PISCES IV DIVE REPORT

Pilot: Terry Kerby Dive #: PIV-141 Date: June 24, 2005

Observer 1: Max Cremer

Affiliation: HURL Sub ops

Observer 2: Peter Stoffers

Affiliation: University of Kiel, Germany

Purpose: (Research) Training Test

Other:

Special Equipment:

Cameras: Sony, ROS

Manipulators: Orion, HYCO

Samplers/Sensors: Bio box, Rock box Sediment scoops, Water Samplers

Support Vessel: R/V Kaimikai-O-Kanaloa

Captain: Ross Barnes

Dive Location: Volcano V-1

Latitude: 21° 09.362' S

Longitude: 175° 44.520' W

Time of Dive: 1202

Time of Surface: 1742

Time Submerged: 5:40

Time Thru Last Dive: 1019:55

Total Time to Dive: 1025:35

Dive Depth: 204m

Water Depth: 204m

Water Temperature: 18°c @ 204m

Visibility: 20m to 2m

Dive Results/Remarks: Pisces IV second dive after thruster tilt problem is fixed. 1225 Land on a sand and rubble bottom in 199m. Move to the northwest into the shallow pit. Discover mussel shell debris in pit and clusters of live mussels on north side pit. Move out of pit to the northwest. 1257 198m At the edge of a dense mussel bed on the southeast edge of the depression between the large cone and the ridge. There are outcrops covered with mussels with active hydrothermal vents. Locate some sulfur deposits and light phase seperation bubbling. 1407 198m. Deploy marker #41. Take sediment scoop #5 of sulfur crust. Moved along the edge of the depression to the southwest. 1457 199m Discover an area of vigorous venting in the middle of a dense musselbed. Deploy Marker #43. Vent temp 68°c. Explore pit and map extent of musselbed to the northwest. 1537 199m Moved back to marker #43. Take water samples. Collect sulfur crust. Collect a sediment scoop gas bubble sample. 1653 98m Move to the southwest up the cone. Discover more mussel beds, venting and white deposits of hydrothermal alteration.

~~Equipment Deficiencies~~: Move upslope to the Southwest. 1709 65m On summit of Cone 1723 Leave the bottom from 65m.

Pilot's Signature: Terry Kerby Date: 7/17/05

Operations Director: Terry Kerby Date: 7/17/05