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| INTERNATIONAL HYDROGRAPHIC ORGANIZATION | INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO) |
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UNDERSEA FEATURE NAME PROPOSAL

(Sea NOTE overleaf)

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

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|-----------------------|------------|----------------------|----------------|
| Name Proposed: | Yoron Hole | Ocean or Sea: | East China Sea |
|-----------------------|------------|----------------------|----------------|

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|--|------|---------|-----------------|-----------------|--------------------|----------------------------|
| 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) |
|---------------------|-----------------------|-------------------------|
| Coordinates: | 27°29.10'N | 127°31.16'E |
| | 27°28.99'N | 127°31.19'E |
| | 27°28.95'N | 127°31.36'E |
| | 27°28.76'N | 127°31.42'E |
| | 27°28.67'N | 127°31.64'E |
| | 27°28.70'N | 127°32.04'E |
| | 27°28.89'N | 127°32.33'E |
| | 27°29.17'N | 127°32.43'E |
| | 27°29.41'N | 127°32.36'E |
| | 27°29.56'N | 127°32.00'E |
| | 27°29.63'N | 127°31.70'E |
| | 27°29.66'N | 127°31.36'E |
| | 27°29.69'N | 127°30.91'E |
| | 27°29.62'N | 127°30.80'E |
| 27°29.38'N | 127°30.82'E | |
| 27°29.21'N | 127°30.85'E | |
| 27°29.12'N | 127°30.96'E | |

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|-----------------------------|-----------------|-------|------------------|-----------------------------------|
| Feature Description: | Maximum Depth: | 675 m | Steepness : | 0° ~ 30 ° |
| | Minimum Depth : | 347 m | Shape : | Funnel shaped crater |
| | Total Relief : | 328 m | Dimension/Size : | 2.6 X 1.7 km; 3.5 km ² |

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| Associated Features: | Funnel shaped crater , fault, lava dome |
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|------------------------------|-----------------------------|-------------|
| Chart/Map References: | Shown Named on Map/Chart: | |
| | Shown Unnamed on Map/Chart: | W182B, 6315 |

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| | Within Area of Map/Chart: | |
| Reason for Choice of Name (if a person, state how associated with the feature to be named): | Geographic name: Named after the adjacent Yoron Island. | |
| Discovery Facts: | Discovery Date: | 2008 May |
| | Discoverer (Individual, Ship): | Japan Coast Guard, Takuyo & Shoyo |
| Supporting Survey Data, including Track Controls: | Date of Survey: | 2008, 2010, 2011 |
| | Survey Ship: | Takuyo (2008 2nd cruise) Shoyo (2008 7th cruise) Natushima (2010 NT1016; 2011 NT1115) |
| | Sounding Equipment: | SEABEAM2112; SEABAT8160 |
| | Type of Navigation: | GPS |
| | Estimated Horizontal Accuracy (nm): | 0.005 nm |
| | Survey Track Spacing: | 2 nm |
| | Supporting material can be submitted as Annex in analog or digital form. | |
| Proposer(s): | Name(s): | Hisayoshi Yokose |
| | Date: | 2012 April |
| | E-mail: | yokose@sci.kumamoto-u.ac.jp |
| | Organization and Address: | Faculty of Science, Kumamoto University 2-39-1 Kurakami Chuoku, Kumamoto 860-8555, Japan |
| | Concurrer (name, e-mail, organization and address): | Tatsuhiko Fukuba, bafuk@jamstec.go.jp , JAMSTEC-MARITEC, 2-15 Natsushima, Yokosuka Kanagawa, 237-0061 Japan: Jun-ichiro Ishibashi, ishi@geo.kyushu-u.ac.jp , Dep. Earth & Planet Sci., Kyushu University, 6-10-1 Hakozaki, Higashi-ku Fukuoka, 812-8581 Japan: Kazumi Akimoto, akimoto@aster.sci.kumamoto-u.ac.jp , Cener for Marine Environment studies, Kumamoto Univ., 2-39-1 Kurokami, Kumamoto, 860-8555 Japan |
| Remarks: | <p>References</p> <p>Sato and Yokose (2007) Geochemical characteristics of the volcanic rocks from the Tokara islands, Ryukyu volcanic arc, Japan. AGU Fall Meeting V41D-0825.</p> <p>Yokose et al. (2009) Regularly spaced submarine rhyolitic-calderas on the Tokara volcanic ridge, northern Ryukyu arc, Japan. EGU Meeting XY541, Geophysical Research Abstracts, vol.11 EGU2009-2283-5.</p> <p>Yokose et al. (2010) Mid-Pleistocene submarine acidic volcanism of the Tokara Islands, Japan. Jour. Geogr. 119, 46-68.</p> <p>Yokose et al. (2010) Submarine volcanic front on the central Ryukyu arc. JPGU Meetng abstract, SVC063-32.</p> <p>Fukuba (2010) Natsushima cruise report NT10-16, Japan Agency for Marine-Earth Science and Technology, Yokosuka, Japan (http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/NT10-16_all.pdf)</p> <p>Ishibashi (2011) Natsushima cruise report NT11-15, Japan Agency for Marine-Earth Science and Technology, Yokosuka, Japan.</p> | |

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| | <p>(http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/NT11-15_all.pdf) Ishibashi (2011) Natsushima cruise report NT11-20, Japan Agency for Marine-Earth Science and Technology, Yokosuka, Japan. (http://www.godac.jamstec.go.jp/cruisedata/natsushima/NT11-20/NT11-20_summary_eng.pdf)</p> |
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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 France Fax: +33 1 45 68 58 12 E-mail: info@unesco.org |
|---|--|

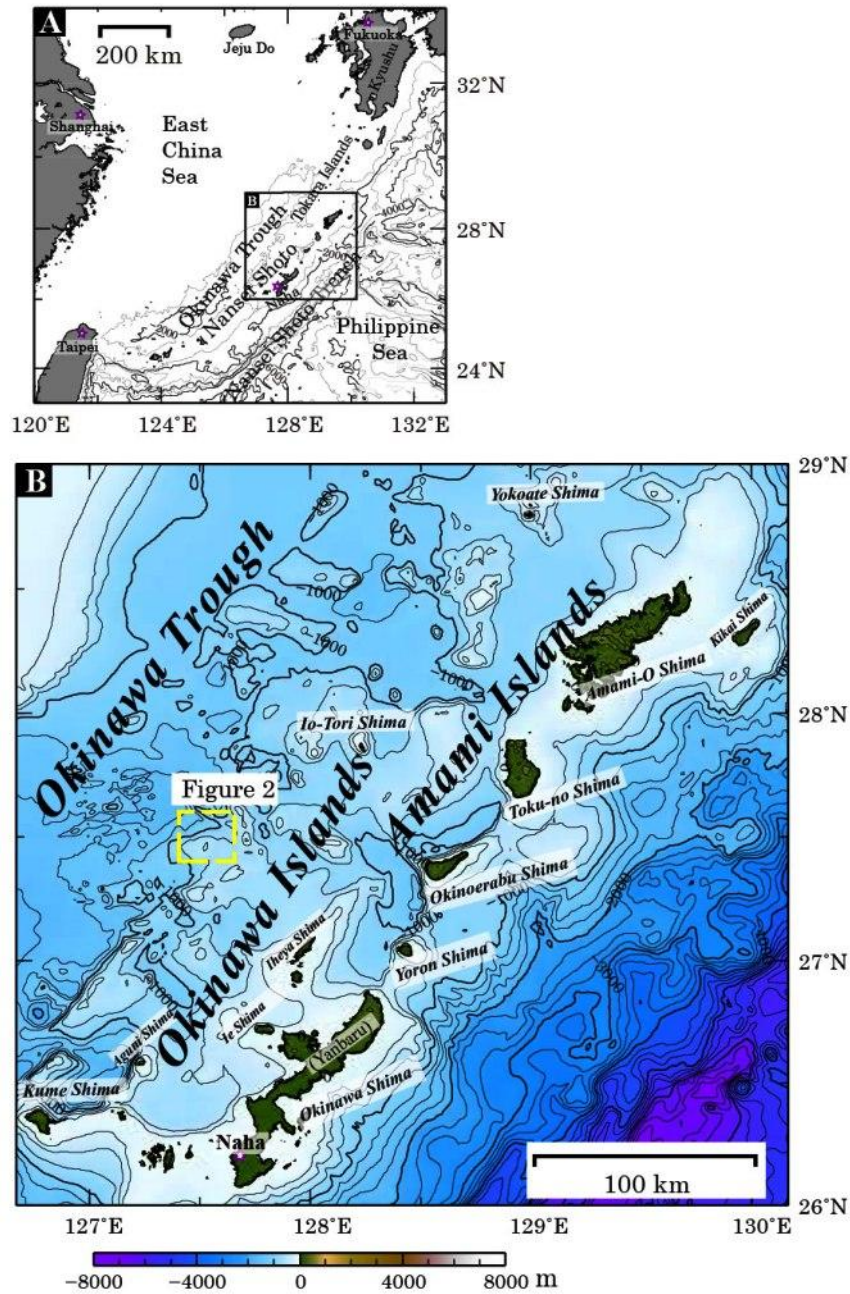


Figure 1. (A) Schematic bathymetric map (contour interval 1000 m) of the Nansei Shoto (Ryukyu Islands) and East China Sea. (B) Bathymetric details (contour interval 200 m) of the middle part of Nansei Shoto, the Okinawa and Amami Islands. Inset yellow box shows the Yoron Hole area. The area is covered by subsequent figure 2. The Yoron Hole lies on southwest of the Tokara volcanic chain.

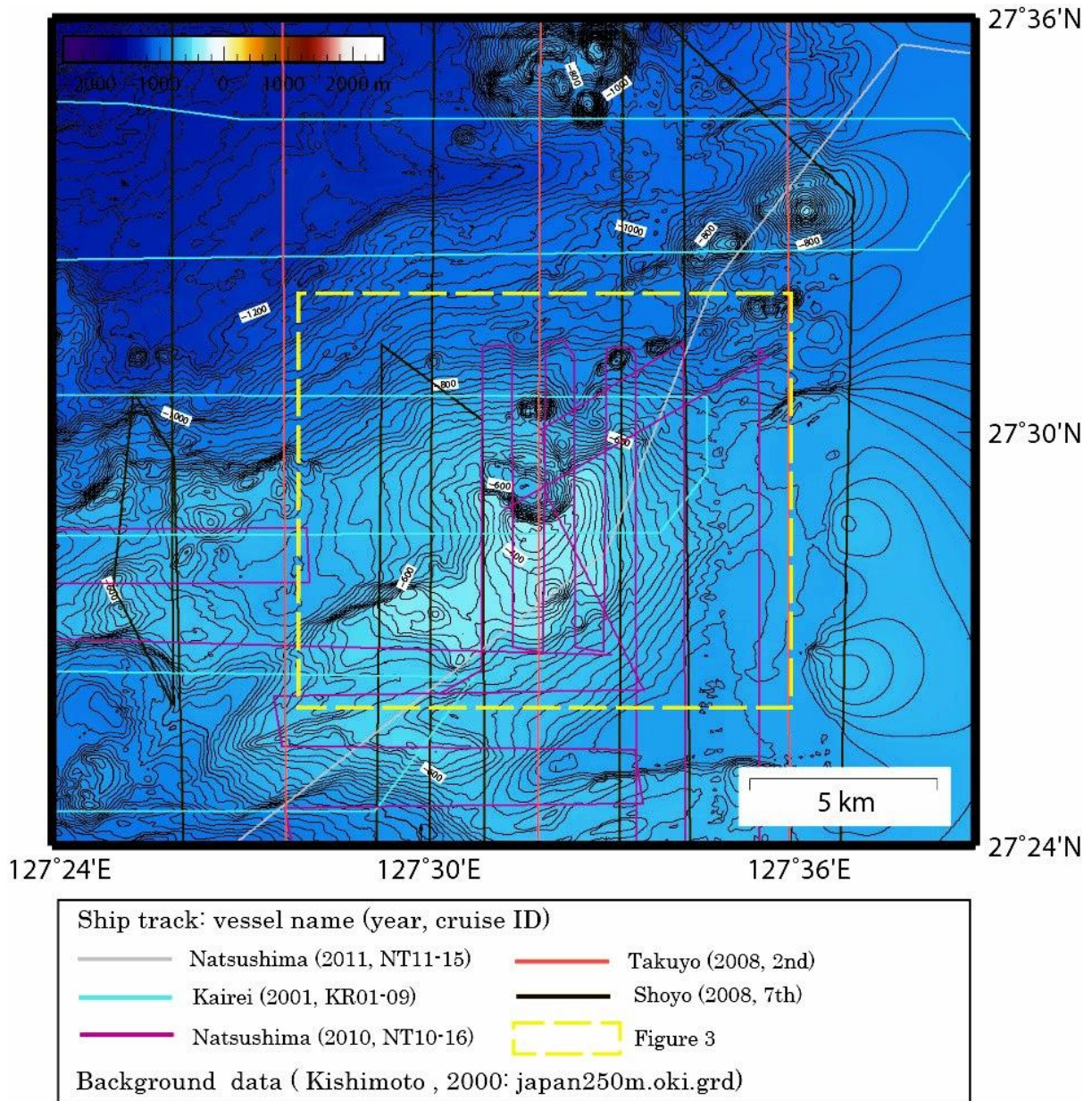


Figure 2. Distribution of multibeam survey tracklines from which bathymetry data were derived. (contour interval 20 m). Inset yellow box shows the Yoron Hole covered by subsequent figure 3. Kishimoto (2000) is also used as a basemap grid in this bathymetric map.

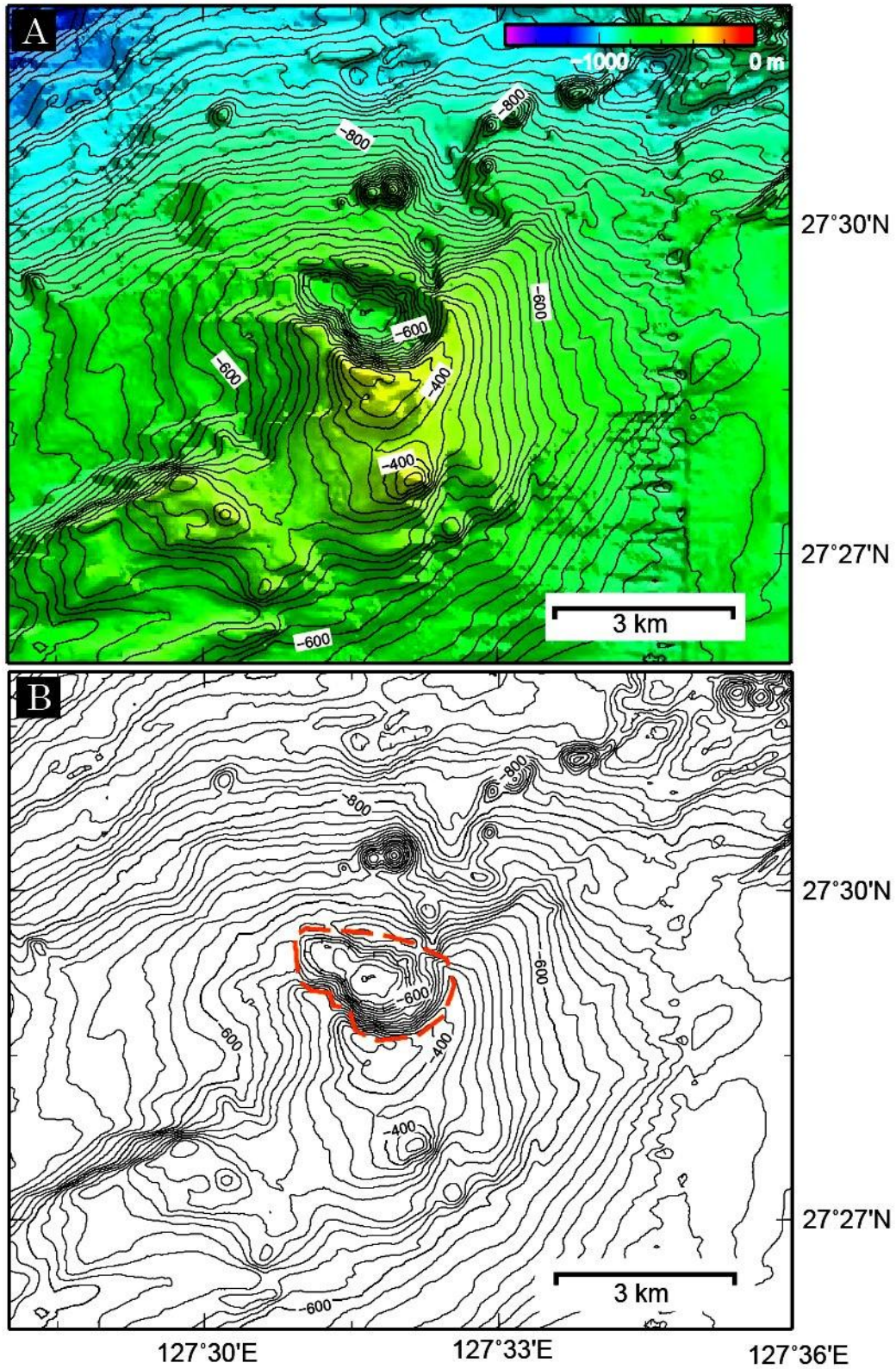


Figure 3. (A) Color shaded bathymetric map of the Yoron Hole (contour interval 20 m). (B) The polygons delineating the feature are shown in red dash lines (contour interval 20 m).

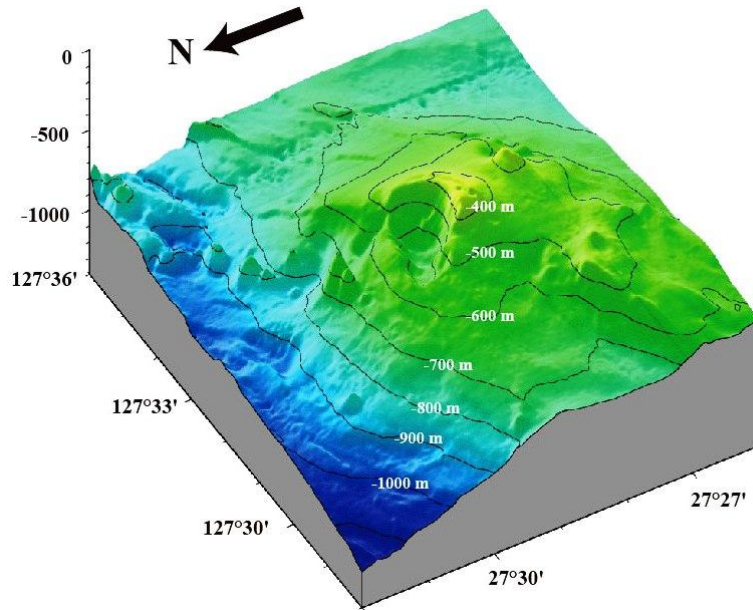


Figure 4. Three-dimensional perspective view of the Yoron Hole (contour interval 100 m) . The polygons delineating the feature are shown in red dash lines.

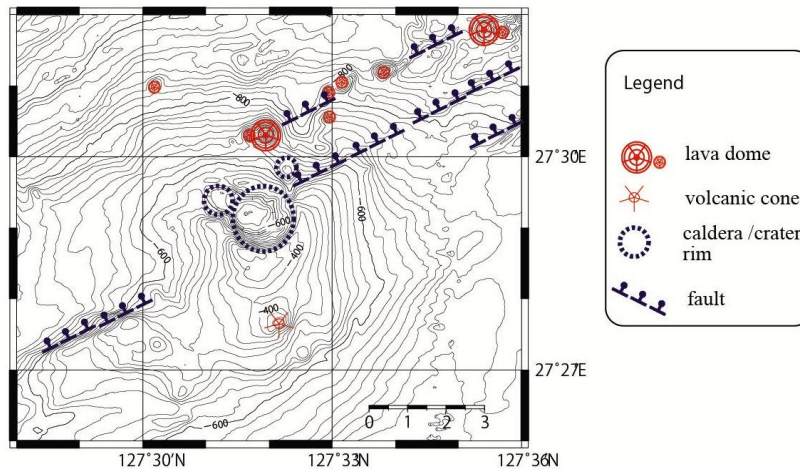


Figure 5. Geological interpretation (contour interval 20 m) of the Yoron Hole based on the volcanic geomorphology and dredge samples.