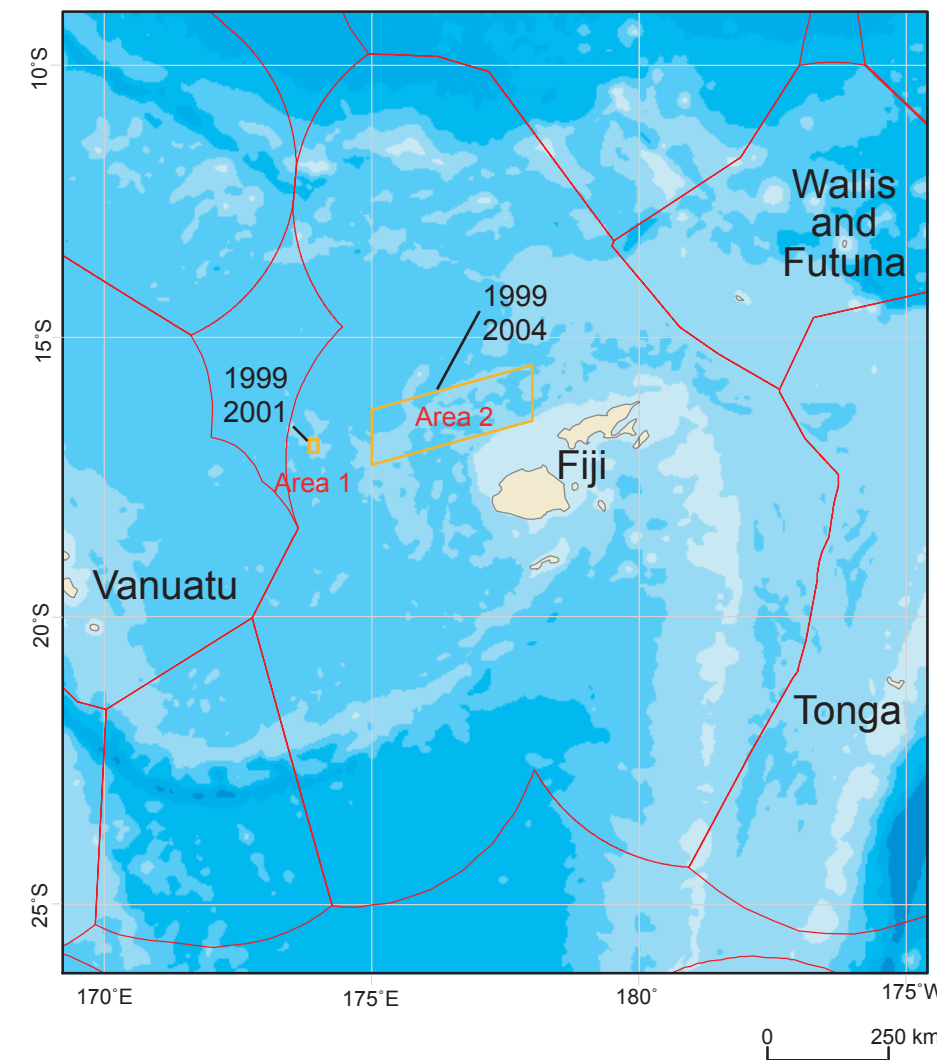


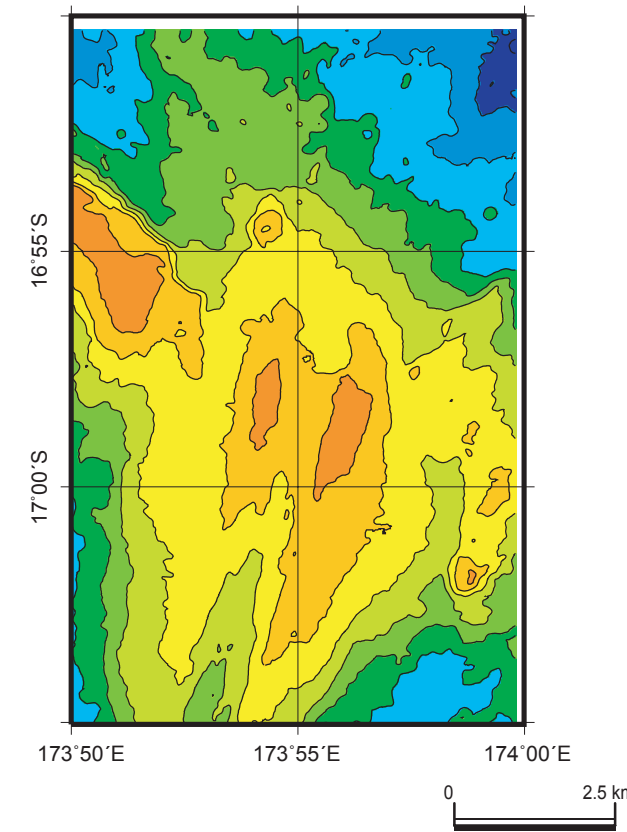


# Republic of the Fiji Islands

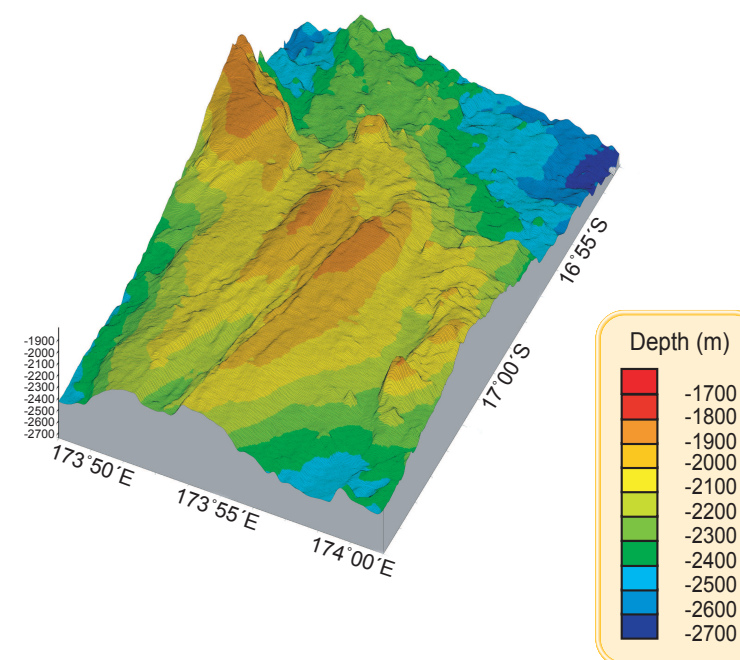
Hydrothermal Deposits (1999,2001,2004)

JAPAN - SOPAC COOPERATIVE STUDY  
ON DEEP SEA MINERAL RESOURCES  
IN THE SOUTH PACIFIC 1985 - 2005

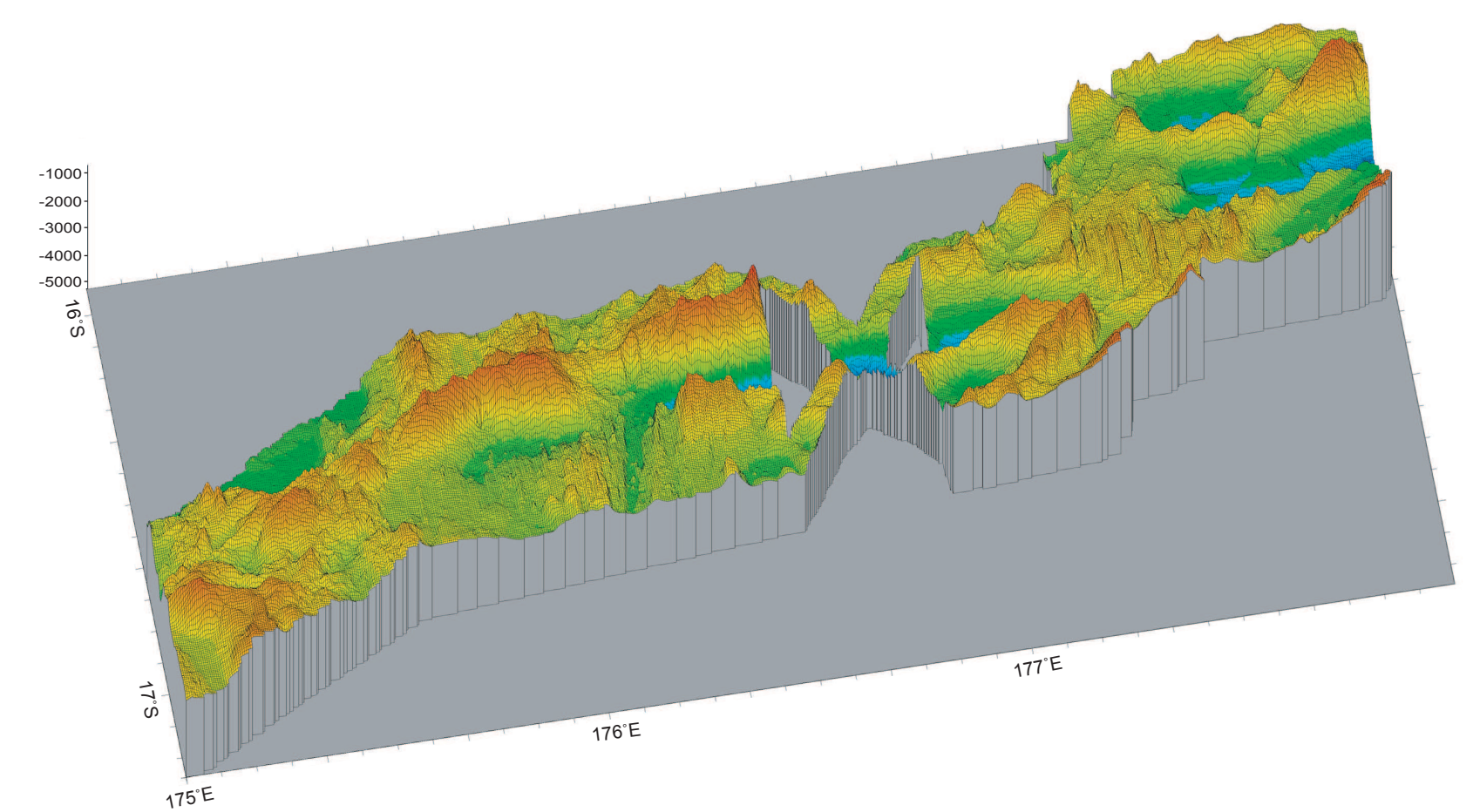
Survey Area



Bathymetry (Area 1)



3-D Bathymetry (Area 1)



3-D Bathymetry (Area 2)

In 1999, the confirmation of the scale of the hydrothermal ore deposits, studies of the known mineralized zones through core sampling by sea floor Benthic Multi-coring System (BMS), and survey of seafloor topography and mineralization of the unexplored areas were carried out in the exclusive economic zone (EEZ) of the Republic of Fiji Islands.

Regarding the study of known mineralized zones, the topographic high near the Triple Junction of the Central Spreading Ridge was designated as "Area 1". Topographic survey was made for the whole area, and Side Scan Sonar (SSS), Finder Installed Deep Sea Camera (FDC) surveys and Large Corer (LC) sampling were carried out in the rift valley. But BMS core sampling could not be carried out on the known mineralized zones due to the deterioration of the weather, thus the sites of drilling were changed to an oceanic ridge and a northern knoll in the Extensional Relay Zone A (ERZ A).

Detailed topographic map had not been prepared previously in the North Fiji Fracture Zone which extends eastward from the vicinity of the Triple Junction. Thus the area from near the Triple Junction to near the Fiji Islands was designated as "Area 2" and seafloor topographic, Sub Bottom Profiler (SBP), and geomagnetic surveys were carried out over 24 nm around the Fiji Transform Fault. Studies of mineralized zones including SSS, FDC surveys and samplings were carried out on the Extensional Relay Zone A (ERZ A). These locations were selected from the results of seafloor topographic survey of "Area 2" and from existing data.

In 2001, the topographic and magnetic surveys were conducted over the survey area, which covers the Triple Junction of the Central Spreading Ridge in the central part of the North Fiji Basin, while the hydrothermal mineralization survey using BMS and the environmental survey were conducted in the Triple Junction Area located at the center of the survey area.

In 2004, the bathymetric survey, FDC seafloor observation, FPG and AD samplings, were conducted in the ERZ A and the Central Hill in the Area 2 for assessing the potentiality of seafloor hydrothermal mineralization. Further, the environmental survey was carried out.

