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CRUISE REPORT

Ship Name: R/V CONRAD

Cruise No: 22-16

Departure: 6 November 1979 from Roosevelt Roads, Puerto Rico
Date Port

Arrival: 9 November 1979 at Roosevelt Roads, Puerto Rico
Date Port

Days at Sea: 3 Days Foreign Port: less than 24 hours
No. of days in arrival port

Area of Operation: U.S. and British Virgin Islands

Program Description: Recover ocean bottom seismometers deployed during
cruise RC 22-12

Participants: (All L-DGO unless otherwise specified)

Ivars R. Bitte
George R. Gunther
Ralph Roessler

Chief Scientist
Scientist
E.T.

All inquiries regarding cruise should be made to the chief scientist.

R/V CONRAD, Cruise 22, Leg 16 was essentially a instrument recovery cruise for OBS's deployed during R/V CONRAD, Cruise 22, Leg 12.

Upon receiving new personnel, stores, engine lubricants and fuel oil the ship departed Roosevelt Roads, Puerto Rico for the first of a series of pickup sites as listed in the cruise prospectus.

As the distance between each instrument of the network averaged 30 N.M. and a normal recovery took about 3 hours, six to seven hours were usually spent between arrivals at the instrument sites.

All the recovery operations were quite routine except at sites B-2 and B-4. The instrument at B-2 failed to respond to any communications attempt, yet there was every reason to believe that the ship was quite near the original deployment site. Both echo sounder and satellite navigation gave depth and position very close to that obtained at time of deployment. Several attempts were made at releasing with no indication that such had occurred, yet the ship was kept in the area well into the next morning where neither visual or radar contact could be made. It was assumed that this instrument was lost for any of several reasons and the ship continued on to the next recovery site.

Site B-4 at first presented a similar communications problem. Satellite navigation had us very near the position called for as the deployment point but the echo sounder indicated a depth of 200-250 fathoms deeper than that logged earlier. With this discrepancy in depth and as a check on the recovery apparatus, it was decided to continue to the next site without an attempt at releasing OBS B-4. The deck borne recovery gear gave no indication of any malfunction and its proper operation was confirmed by normal recoveries of the next three instruments. After site B-6

the ship once again returned to site B-4 for another attempt at finding the instrument. In the course of that attempt, while running a grid to try to locate a depth closer to the depth during deployment, contact was made with the OBS about seven miles south of the logged deployment position. Either due to a bad fix or typographical error, the wrong position was recorded at the time of deployment.

Between each and after the last recovery the time was spent in cleaning and packing the gear for shipment to L-DGO. One problem that was present at each instrument opening was the outgassing product (SO_2) of the lithium batteries used in the instruments. Some of the instruments showed more than negligible damage from the corrosive effect of this discharge. Prior to final closure of each instrument for shipment neutralizing attempts were made with bicarbonate of soda in solution to the affected areas.

On this leg no routine geophysical work was done and no equipment used other than the echo sounder for verifying instrument site depth and as a means of visually tracking acoustic transmission between shipboard equipment and bottom instruments.

CRUISE TRACK NOT AVAILABLE
AT THIS TIME