

Introduction

The objective of this cruise was to obtain geophysical and geological data to assist in the production of a geological map for the area of the Hebridean Shelf between 56° - 57° N, 6° - 9° W.

Narrative

The R.R.S. John Murray left Barry on the morning of the 25th of May and made passage to the entrance to St. George's Channel. The Sparker profiling equipment was then deployed and a short line run on the eastern side of the channel in order to set up the equipment and provide further seismic coverage in an area where previous cruises had indicated a particularly complex geological situation. Passage was then made at full speed through the Irish Sea and North Channel until in the late afternoon on the 27th a northward traverse run with Gravity and Magnetic measurements and Sparker seismic profiling was commenced at $7^{\circ}48'$ W, $55^{\circ}30'$ N. Geophysical profiling continued during the 28th and 29th in the region to the S.W. of Barra until the morning of the 30th when the seismic profiling equipment was retrieved and the rock dredge prepared. Dredge and gravity core sites were then investigated in three areas to the North of Coll before geophysical surveying was re-started on the evening of the 30th. Routine geophysical profiling continued until the morning of the 1st of June when dredge samples were obtained from a site to the east of the Stanton Banks. Apart from a further four stations where rock dredge and gravity corer was employed to obtain samples of the outcropping bedrock the rest of the cruise consisted of routine Sparker profiling and Gravity and Magnetic measurements which were terminated in the evening of the 6th of June when the vessel made passage to Ardrossan. The weather throughout this cruise was exceptionally good and no time was lost due to equipment failure. The Sparker records are of excellent quality.

Results.

An assessment of the geophysical and geological results of the cruise are now in hand between Mr. C. Uruski formerly a research student at this department, now at the University of Durham, and Drs. M.R. Dobson and R.J. Whittington of this department. The resultant geological map will be published as the Tiree sheet at 1:250,000 U.T.M. by the I.G.S.

R.R.S. John Murray Cruise 7/79, Captain P. McDermott.

Scientific Party

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