

***Jason Dive J2-204, July 27 - 28, 2006***

10:00 (GMT); 20:00 (Local)

**Aim:** The dive was planned to investigate the Tufar 3 hydrothermal field. According to the Tufar paper, the field is supposed to extend for 2 km. The ABE survey, however, revealed only a single eH anomaly.

**Landing coordinates:** 3° 6.95' S, 150° 21.25' E [UTM: 9655250N, 205 900E (WGS84 Zone 56S)]

**Summary:** Jason landed on the north shoulder of the axial rift and traversed NE up and along that shoulder, composed of pillow lavas. The ridge disappears to the NE, and further NE there is a group of small mounds. The first one crossed was a pillow mound, which in one spot had white-yellowish patches with black crusts, as well as macrofauna, among the pillows (target 101; virtual van number 10664 to 10680). However, there was no eH anomaly noted here.

Another smaller pillow mound to the SE had an eH anomaly registered by Jason, and there were mats of soft yellow pudding-like material interpreted as sulfur mats (target 102; virtual van numbers 10773 to 10859). Temperatures were 5°C and 6.3°C in the pudding and adjacent sediment, respectively (ambient bottom water was 1.9°C) (virtual van number 10800).

One hundred meters away, another pillow mound had small hydrothermal chimneys venting fluid at 194°C (target 103; virtual van 10910 and following), and associated with snails and crabs. Two samples were taken: from an inactive chimney (J2-204-1-R1) and an active chimney (J2-204-1-R2).

A nearby pillow mound to the south (target 103) exhibited some shimmering water associated with barnacles, gastropods and crabs, nestled in lava (vv 11030 and following). Nearby was sporadic oxide staining of the pillows (vv 11119).

After this, the dive proceeded to the NE and returned back to the SW, but failed to identify any additional hydrothermal features. Much of the seafloor was covered 100% by sediments, broken up infrequently by tectonic fissures with a NE-SW orientation, and irregularly-spaced circular (in plan view) pillow mounds. Most had haystacks at the summit with elongate/tubular pillows oriented downhill.