

Melville MGLN-06

Jason Dive 201

Jason Dive target: 3° 9.47'S, long 150° 17.04'E

**Aim:** Locate the “Tufar 2” chimney field, using the co-ordinates taken from German cruise reports and Tufar (1990). Sampling of sulfides from inactive structures with focus on collecting large, representative samples.

Launch time: 22:30 7/23/2006

After a couple of recoveries due to ground faults, Jason reaches the seafloor at 08:30 of 07/24/2006. Extinct sulfides are located in an area extending from x3680, y6320 to x3870, y6520 in 2470 to 2490 m water depth. Individual structures are up to 8 m tall. Some fallen chimneys may have been up to 15 m tall. Twenty-two samples of chimney and rubble material were collected, comprising tips of inactive spires as well as rubble from mounds and fallen chimneys. The extinct sulfide field is developed along NE trending fissured ridges of pillow lava terrain. The pillows have sediment covers that range from minor dustings to few cm in thickness. Some sulfide mounds are also sediment-covered and have significant aprons of sediments rich in Fe-oxyhydroxide with possible sulfide debris.

Reconnaissance exploration of an area down to 200 m south of the sulfide field showed heavily sedimented pillow lavas of apparently greater age than the pillows hosting the sulfide field.

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