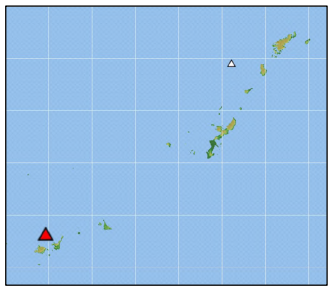
99. Submarine Volcano NNE of Iriomotejima



Latitude: 24°34'N, Longitude: 123°56'E, Depth: -200 m

Summary

On October 31, 1924, a sudden submarine eruption occurred in the sea approximately 20 km to the north-northeast of Iriomotejima. The next day a large amount of pumice covered the nearby surface of the sea, and was eventually washed to various parts of Japan by the Japan Current. The SiO_2 conten of ejecta is 77.0 wt %.

Submarine Topographic Map

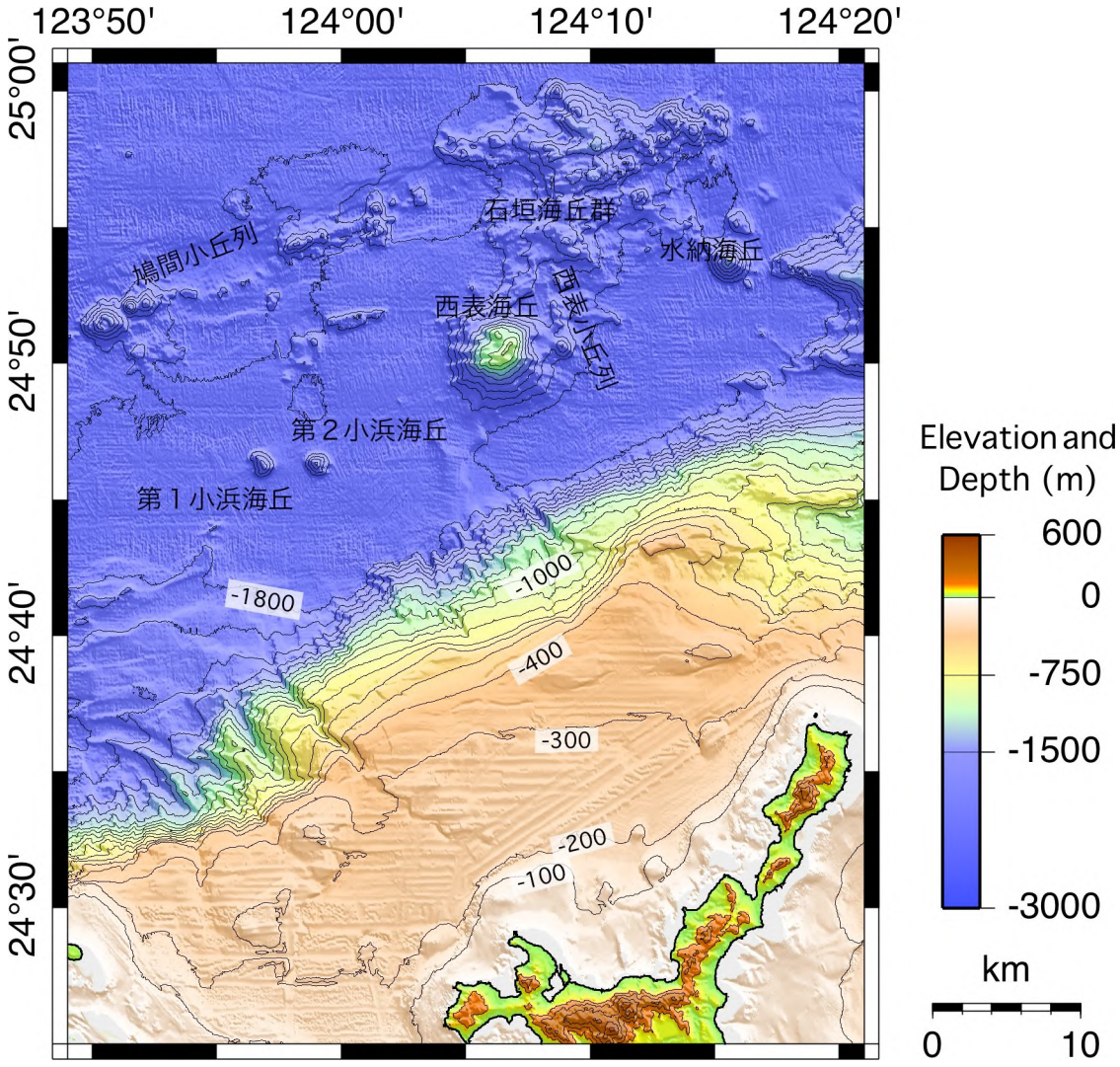


Figure 99-1 Submarine topographic map of the submarine volcano NNE of Iriomotejima (Japan Coast Guard).

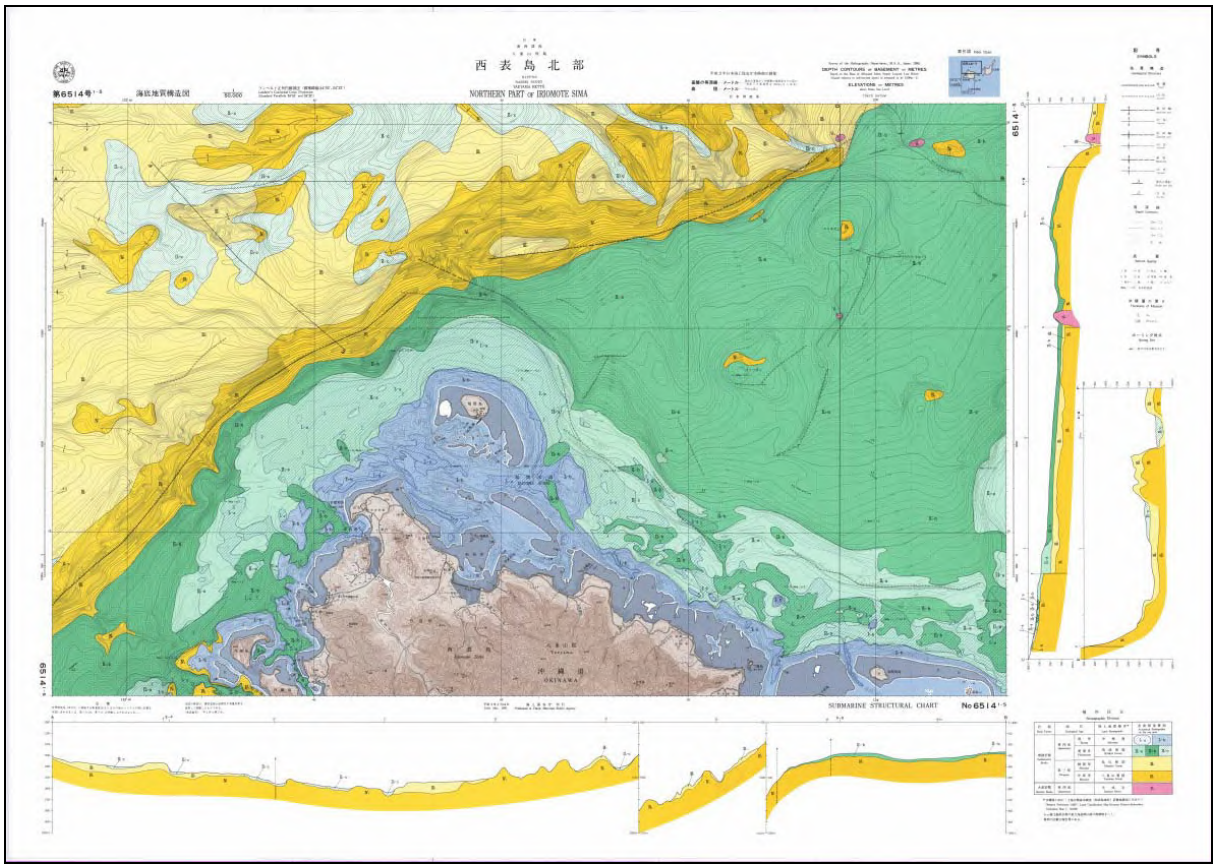


Figure 99-2 Submarine tectonic map of the submarine volcano NNE of Iriomotejima (Maritime Safety Agency, 1991).

Chronology of Eruptions

▪ Historical Activity

Year	Phenomenon	Activity Sequence, Damages, etc.
1924 (Taisho 13)	Large: Phreatomagmatic eruption or magmatic eruption, (discolored water)	October 31. (Floating pumice). The eruptive activity occurred in the sea, north-northeast of Iriomotejima. A large amount of pumice was washed onto shores in Japan. Magma eruption volume = 0.4 km^3 DRE. (VEI 5) * No discolored water or other anomalous phenomena were observed thereafter.
1991 (Heisei 3)	Earthquake	On January 23 an earthquake swarm began from the north of the island to out at sea. Three large earthquake swarms occurred by December, 1992 (Heisei 4). Earthquake swarm activity was extremely high, and many earthquakes could be felt at the Iriomote weather station.
2000 (Heisei 12) to 2001 (Heisei 13)	Earthquake	On November 14 an M4.4 earthquake occurred in the north of the island (JMA scale seismic intensity of 5-lower at Iriomotejima). 39 felt-earthquakes occurred by April 30, 2001. No damage was caused by these earthquakes.

* Reference documents have been appended with reference to volcanic periods, areas of activity, and eruption types taken from the Active Volcano Database of Japan, AIST (Kudo and Hoshizumi, 2006 onwards) and the Database of the Maritime and Submarine Volcanoes in Japan (Japan Ciast Guard, 2006).

Recent Volcanic Activity

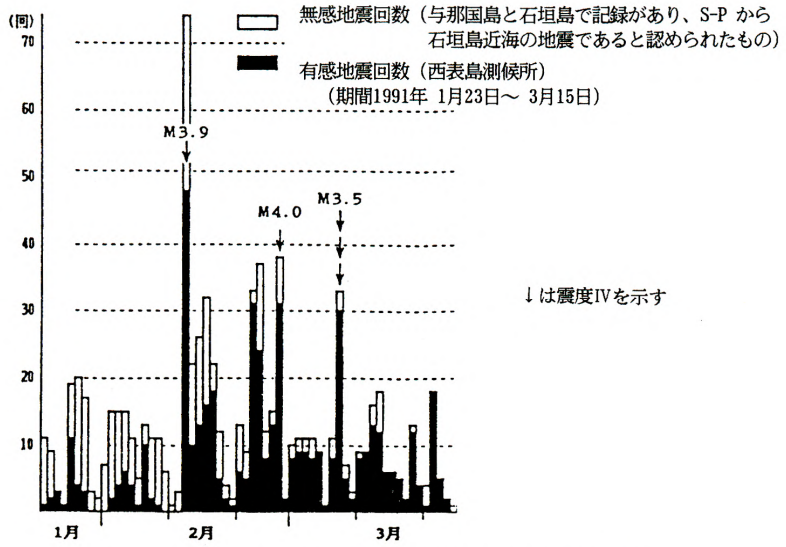


図73－2　西表島付近の日別地震回数（1991年 1月23日～ 3月15日）
（気象庁地震機動観測班による）

Figure 99-3 Number of earthquakes each day in and around the Iriomotejima area (January 23, 1991, to March 15, 1991). (according to the Japan Meteorological Agency earthquake mobile observation team)

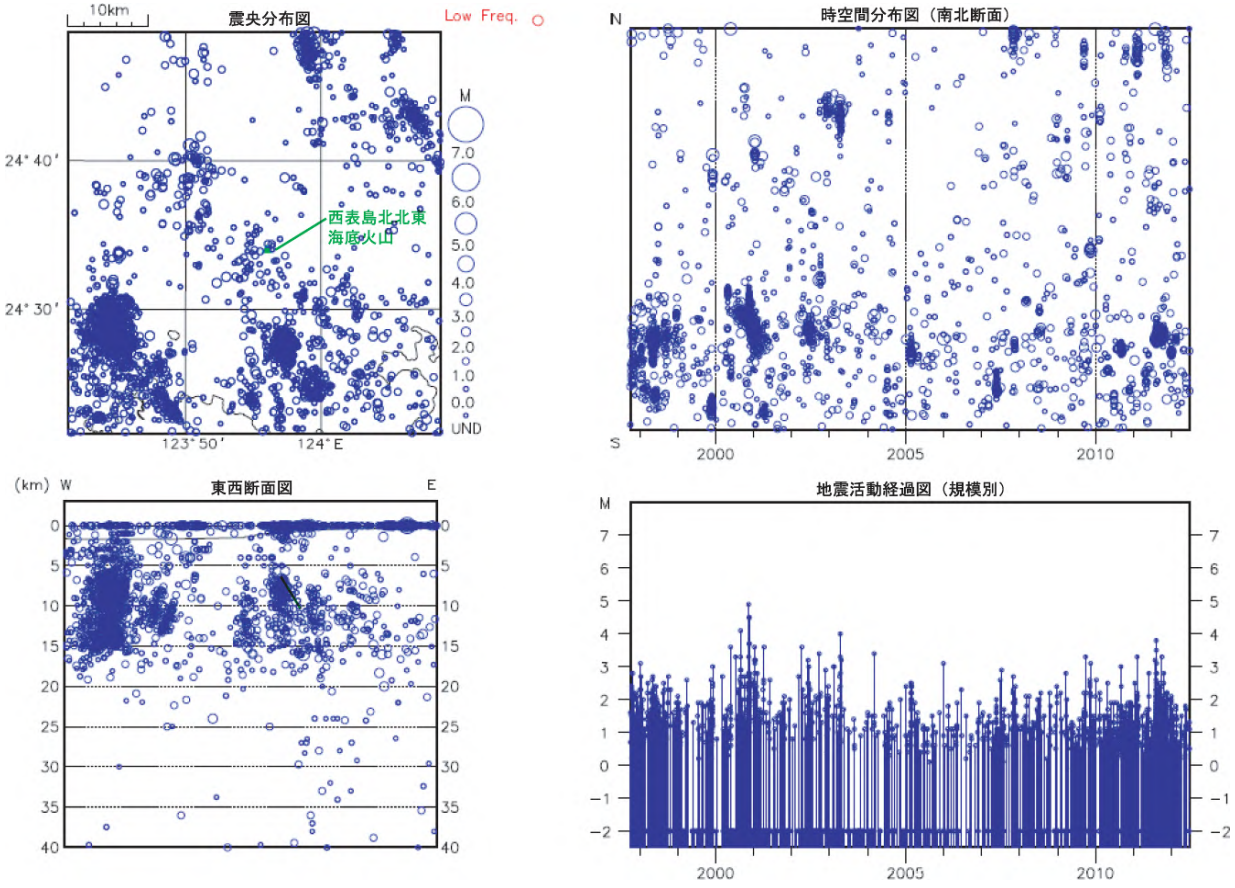


Figure 99-4 Activity of shallow VT earthquakes (blue circles) and deep low-frequency earthquakes (red circles) observed by a regional seismometer network (October, 1997, to June 30, 2012). Epicenter distribution (upper left), space-time plot (N-S cross-section) (upper right), E-W cross-section (lower left) and magnitude-time diagram (by scale) (lower right).

Information on Disaster Prevention

①Hazard Map

None

Bibliography

Maritime Safety Agency (1991): Basic Map of the Sea in Coastal Waters, 6514[1-S], Maritime Safety Agency (in Japanese).

(Ito, K.)