

UNDERSEA FEATURE NAME PROPOSAL

(See NOTE overleaf)

Ocean or Sea Northwest Pacific Ocean Name proposed Mogi Fan

Coordinates : A - of midpoint or summit : Lat. _____, Long. _____
_____ kilometres in _____ direction from _____

and/or B - extremities (if linear feature) :

Lat. 34°05' N } to { Lat. 34°15' N
Long. 142°00' E } to { Long. 141°47' E

Description (kind of feature) : fan

Identifying or categorizing characteristics (shape, dimensions, total relief, least depth, steepness, etc.):

Mogi Fan is an even-shaped partial cone, ~ 18 km in basal diameter, located next to the Katsuura Basin, in the Izu-Ogasawara Trench floor, at a water depth of ~ 9000 m. It is probably the known deepest fan in the world.

Associated features : Katsuura Basin, Izu-Ogasawara Trench and Mogi Seamount

Chart reference :

Shown with name on chart No. _____

Shown but not named on chart No. Japanese chart No. 6603

Not shown but within area covered by chart No. _____

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

Dr. Akio Mogi had long worked for the Hydrographic Department of Japan. His research interests were mainly on morphological study of undersea features, including the concerned area (i.e., northern part of the Izu-Ogasawara Trench). This was resulted in publication of an atlas of seafloor morphology around Japan (Mogi, 1979). He found in situ deformation of a subducting seamount and demonstrated this is an excellent example of a plate subduction, giving a huge impact on the marine geology/geophysics community (Mogi and Nishizawa, 1980).

Discovery facts :

Date Although the fan was described in as early as in 1988 (Soh et al., 1988), it was mapped with the modern multi-beam technique on Nov. 2001, Feb. 2005, July 2005, Oct. 2006 and Sep. 2007.

by (individuals or ship) The Japanese survey vessel "Takuyo" and "Shoyo"

By means of (equipment) : Multibeam Echo Sounder SeaBeam 2112

Navigation used : GPS

Estimated positional accuracy in nautical miles : 0.054 miles (100 m)

Description of survey (track spacing, line crossing, grid network, etc.) : The fan was 100 % mapped with grossly WNW-ESE- and N20W-oriented survey lines.

Nature and repository of other survey activities (dredge samples, cores, magnetics, gravity, photographs, etc.) : Hydrographic and Oceanographic Department of Japan has geomagnetic and gravity data; Ocean Research Institute, University of Tokyo has 3.5 kHz subbottom profiles and multi-channel seismic profiles (Soh et al., 1988).

Supporting material : enclose, if possible, a sketch map of the survey area, profiles of the features, etc.,

with reference to prior publication, if any : bathymetric map (Fig.2) and map of survey lines (Fig.3) and a paper on this feature:

Soh, W., A. Taira and H. Tokuyama, 1988, A trench fan in the Izu-Ogasawara Trench on the Boso Trench Triple Junction, Japan, Marine Geology, 82, 235-249.

Submitted by : Hydrographic and Oceanographic Department of Japan

Date : 18 April 2008

Address : 5-3-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan

Concurred in by (if applicable) : _____

Address : _____

National Authority (if any) : Japanese Committee on Undersea Feature Names

Address : 5-3-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan

NOTE : This form should be forwarded, when completed :

- a) **If the undersea feature is located in territorial waters :-**
to your "National Authority for Approval of Undersea Feature Names" or, if this does not exist or is not known, either to the International Hydrographic Bureau or to the Intergovernmental Oceanographic Commission (see addresses below);

- b) **If the undersea feature is located in international waters :-**
to the International Hydrographic Bureau or to the Intergovernmental Oceanographic Commission, at the following addresses :

International Hydrographic Bureau
4, quai Antoine 1^{er}
B.P. 445
MC 98011 MONACO CEDEX
Principality of MONACO
Fax: +377 93 10 81 40
E-mail: info@ihb.mc

Intergovernmental Oceanographic Commission
UNESCO
Place de Fontenoy
75700 PARIS
FRANCE
Fax: +33 1 45 68 58 12
E-mail : info@unesco.org

Personal history of the late Prof. Dr. Akio Mogi

Given name: Akio

Family name: Mogi

1927 Born in Yamagata, Japan

1983 Deceased

Education:

1951 B.S. in geography, Tohoku University

1962 PhD in geography, Tohoku University

Professional carrier:

1952 Hydrographic Department of Japan

1977 Director of the Ocean Survey Division, Hydrographic Department of Japan

1982 Professor, Chiba University

Remarks:

Dr. Akio Mogi had long worked for the Hydrographic Department of Japan. Dr. Mogi played a major role in the early history of the modern Japanese marine geology /geophysics / hydrography community. His research interest mainly included morphological study of undersea features. This was resulted in publication of an atlas of seafloor morphology around Japan (Mogi, 1979). Based on this experience, he wrote many scientific articles and several text books (although many were in Japanese). He found in situ deformation of a subducting seamount and demonstrated this is an excellent example of a plate subduction, giving a huge impact on the marine geology/geophysics community (Mogi and Nishizawa, 1980).

Selected publications:

Mogi, A. and H. Iwasaki (1975), Evolution of micro-topographies on two submarine sand banks in Bisan Seto (1), *Journal of Geography*, 84, 84-94.

Mogi, A. and M. Tuchide (1978), Submarine volcanic activity and its surveillance in the adjacent seas of Japan, *Bulletin of the Volcanological Society of Japan*, 23,1,91-100.

Mogi, A. (1979), *Atlas of the Seafloor around Japan: Aspects of Submarine Geomorphology*, Tokyo Univ. Press., pp96.

Mogi, A. and K. Nishizawa (1980), Breakdown of a seamount on the slope of the Japan Trench. *Proc. Japan Academy*, 56, Ser.B, 257-259.

Mogi, A., M. Tuchide and M. Fukushima (1980), Coastal erosion of new volcanic island Nishinoshima, *Geographical Review of Japan*, 53,7,449-462.

Sato, T. and A. Mogi (1982), Sea level change in the Japan Sea deduced from submarine terraces and buried shelf channels, *Quaternary Research*, 21,3,203-210.

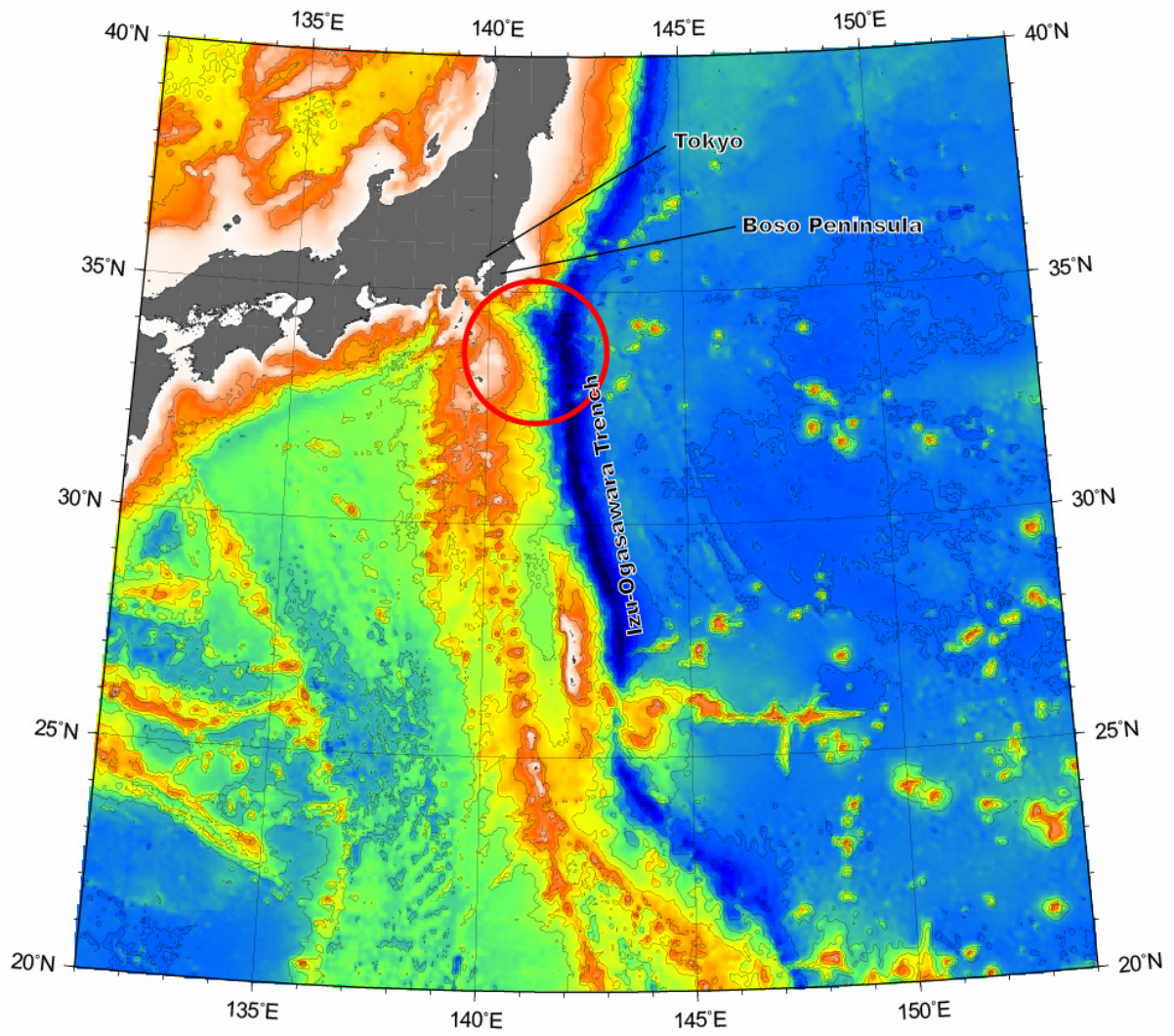


Fig. 1. Index map for the undersea features near the Boso Peninsula, using the bathymetry data of ETOPO-2. The red circle indicates the concerned area.

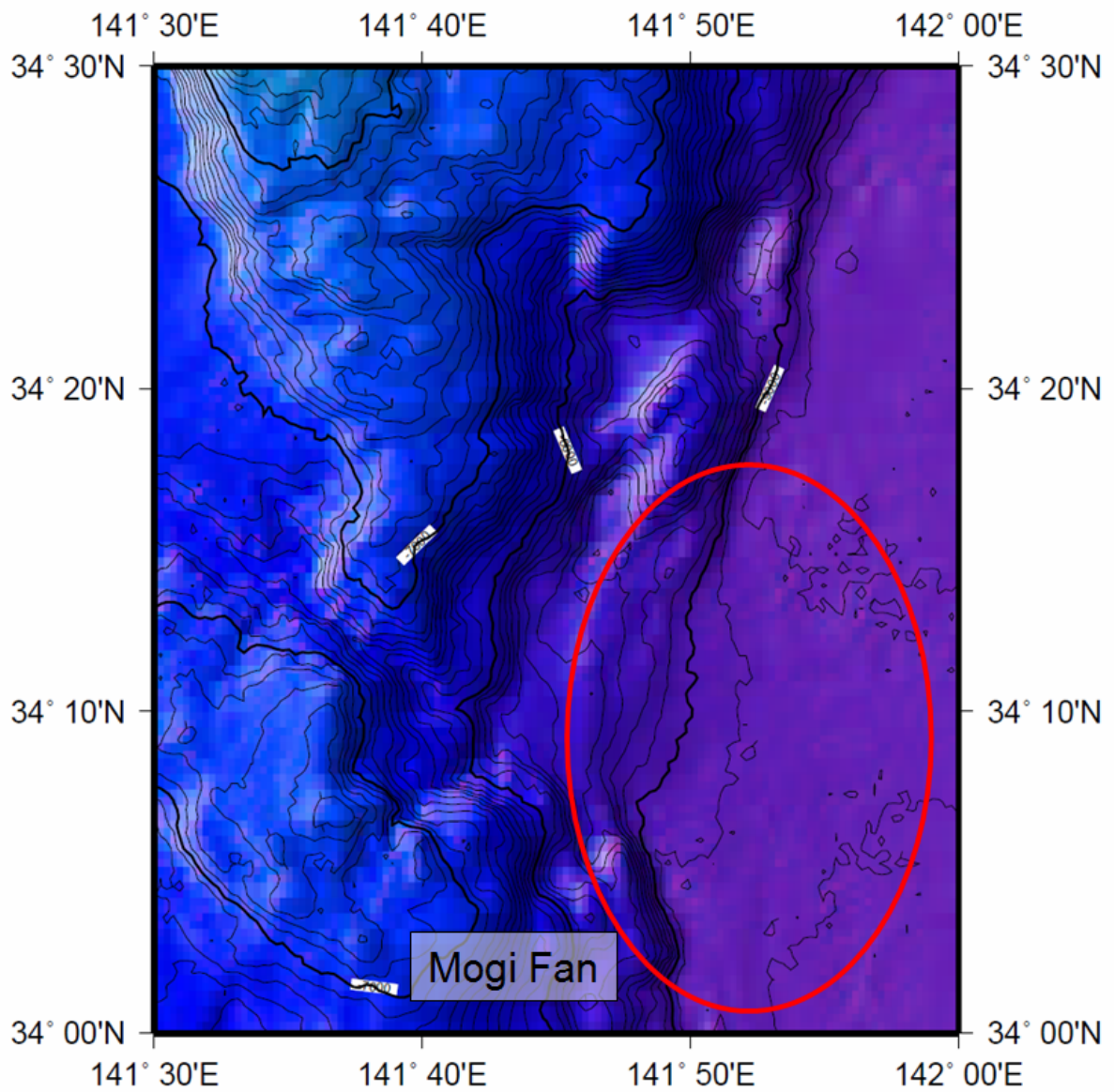


Fig. 2. Bathymetry of Mogi Fan (indicated by the red circle). Contours in 100 m.

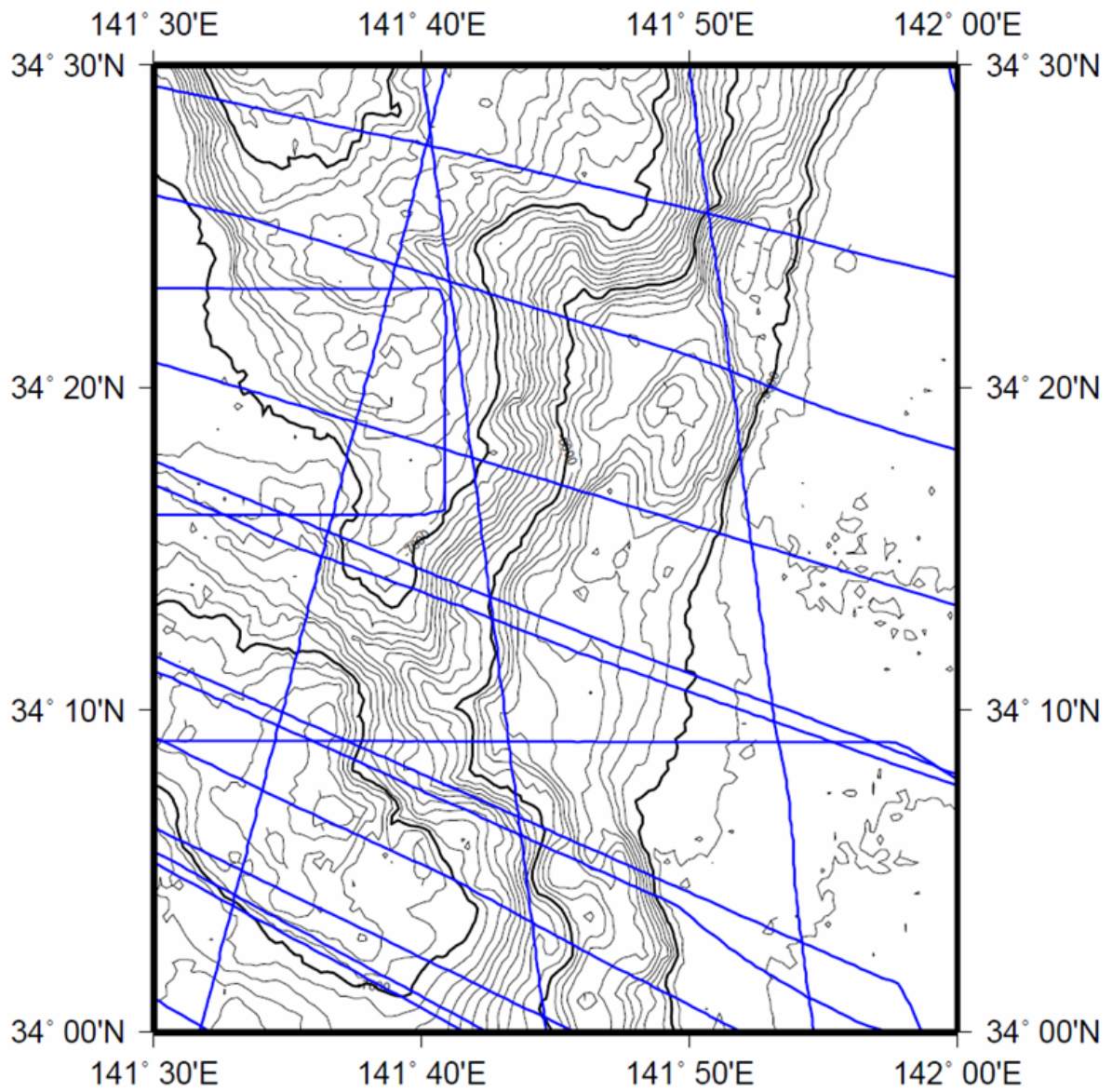


Fig. 3. Bathymetry of Mogi Fan, showing the track lines. Contours in 100 m.

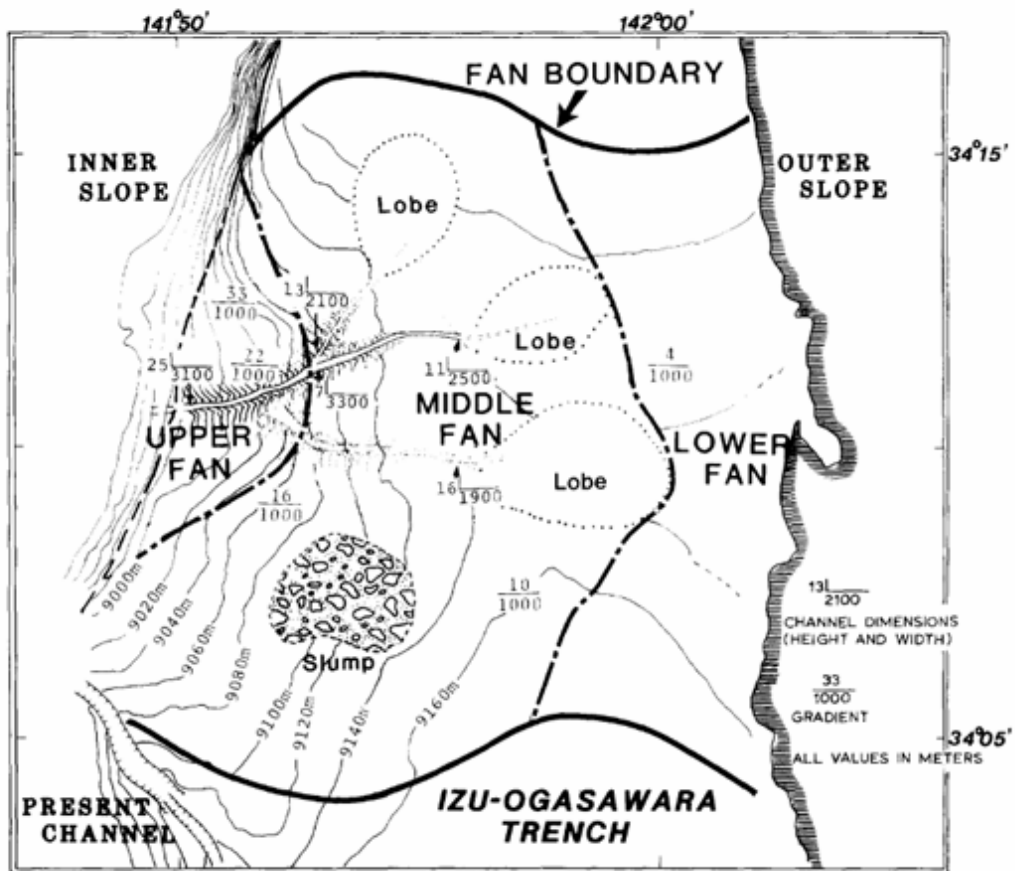
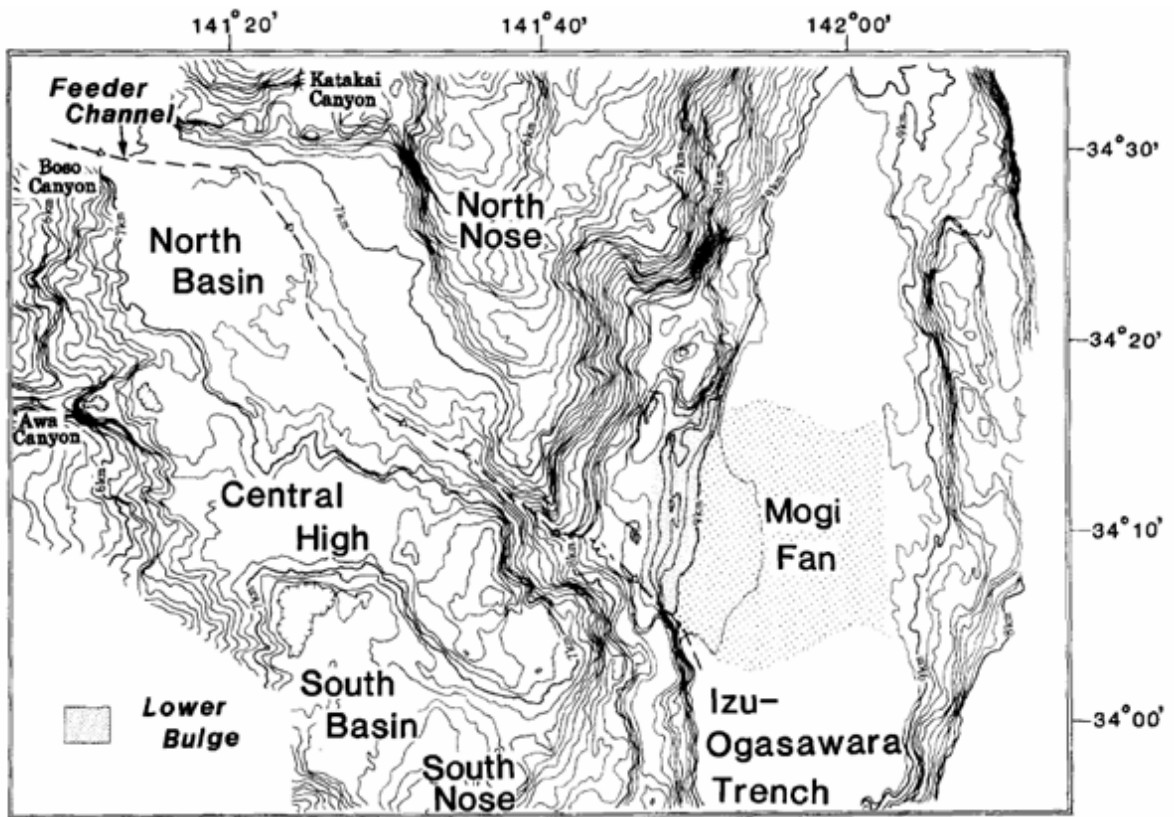


Fig. 4. Geologic interpretation of the morphology of Mogi Fan (after Soh et al., 1988).