

APPENDIX IV

ALVIN dives 2941 and 2944, Recovery of thermocouple/thermistor array package (Meg Tivey and Al Bradley (WHOI))

- Two instruments, each with 2 working pods, were deployed in summer, 1994 at the Monolith and Table Vent sites, Cleft Segment (JFR), and were recovered June 27 & 30, 1995.
- Approach produced continual records of fluid temperatures, recorded once per minute, at 18 to 20 discrete points in each of 4 areas (2 of high temperature and 2 of low temperature diffuse flow).
- A chimney grew inside the stainless steel ring and through the thermocouple array at Monolith. Data recorded during the first 16 days provide an account of wall temperature during growth of the chimney.
- (Unfortunately by the end of the 16th day the inconel-sheathed thermocouples had corroded; titanium-sheathed thermocouples will be used in the future).
- The 5.5 month records of temperatures associated with the other 3 sites are being examined.
- Deployment and recovery of the instrument packages went relatively smoothly, owing in large part to working out strategy with the *ALVIN* group during instrument development and prior to each cruise.
- An inductively coupled link was used during instrument deployment in 1994 to interrogate the instruments to make sure they were working properly once deployed.
- Results will be presented on Thursday in Session S41B, Geology and Geophysics of the Juan de Fuca Ridge I Posters.