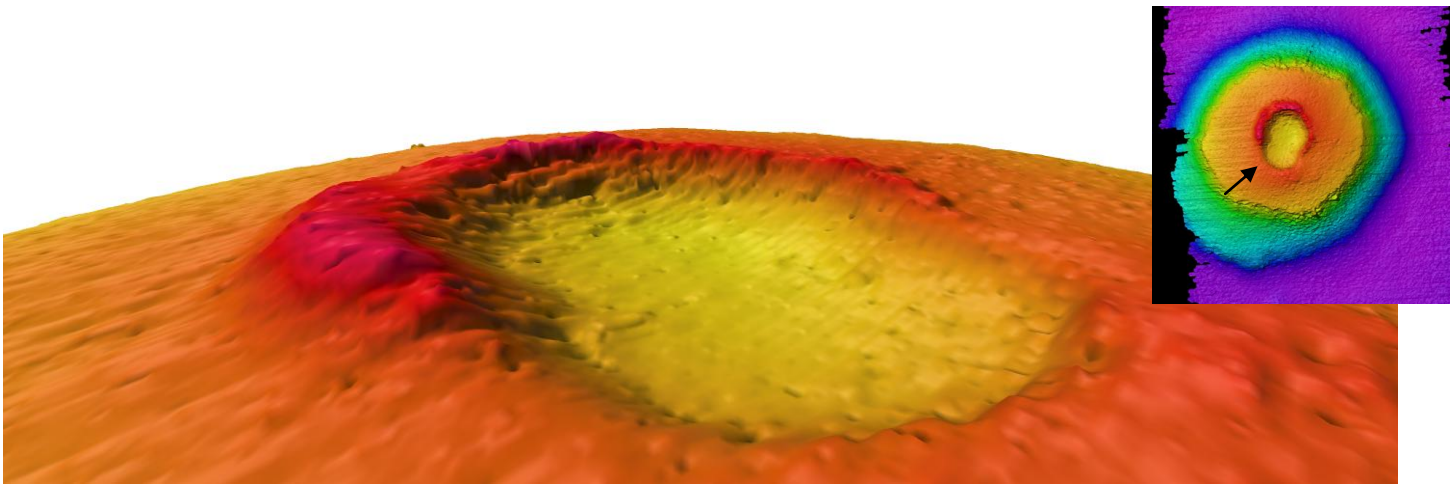
***Above**: Close up of the crater located in the centre of the proposed **Colosseum Guyot** from the East (looking west) . This view clearly shows the crater depression and the rampart around the northern section of the crater.*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal-Crater Image 001.tif]



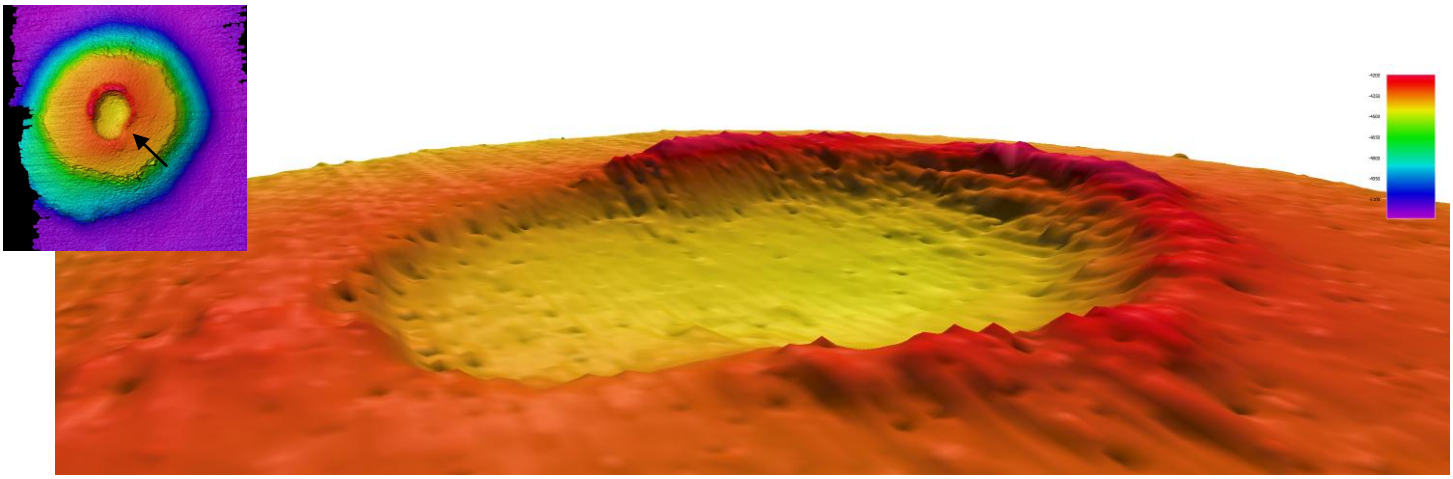
***Above**: Close up of the crater located in the centre of the proposed **Colosseum Guyot** from the South (looking North) . This view clearly shows the crater depression and the rampart around the northern section of the crater*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal-Crater Image 002.tif]



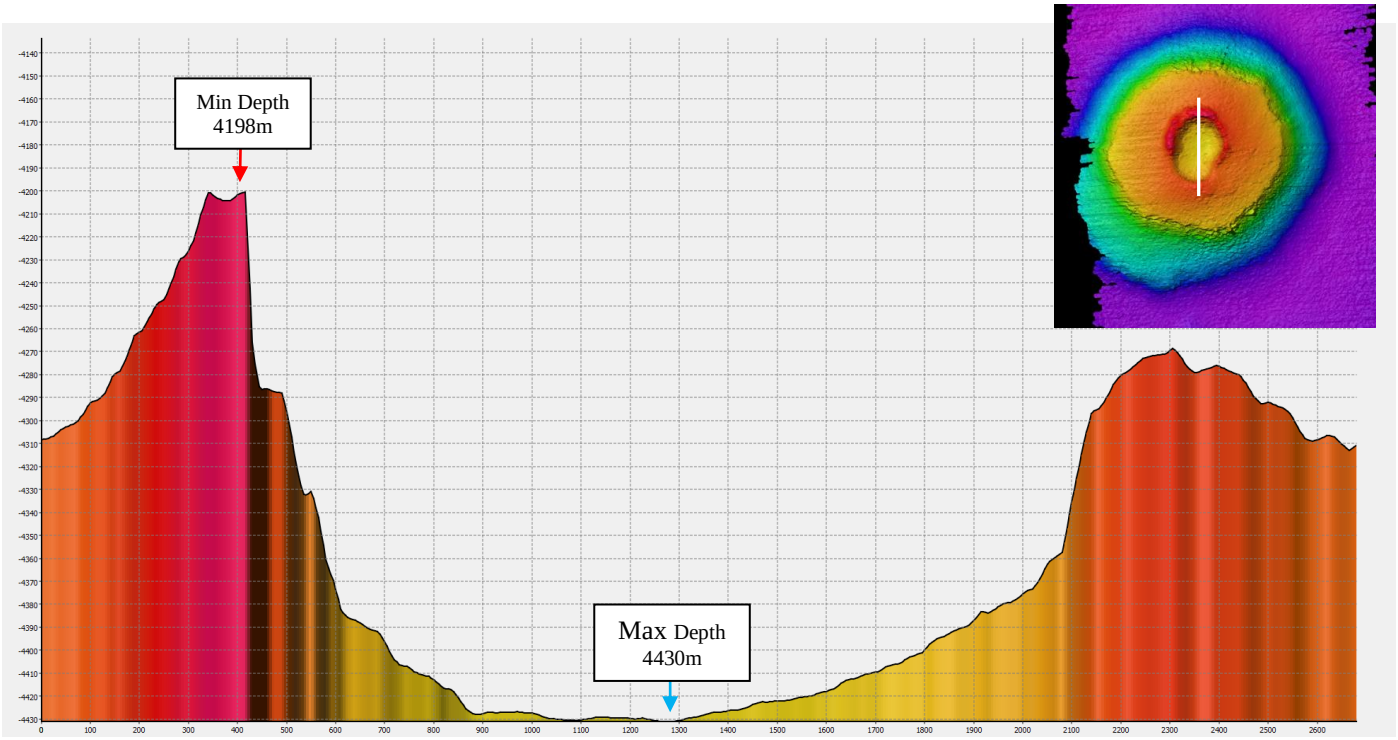
***Above**: Close up of the crater located in the centre of the proposed **Colosseum Guyot** from the South West (looking North East) . This view clearly shows the crater depression and the rampart around the northern section of the crater*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal-Crater Image 003.tif]



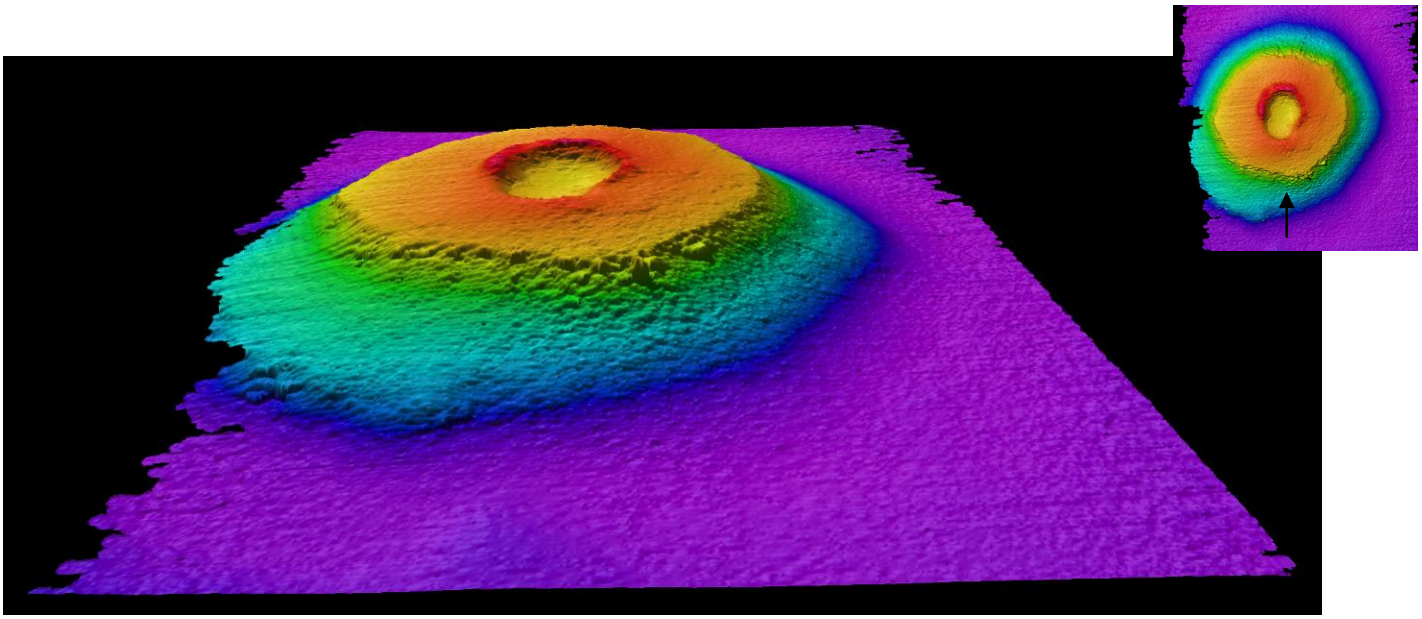
***Above**: Close up of the crater located in the centre of the proposed **Colosseum Guyot** from the South East (looking North West) . This view clearly shows the crater depression and the rampart around the northern section of the crater – [Flederamus]*

[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal-Crater Image 004.tif]

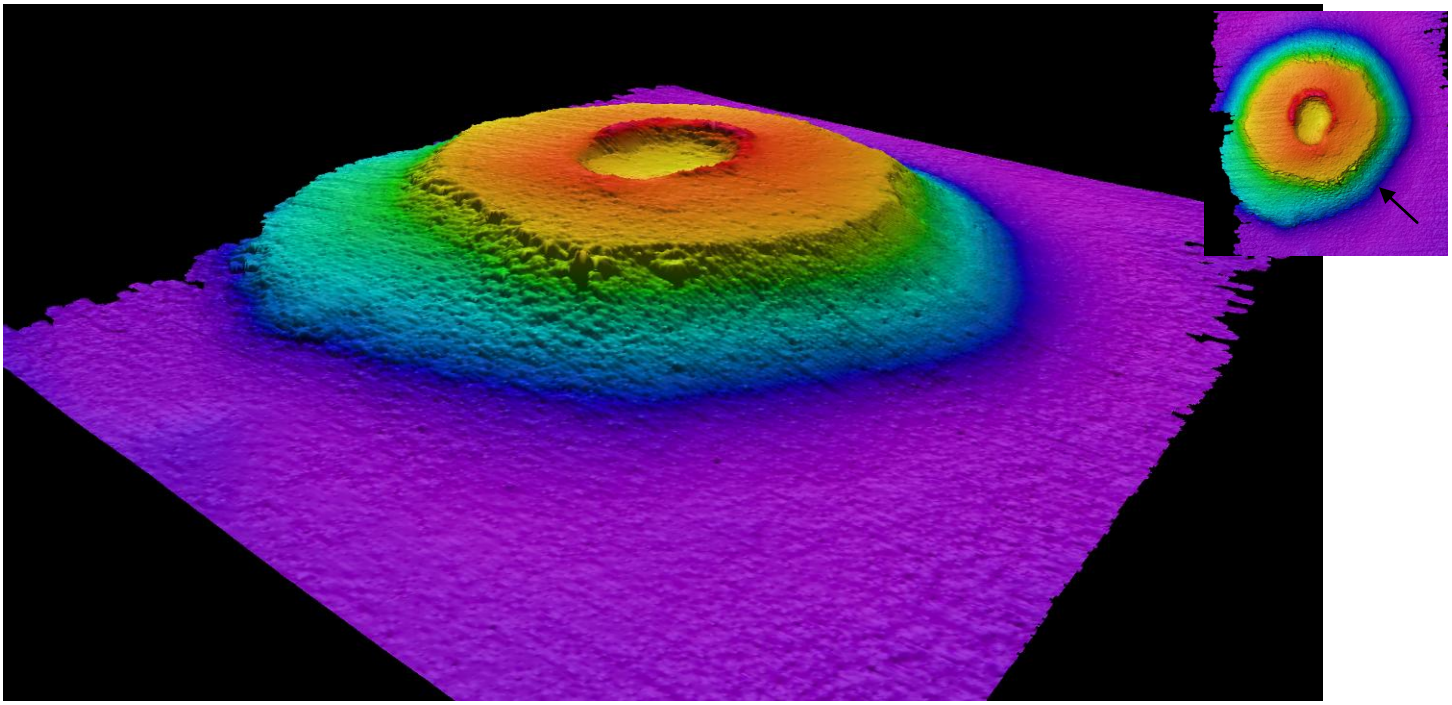


*Above: North/South Profile line across the crater at the centre of the **Colosseum Guyot.** The profile line is **2680m** long starting at **N 32 11.930, E 160 11.363** and ending at **N 32 10.481, E 160 11.344.** The minimum depth is **4198m (N 32 11.745, E 160 11.361)** and the maximum depth is **4430.83 (N 32 11.240, E 160 11.354)** giving a total crater depth from the top of the northern rampart as **232m** [Caris]*

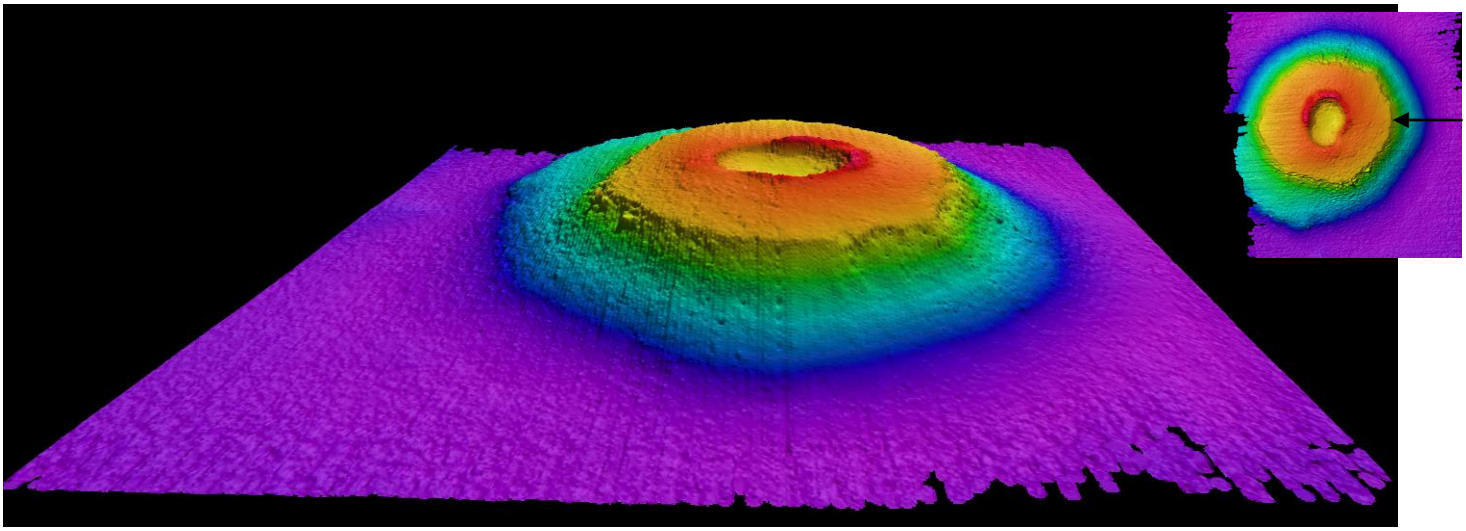
[Supporting Image File: Leighton Rolley - SOI - Colosseum Guyot Proposal-Crater NS Depth.tif]



Above**: Fledermaus 3D rendering with no vertical exaggeration showing proposed **Colosseum Guyot** from the South looking due North - **Leighton Rolley - SOI - Colosseum Guyot Proposal-Looking North.tif

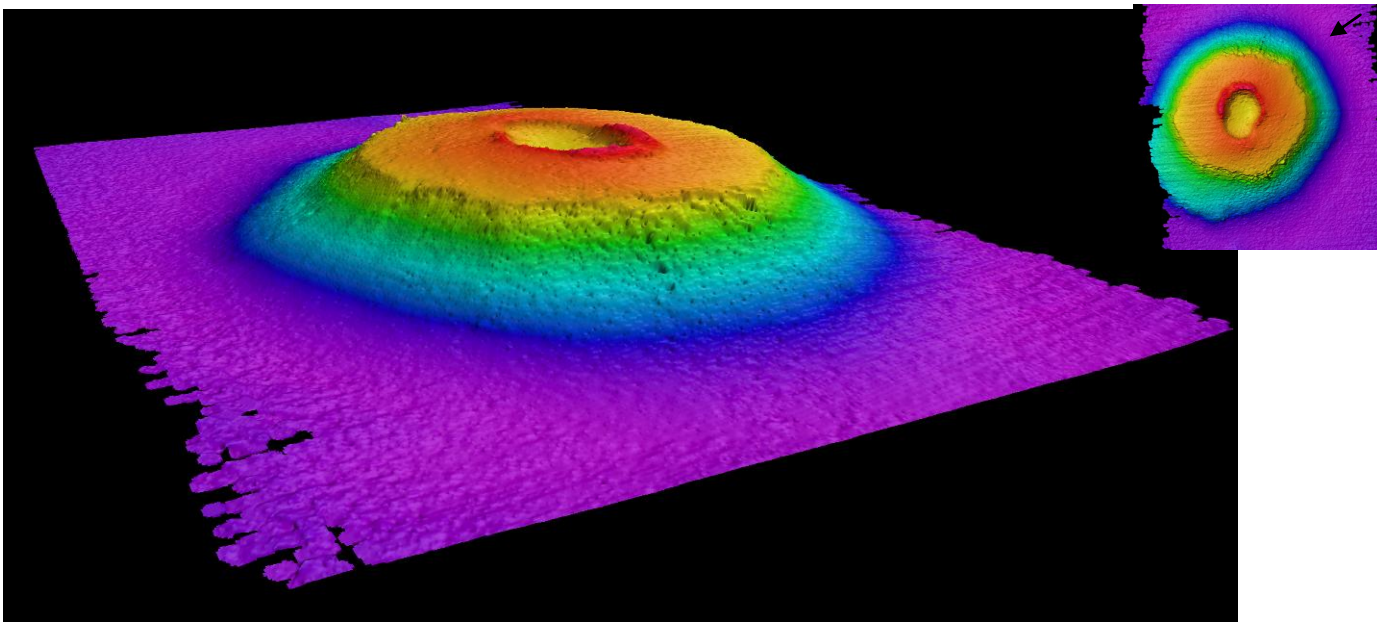


Above**: Fledermaus 3D rendering with no vertical exaggeration showing proposed **Colosseum Guyot** from the South-South-East looking North-North West - **Leighton Rolley - SOI - Colosseum Guyot Proposal-Looking North North West.tif



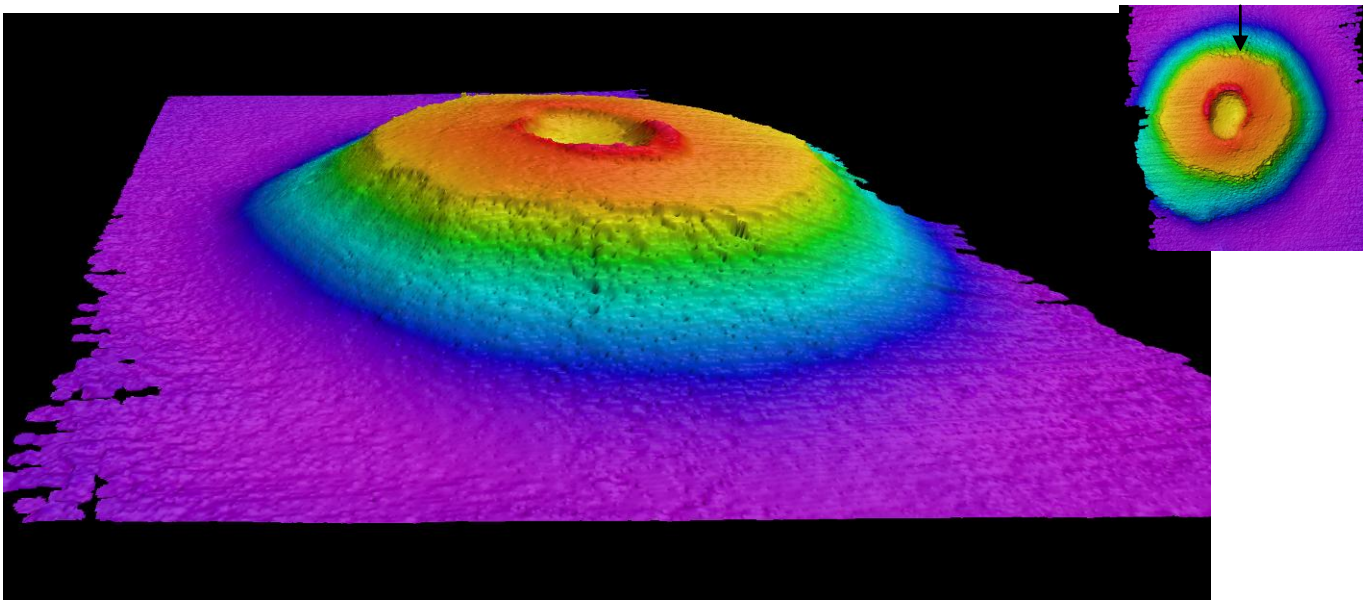
***Above**: Fledermaus 3D rendering with no vertical exaggeration showing proposed **Colosseum Guyot** from the East looking West -*

Leighton Rolley - SOI - Colosseum Guyot Proposal-Looking West.tif



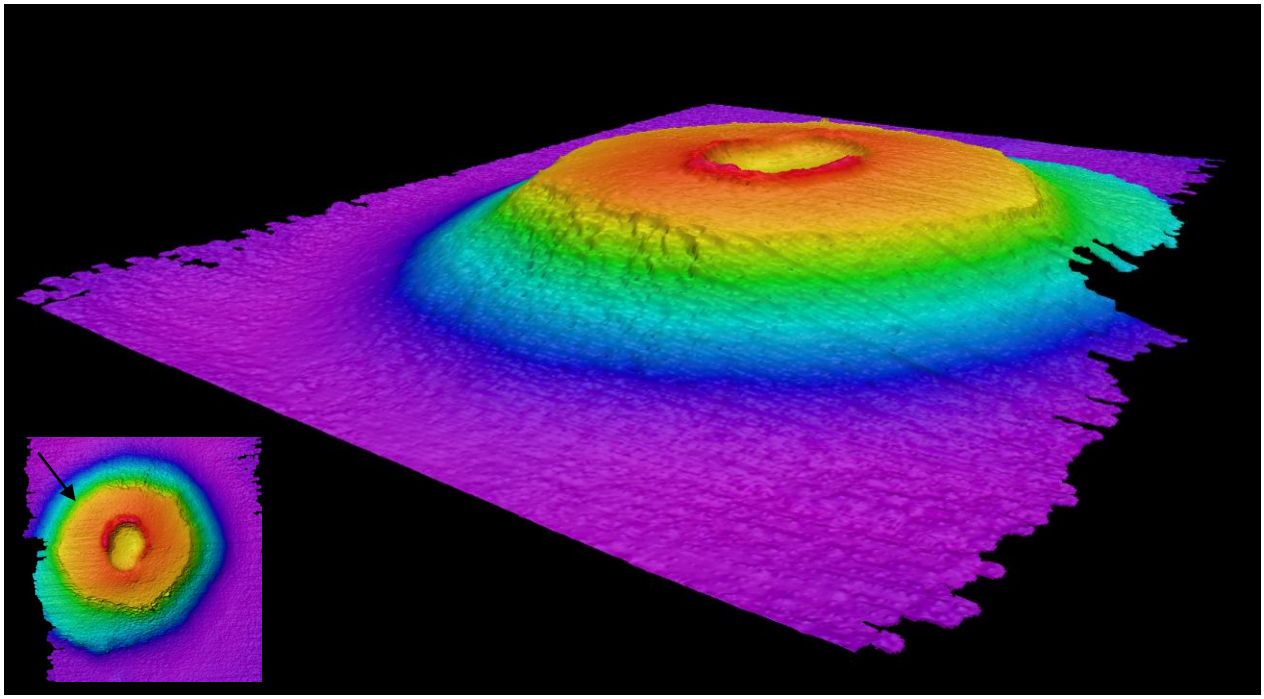
***Above**: Fledermaus 3D rendering with no vertical exaggeration showing proposed **Colosseum Guyot** from the North-North-East looking South-South West*

Leighton Rolley - SOI - Colosseum Guyot Proposal-Looking South South West.tif



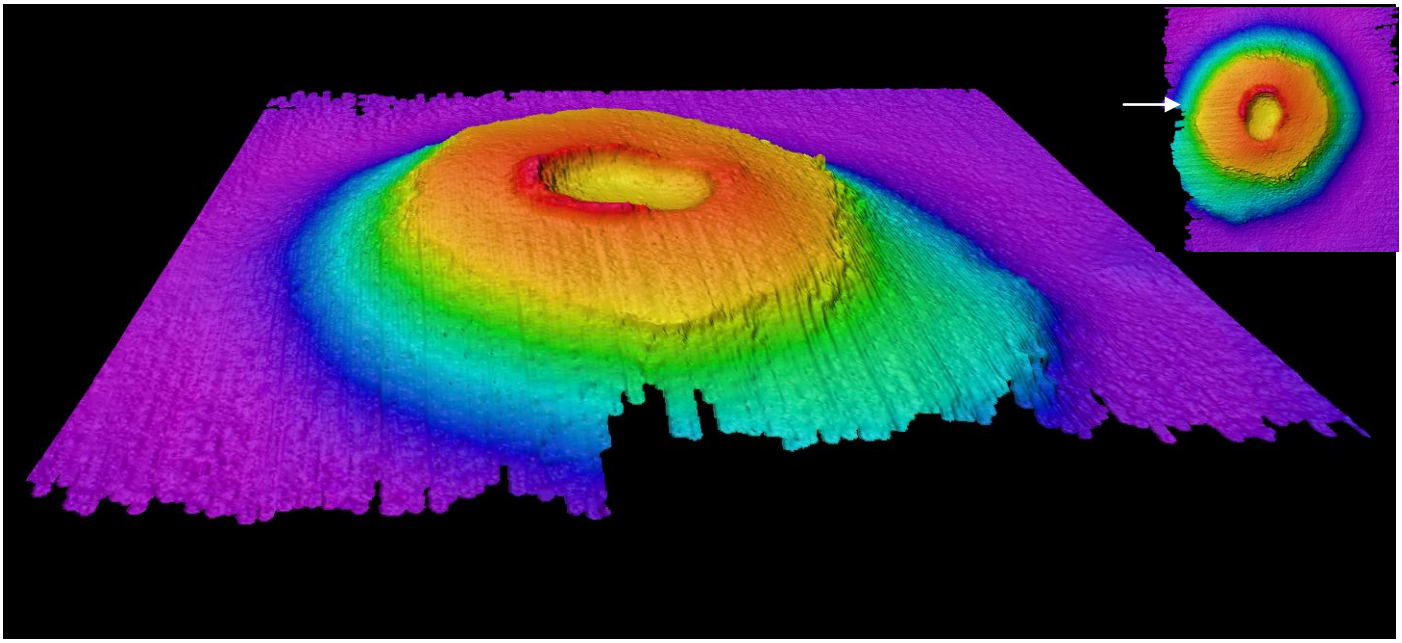
***Above**: Fledermaus 3D rendering with no vertical exaggeration showing proposed **Colosseum Guyot** from the North looking South*

Leighton Rolley - SOI - Colosseum Guyot Proposal-Looking South.tif



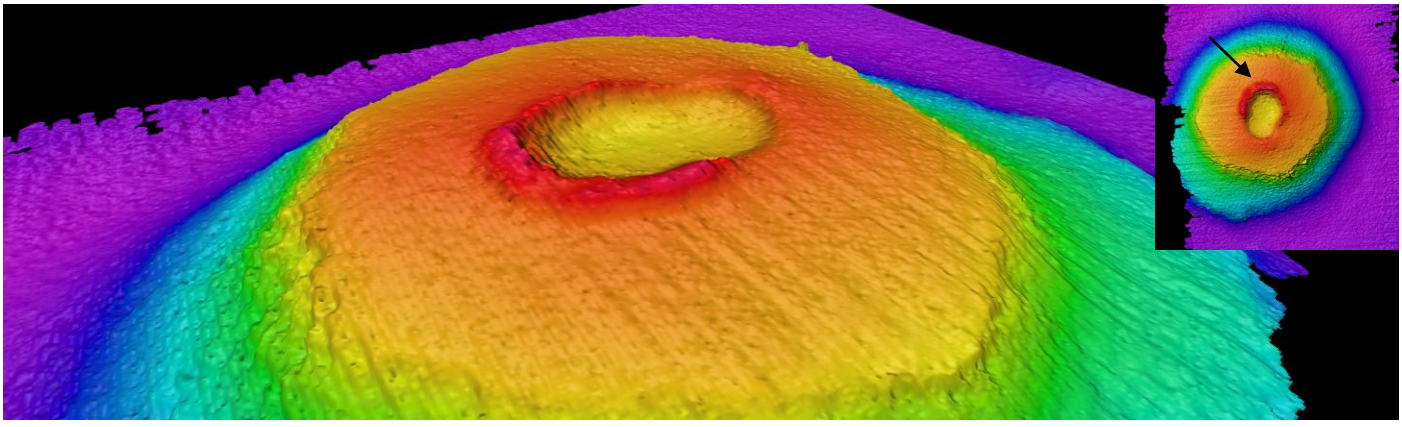
***Above**: Fledermaus 3D rendering with no vertical exaggeration showing proposed **Colosseum Guyot** from the North-North-West looking South-South East*

Leighton Rolley - SOI - Colosseum Guyot Proposal-Looking South South East.tif



***Above**: Fledermaus 3D rendering with no vertical exaggeration showing proposed **Colosseum Guyot** from the West looking East*

Leighton Rolley - SOI - Colosseum Guyot Proposal-Looking East.tif



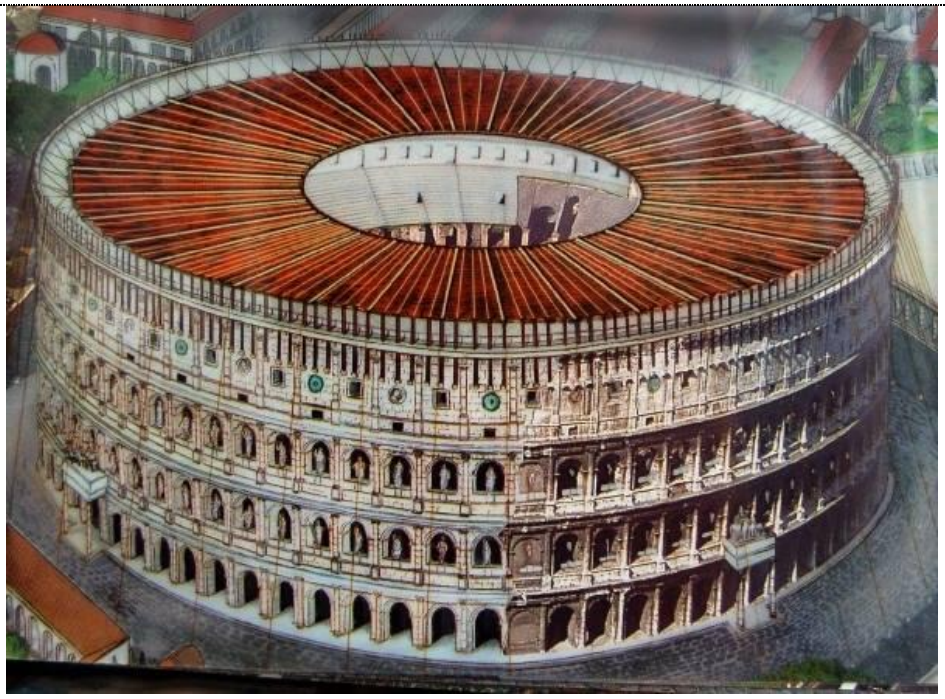
***Above**: Close up from the NNW of the crater located in the centre of the proposed **Colosseum Guyot .** This view clearly shows the rampart on the northern section of the crater.*

Leighton Rolley - SOI - Colosseum Guyot Proposal-Looking at Caldera.tif

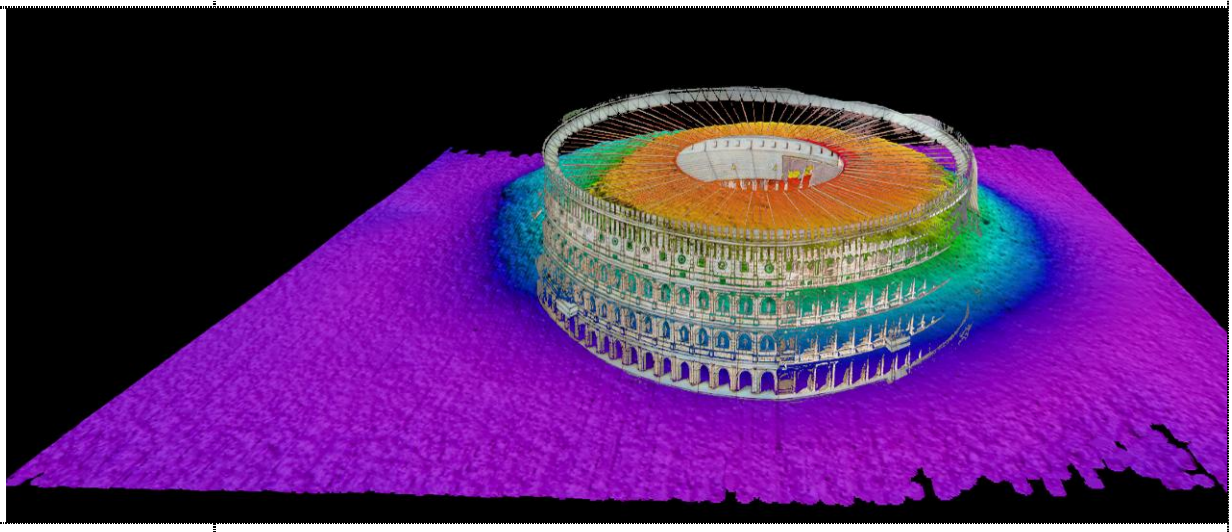
Associated Features:	The proposed ***Colosseum Guyot*** features a hole/crater/caldera in the center of the summit. However, we believe this feature is adequately covered in the naming justification included below and due to the relatively small size has not been included as a separate naming proposal. The generic term to be applied to this feature i.e Caldera or Hole cannot be quantified as no in-situ investigation of this feature and its formation (i.e volcanic) has been conducted at this stage. However, we have included the generic definitions of both a hole and a caldera below as this feature is recognizable in the summit of our proposed feature. **CALDERA** (Publication B-6 Edition 4.1.0, September 2013 UNDERSEA FEATURE TERMS AND DEFINITIONS). A roughly circular, cauldron-like depression generally characterized by steep sides and formed by collapse, or partial collapse, during or following a volcanic eruption **HOLE** A depression of limited extent with all sides rising steeply from a relatively flat bottom (Publication B-6 Edition 4.1.0, September 2013 UNDERSEA FEATURE TERMS AND DEFINITIONS).

Chart/Map References:	Shown Named on Map/Chart:	No
	Shown Unnamed on Map/Chart:	No
	Within Area of Map/Chart:	

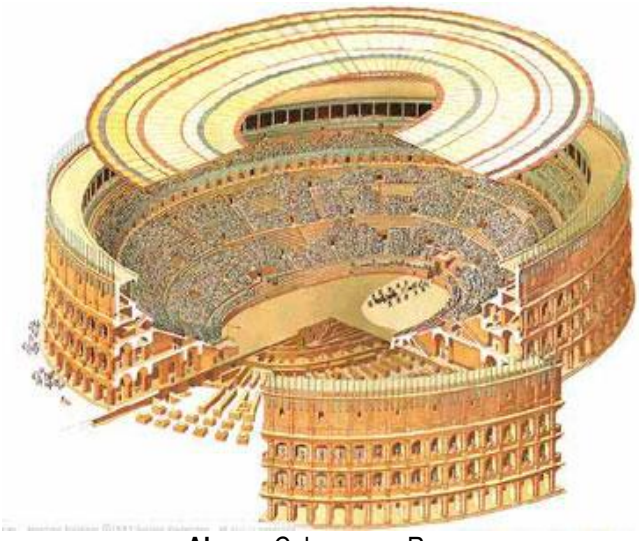
Reason for Choice of Name (if a person, state how associated with the feature to be named)**:**	**GUYOT** a **SEAMOUNT** with a comparatively smooth flat top (Publication B-6 Edition 4.1.0, September 2013 UNDERSEA FEATURE TERMS AND DEFINITIONS). **SEAMOUNT**: A distinct generally equidimensional elevation greater than 1000m above the surrounding relief as measured from the deepest isobath that surrounds most of the feature. The proposed ***Colosseum Guyot*** feature matches the description of a SEAMOUNT by exceeding 1000m in elevation (1020m) and being equidimensional. The top of the feature is comparatively flat and based on this characteristic matches the description of a **GUYOT** if disregarding the crater like feature in the center. Due to the distinct flat top that features a central crater we discussed the resemblance of this feature to a Roman amphitheater viewed from above. The larger Roman amphitheaters including the Colosseum in Rome were built to incorporate a Velarium. The purpose of a Velarium was to provide shade for the spectators who watched the gladiatorial games in the blistering sun and heat of Ancient Rome.



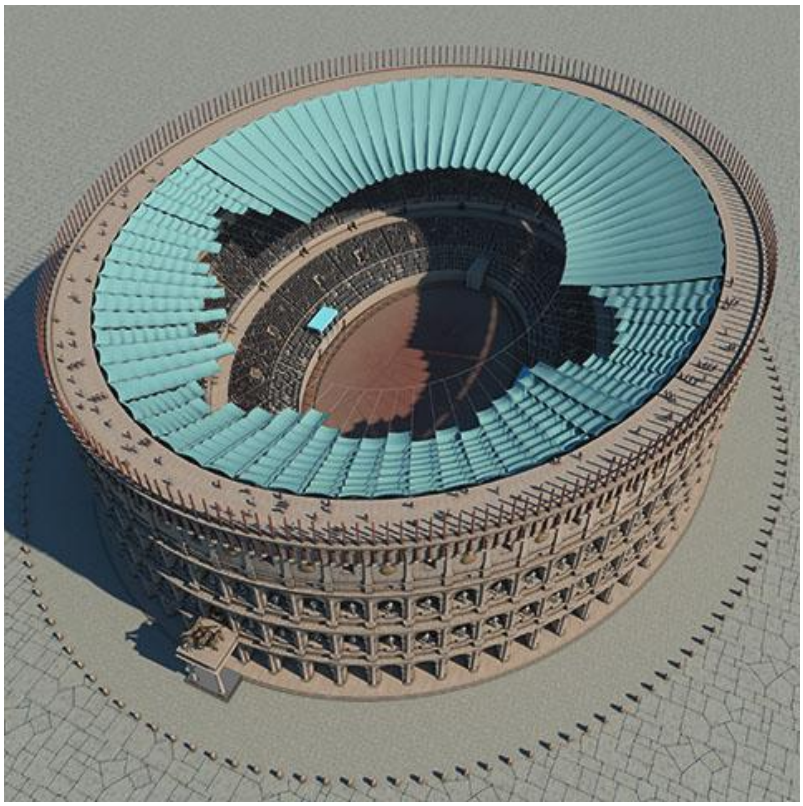
Above: Artist rendering of the Colosseum, Rome with Velarium



Above: Overlay of Colosseum on the proposed ***Colosseum Guyot (Colosseum not to scale!!)***



Above: Colosseum, Rome



Above: Rendering of Colosseum with Velarium

Based on this observation we proposed to name it after the Colosseum in Rome.

We believe that this proposal falls within Publication B-6 Edition 4.1.0, September 2013 Section II. PRINCIPLES FOR NAMING FEATURES Part 1:

"Short and simple specific terms are preferable."

Furthermore part 2 of Principles for Naming Features states:

"The principal concern in naming is to provide effective, conveniently usable, and appropriate reference; commemoration of persons or ships is a secondary consideration."

This name is simple and can be easily referenced and remembered by researchers

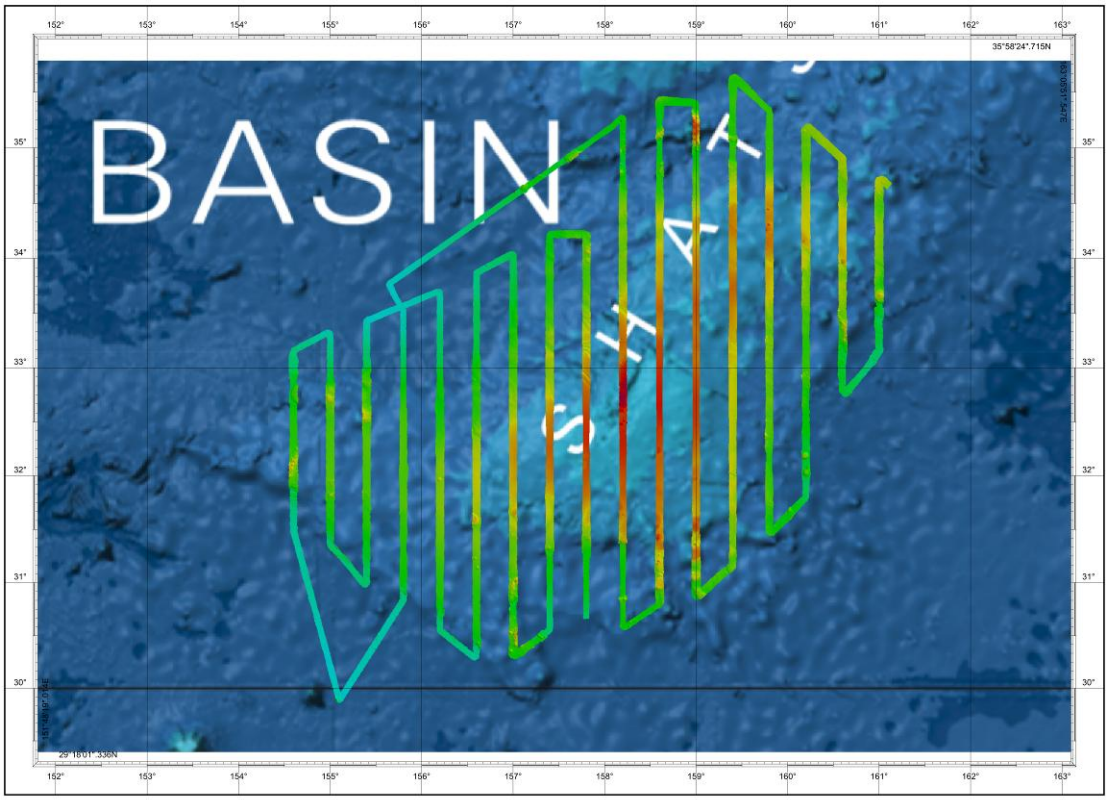
Notes on the Colosseum

The Colosseum or Coliseum is an amphitheatre in the centre of the city of Rome, Italy. Built of concrete and stone, it is the largest amphitheater ever built and is considered one of the greatest works of architecture and engineering

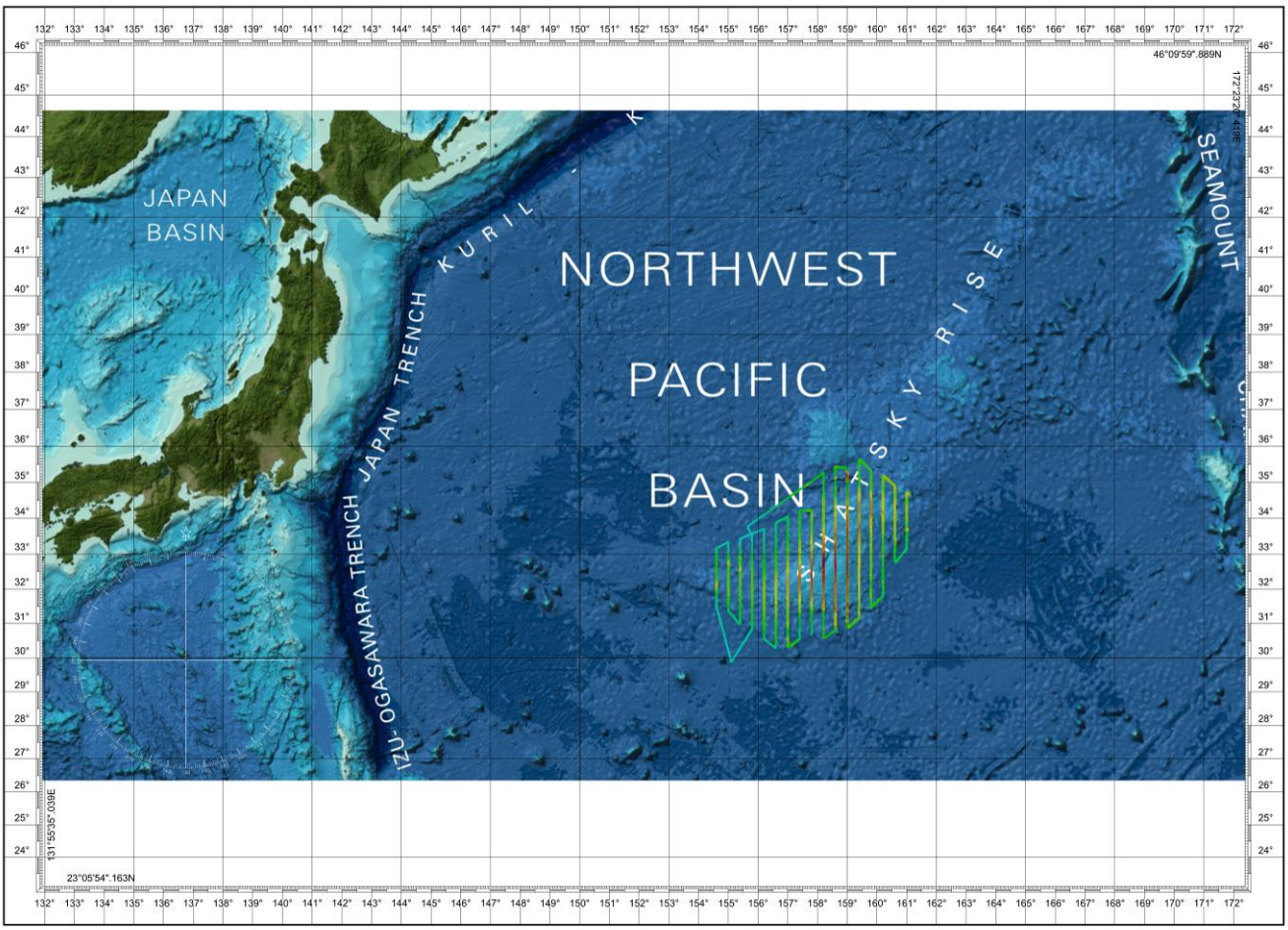
The Colosseum is situated just east of the Roman Forum. Construction began under the emperor Vespasian in 72 AD and was completed in 80 AD under his successor and heir Titus Further modifications were made during the reign of Domitian (81–96). These three emperors are known as the Flavian dynasty, and the amphitheatre was named in Latin for its association with their family name (Flavius).

The Colosseum could hold, it is estimated, between 50,000 and 80,000 spectators, having an average audience of some 65,000; it was used for gladiatorial contests and public spectacles such as mock sea battles, animal hunts, executions, re-enactments of famous battles, and dramas based on Classical mythology. The building ceased to be used for entertainment in the early medieval era. It was later reused for such purposes as housing, workshops, quarters for a religious order, a fortress, a quarry, and a Christian shrine.

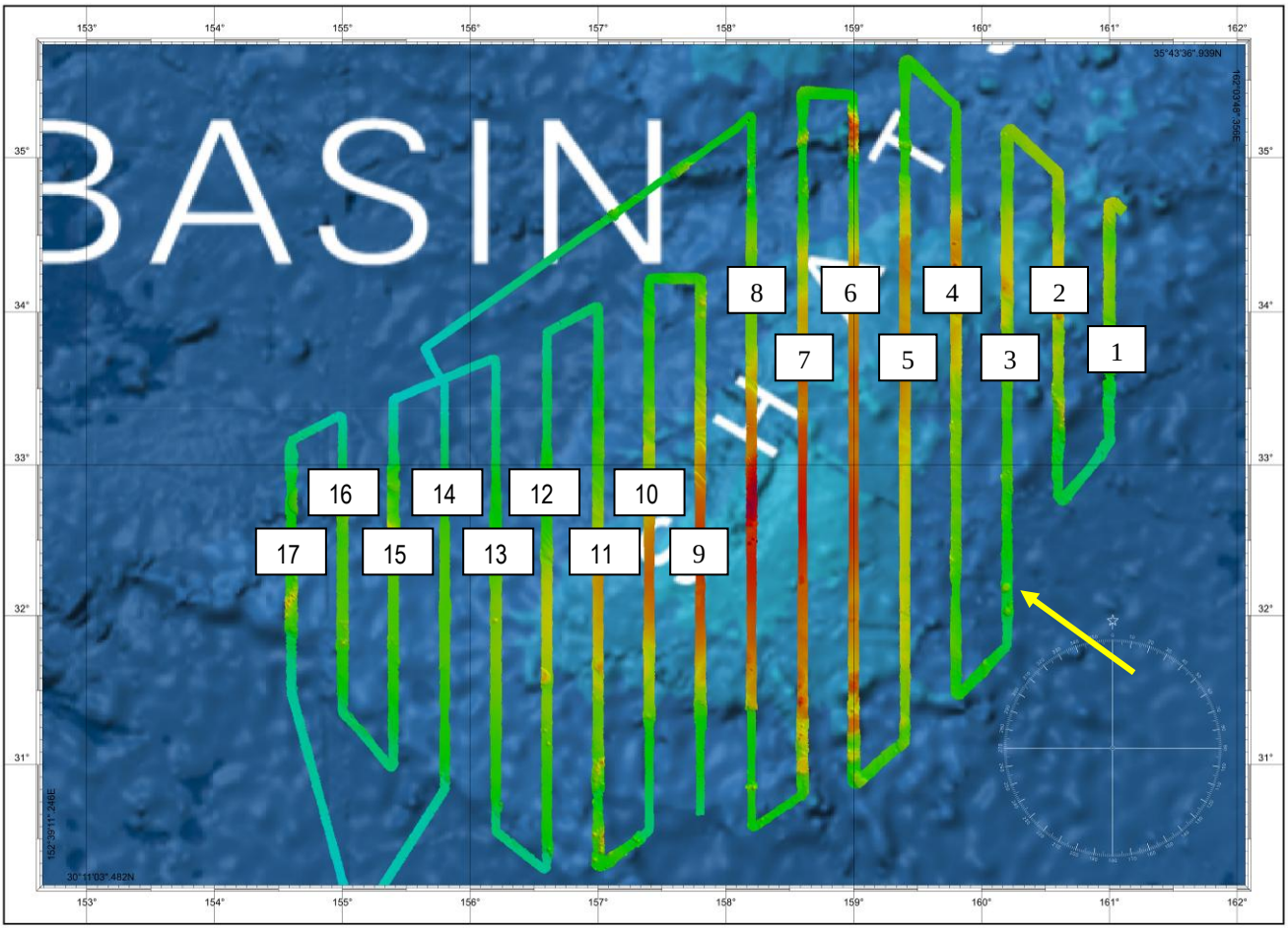
	Although partially ruined because of damage caused by earthquakes and stone-robbers, the Colosseum is still an iconic symbol of Imperial Rome. It is one of Rome's most popular tourist attractions.



Above: Overview of the complete Tamu Massif survey conducted between 15th October 2015 and November 5th 2015. The survey data has been overlaid on the Gebco 2014 World Map – **"Leighton Rolley - SOI - Colosseum Guyot Proposal - Tamu Massif Survey.tif"**

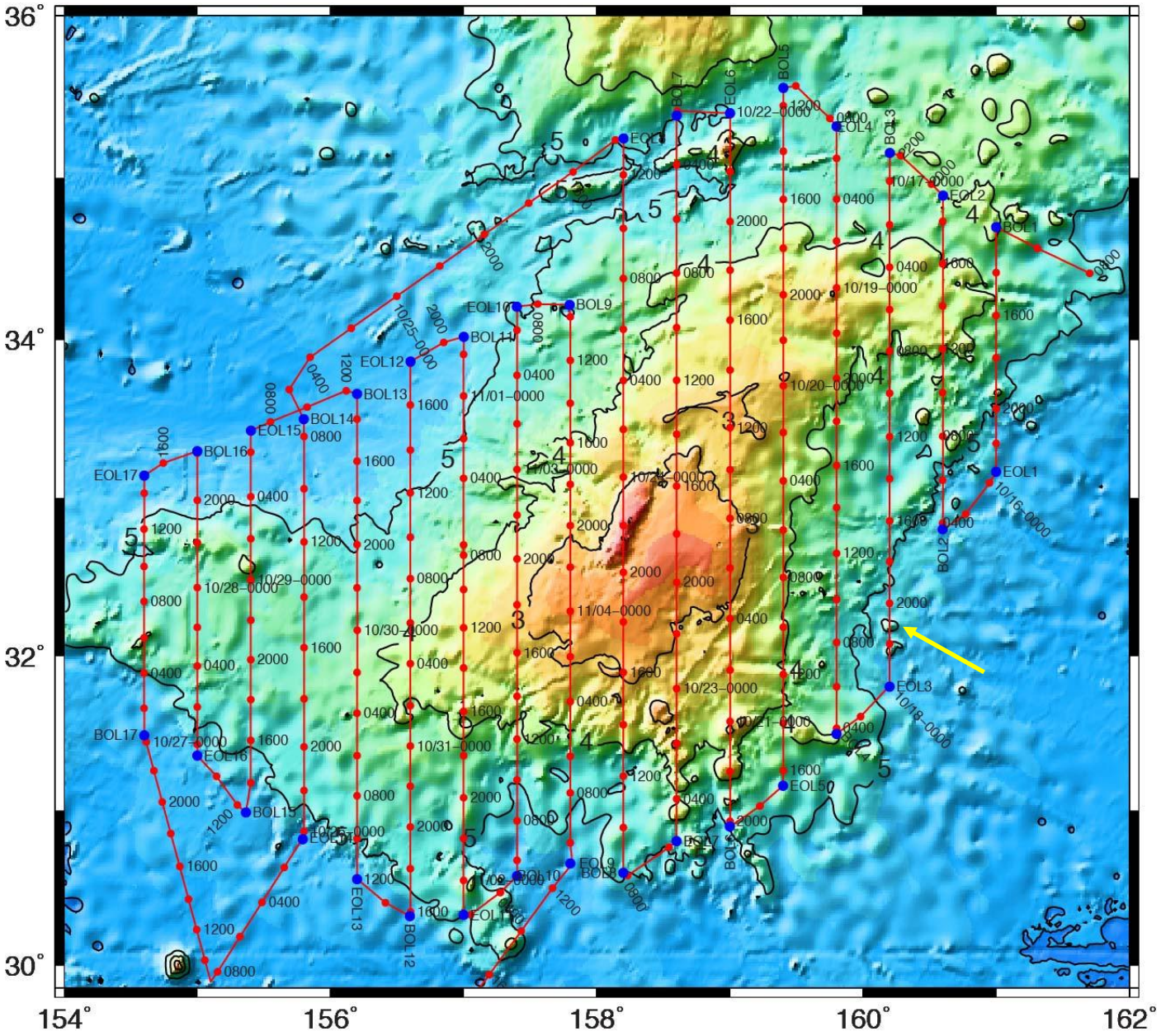


Above: overview of the Tamu Massif survey showing the Northwest Pacific Basin and Shatsky Rise. The survey data has been overlaid on the Gebco 2014 World Map – "**Leighton Rolley - SOI - Colosseum Guyot Proposal- Overview with japan and survey area.tif"**



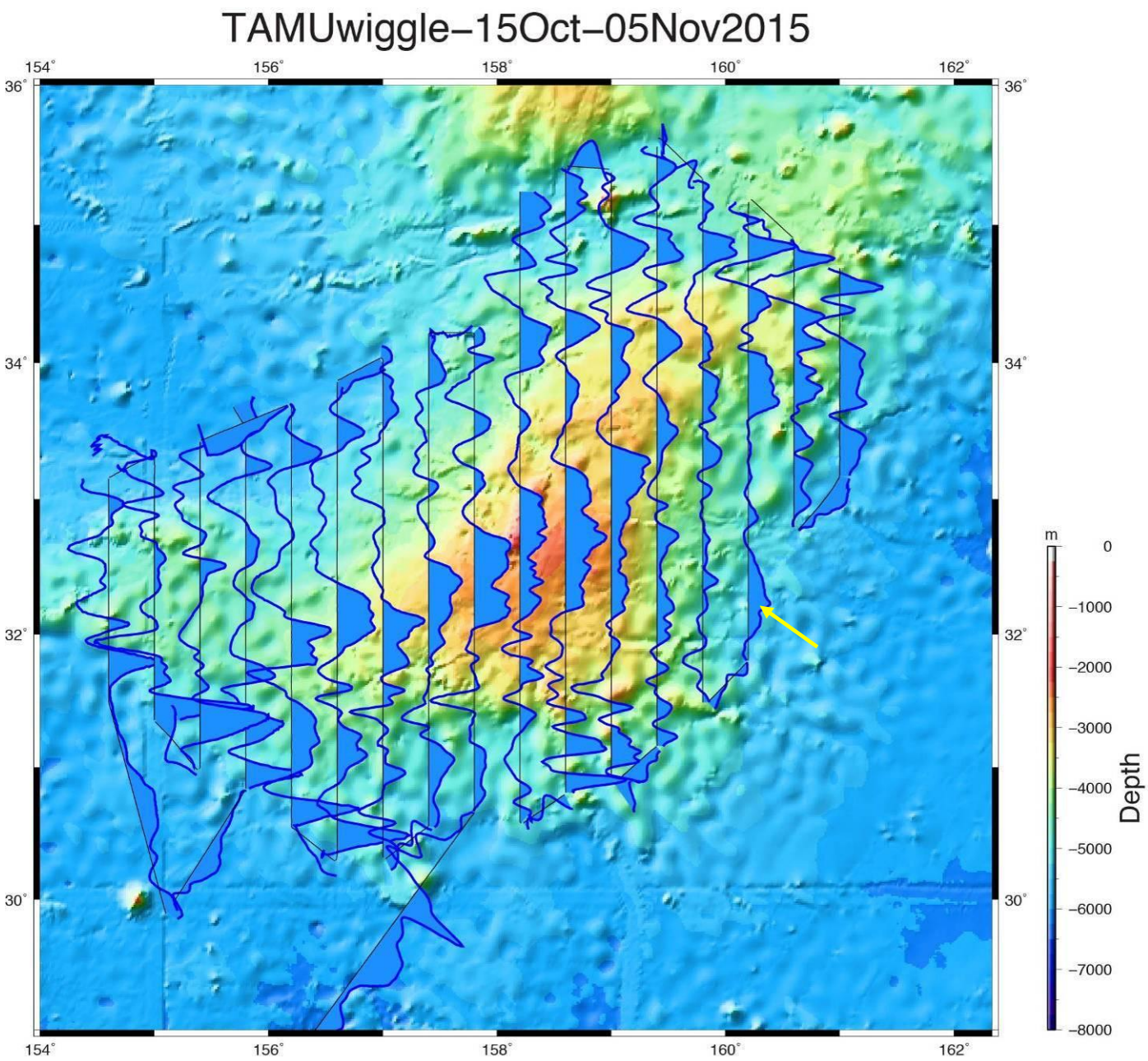
Above: Complete Tamu massif survey showing Line numbering. The proposed ***Colosseum Guyot*** was identified in the Southern portion of Line 3 and is indicated by the arrow. The Tamu Massif survey data has been overlaid on the Gebco 2014 World Map –

Leighton Rolley - SOI - Colosseum Guyot Proposal- Tamu Massif Survey Zoom.tif



Above: Complete Tamu Massif survey with date/timings showing the vessel position throughout the survey. The yellow arrow indicates the proposed position of the ***Colosseum Guyot***

Leighton Rolley - SOI - Colosseum Guyot Proposal-Survey timingsa.jpg



Above: Magnetic data collected during the Tamu Massif survey. The position of the proposed ***Colosseum Guyot*** is indicated by the arrow -

Leighton Rolley - SOI - Colosseum Guyot Proposal-Magnetic Data.jpg

Discovery Facts:	Discovery Date:	17th November 2015
	Discoverer (Individual, Ship):	Leighton Rolley (Hydrographer) – (Employee of Schmidt Ocean Institute)

The discovery of the proposed **Colosseum Guyot** occurred during RV Falkor science cruise FK151005 departing Honolulu, Hawaii on the 5th October 2015 and arriving in Apra, Guam on the 10th November 2015. The Tamu Massif survey occurred between the 15th October 2015 and the 5th November 2015.

The objective of the cruise was to run 17 North/South lines across Tamu Massif to study magnetic anomalies across a feature often described as the world's largest single volcano (albeit extinct).

Measurements of the magnetic field were completed using a SeaSpy magnetometer towed 300m behind the vessel.

The magnetic survey lines were spaced 20NM miles and in addition to magnetometer operations the RV *Falkor's* EM302 deepwater multibeam system was run in parallel to acquire exploratory multibeam lines of this little known feature.

Due to the size of Tamu Massif it was not possible to obtain 100% coverage of the feature. It would take RV *Falkor* approximately 10 months continuous 24/hr mapping completely map Tamu Massif with its EM302 multibeam system. The duration of the expedition was 36 days which is close to the maximum for this survey vessel and given the remote location of the survey area.

The statistics for the entire survey at Tamu Massif are:

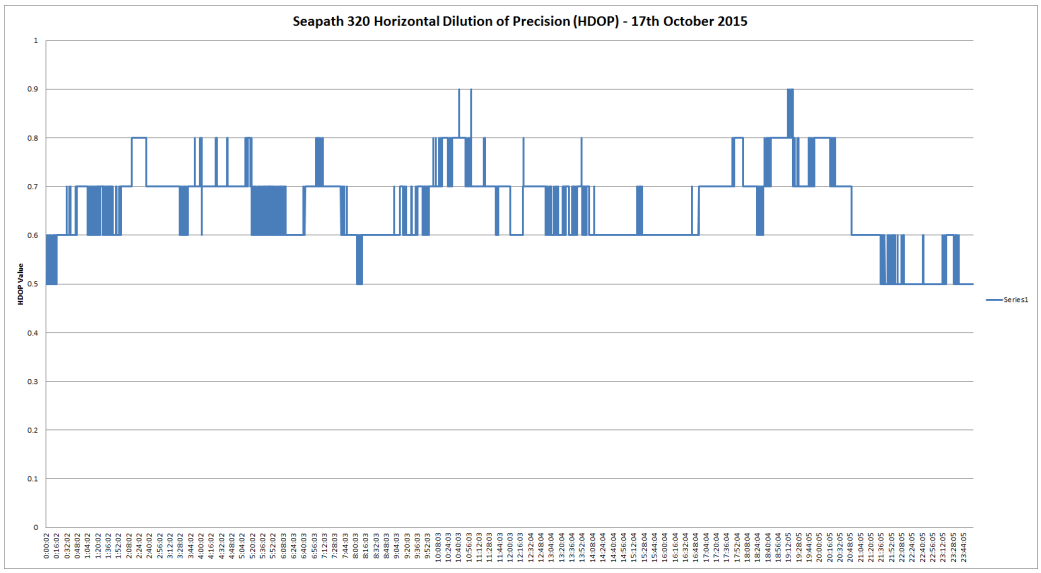
16GB of survey data incorporating 495 ".all"l Multibeam Files

Distance Run (meters): 7,486,325m
Distance Run (KM): 7486km
Distance Run (NM): 4042nm
Average Speed: 8.4kts (4.33m/s)
GPS Positions: 1,724,143
Total Pings: 170599
Total Soundings: 73,698,768
Total Coverage M2: 65,754,008,606
Total Coverage KM2: 65754.00km2
Average Across Track: 7565.189819
Max Depth: 7786m
Average Depth: 4497m
Average Ping rate: 10.3 Seconds

	The multibeam line incorporating the proposed ***Colosseum Guyot*** feature was completed on the 17th October 2015 and was Line File 060 of the survey Survey File Name: **0060_20151017_204420_FK151005_EM302.all** First position N32°14'01.63" E160°11'59.86" Last position N32°05'59.98" E160°12'00.01" First date 2015.10.17 and time 20:44:20 Last date 2015.10.17 and time 21:44:18 Number of GPS positions 3599 Total distance 14841 m Average speed 4.12 m/sec.,8.02 kn Average time between GPS pos. 1.00 sec. Average heading 176.50 deg. Direction sailed 179.98 deg. First ping date 2015.10.17 time 20:44:08 and pingNo 37430 Last ping date 2015.10.17 time 21:43:56 and pingNo 37740 Duration of logging 00:59:48 (h:m:s) No. of pings 311 No. soundings 134352 Valid soundings 134352 % valid 100.00 Total coverage 157342415 m2 Average swath width 8445.74 m Max depth 6291.90 m Min depth 4096.33 m Average depth 4996.74 m Average time between pings 10.5 sec.

Supporting Survey Data, including Track Controls:	Date of Survey:	15th October 2015 – 5th November 2015 Feature Discovering Line

	Survey Ship:	**Vessel**: R/V *Falkor* **Call Sign**: ZCYL5 **IMO**: 7928677 **MMSI**: 319005600 **Home Port**: George Town, Gran Cayman **Class**: GL **Operator**: Schmidt Ocean Institute
	Sounding Equipment:	Kongsberg EM302 Multibeam 1x0.5 **Serial No:** 105 **Survey ID:** FK151005 **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:	DGPS was utilized for the entire duration of the survey. **Seapath 320 Primary Science** S/W Version 1.02.01 MRU 5 S/N 7834 **POSMV – Secondary Science GPS** Fully Surveyed: 08/2014 **DGPS Corrections** Model: C-NAV 3050 S/N: 12380 SW Version: 3.00 Build 165 Alignment Survey: 08/2014 **NTP** S350 Timing Sync Server
	Estimated Horizontal Accuracy (nm):	The vessel average survey speed during the survey line across the proposed feature was **8.02kts** (4.12m/s). Average time between pings during this survey line was **10** seconds giving a horizontal resolution of **40m** HDOP (Horizontal Dilution of Precision) throughout the survey of proposed ***Colosseum Guyot*** was 0.8m During the survey XBT's were deployed on 6 hour basis unless a sufficient change was detected in the S/Speed value using a hull mounted Valeport SVP at the transducer face



Above: Primary GPS used throughout survey showing a maximum HDOP of 0.9 during the 17th November when the feature was discovered

Leighton Rolley - SOI - Colosseum Guyot Proposal- Seapath HDOP.png

Survey Track Spacing:	A single survey line crossed this feature as part of the larger Tamu Massif Survey. Detailed previously in this document Line spacing for the entire survey was approximately 20NM

Multibeam Data Processed and Display with:

Caris HIPS and SIPS 9.0.17
Build: 2015-08-10-08-25-46

Flederamus 3D renderings produced using

Flederamus Version 7.4.4b
64 Bit Edition
Build 120, jul 15 2015 05:52:14
EPSG Database Version 7.9

Futher:

A EM302 calibration was conducted prior to this expedition on the 25th September 2015 off Honolulu, Hawaii with third party verification from Paul Johnson, University of New Hampshire

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
	Date:	3rd November 2015
	E-mail:	Leighton.r@soi-team.org

	Organization and Address:	Schmidt Ocean Institute 555 Bryant Street, #374 Palo Alto, CA 94301 Phone: (415) 975-4080 Fax: (415) 975-4081
	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

Supporting Documentation