Melville MGLN-06

Jason Dive 200

Jason Dive target 3º 9.86’ S 150º 16.78’ E

Aim: Locate and explore the Vienna Woods Vent Field. Sample sulfide chimneys and rubble of inactive structures following a sampling grid with a line spacing of about 20 m.

Launch time: 12:00 7/22/2006

Twenty-two samples were collected from an area between x3172, y5651 and x3369, y5847 and depths between 2376 and 2485 mbsl. They represent exclusively inactive chimneys and sulfide rubble. Chimneys are predominantly Zn-sulfide with minor Fe- and Cu-sulfides; they are commonly silicified and, hence, inactive chimneys are often intact and even fallen structures degrade slowly. The majority of chimneys are aligned along fissures and small-offset faults that trend 040 to 050. Samples are all from inactive structures and comprise tips of spires, rubble from base of chimneys, and rubble from central parts of fallen chimneys. The chimney are hosted in lightly sedimented pillow lava terrain with occasional lobate and one small hackly sheet flow.
Active venting was observed in the form of diffuse venting through chimney structures (either near base or near top) and focused venting from orifices near the top of structures that are between 5 and 12 m tall. No temperature measurements were being conducting. Appearance of venting fluids ranges from black (x3237, y5745) to gray and clear (x3312, y5782). Gastropods, galatheid crabs, barnacles, and annelids colonized the walls of active chimneys and rare patches of diffuse venting through pillow basalt.
Also explored was an area of pillow and occasional lobate lava to the NE of the Vienna Woods field up to x3500, y6050. No sulfide chimneys were spotted NE of x3370, y5850.

End of dive: 10:00 7/23