

## **DIVE SUMMARY Jason Dive #203 – 26<sup>th</sup> – 27<sup>th</sup> July 2006**

The primary goal of this dive was to investigate an area just north of the Tufar Field 2 that was surveyed by a high altitude (150 m) ABE survey (dive 183). ABE183 found small temperature and Eh anomalies in the north west region of the mapped ABE area and at the summit of a curious circular ring of high bathymetry on the northern flank of the rift valley floor. This ring-like feature was colloquially called “Bronze-Age Fort” area.

Coordinates for the landing site:

- Lat/long: -3° 9.0' S, 150° 17.50' E
- UTM: 9651420N, 198940E (WGS84 Zone 56S)

Jason in the water at \*\*:\*\*: and on bottom at \*\*:\*\*:.

The dive landed in old pillows lightly sedimented. Jason then investigated several mounds which turned out to be pillow lava mounds. The Eh anomaly was sedimented pillow lava with no indication of venting anywhere. Jason then traversed pillow flows and then encountered a lava flow front of hackly, and broken up lava. This soon transitioned into massive sheet flow occasionally marked by areas of jumbled sheets and blocky lava rubble zones. The undulating sheet flow terrain continued up until the base of the ring like scarp, which was a very steep faulted surface of truncated pillow flow. First sample was taken at base of this ring like scarp in talus. The second sample was taken from the top of the scarp, which turned out to be young glassy basalt. Descending the scarp front, we came across a set of tall free-standing extinct sulfide chimneys, several meters high. This was sampled (3). Jason then crossed over an extensive rubble field of blocky pillow flow talus forming a series of steep-sided “hogback” ridges to the southeast of the ring-like fault feature. A sample (4) was taken on this blocky terrain. Very little sediment cover was found in this highly tectonized zone of lava flow debris. Jason returned to the steep ring-like fault and found another extinct sulfide chimney not far from the earlier discovery, just in front of the fault wall. More chimneys were found coming right out of the basalt talus. Two pieces from the one of the chimneys were sampled (5-R1-small; 5-R2-large) coming directly out of basalt substrate. Jason continued to travel northeast over the rubble field that resides in front of steep ring-fault and then turned and did a reciprocal course travelling over talus. Jason then turned to head up the ring-like scarp face along its central section. Hydrothermal staining was found at the base in talus. At summit of this steep truncated pillow scarp Jason came up on pillowed flow and rippled sheet flow, sedimented. Within the center of the ring was sedimented lobate flow. Then Jason came across large areas of blocky pillow talus as we progressed further within the ring. Hydrothermal staining was found on the talus blocks but did not happen in place. Came up to a steep fault face of truncated pillows with stained surfaces. Top of scarp is dominated by pillow flows with thick sediment cover burying the pillows. Progressing further into the “fort” we came across yet another talus ramp of blocky lava, little or no sediment cover. Very fractured pillows at the top of the talus ramp. This fractured pillow outcrop was sampled (6). This was the shallowest depth that Jason reached at 2423 m. Jason then turned southwest and headed back across the central plain within the ring structure. Large pillows covered with thick sediments followed by fissures with broken pillow talus. Again large areas of blocky talus and a ~20 m high fault wall (down to north). Outside of the ring we descended onto hackly and jumbled sheet flow. Pick up the last two samples from this hackly sheet flow (7-R1; 7-R2).

A total of \*\* samples were taken

Jason left the bottom at 00:58 and was on deck by 02:28.