9/9/68

CRUISE REPORT: R.R.S. JOHN MURRAY 6/68

University College, 14 May - 3 June 1968

English Channel

Aims and Results

The primary aim was to obtain information about the solid geology of the sea floor (structure and stratigraphy) between Lyme Bay and the Straits of Dover. It was intended to do this by means of a) sampling with a gravity corer, b) continuous reflection profiling with the 'Egerton' Sparker, and c) continuous magnetic traverses with the 'Varian' proton magnetometer. In the event little coring was attempted because the pay-out velocity of the main winch was too slow. The sparker (once it had been made operational) and the magnetometer worked well throughout the cruise.

The geological results cannot be given until the sparker and magnetometer records have been studied. It is hoped that they can be appended to the report of a future cruise.

Personnel The following took part:-

University College London

D. T. Donovan	(principal scientist, first part)	Staff members
A. J. Smith	(principal scientist, second part)	
P. W. Roberts		
P. G. Llewellyn		
A. J. Lloyd		
R. G. Dingwall	(research student)	
H. Mason	(undergraduate student)	
K. W. Stevens	(technician)	
D. Games	(technician)	

R.V.U. Plymouth

S. Jones

M. J. Winfield

We are grateful to the R.V.U. technicians for their co-operation and for working long hours when this was necessary.

Narrative

The first 24 hours of the cruise was spent trying to improve sparker performance. A few cores were obtained east of Start Point. The port engine overheated and broke down in the morning of 15 May and we returned to Plymouth. As it appeared that engine repairs would take several days, it was decided to change plans and, instead of calling at Shoreham for the second party to take over, they would now leave from Plymouth when engine repairs are complete. The scientific party dispersed.

Professor Donovan returned to Plymouth for trials on Monday, 20 May. An overnight traverse to mid-Channel and back showed the sparker to be working well, and on the morning of 21 May the ship returned to Plymouth to embark the second party under Dr. Smith.

On Tuesday, 21 May ship departed from Plymouth. The sparker was streamed after passing Plymouth Breakwater, and a course set for Start Point and Lyme Bay. From Lyme Bay a series of north and south traverses of the Channel was commenced. After completing the second leg trouble was again reported by the engineers. The port engine overheated and stopped (0645/22 May). All sparker records up to this time were of excellent quality. The ship anchored off Freshwater, Isle of Wight, to check starboard engine, and decided (1600/ 22 May) to proceed to Southampton for repairs. Some of the party returned to London on 23 May.

Dr. Smith visited the John Murray at Southampton on Saturday, 25 May. When he was about to leave at 1730 hours engineers reported the camshaft of the Port Engine to be cracked.

The full complement of crew and scientists had rejoined the ship by the morning of Monday, 27 May. The ship sailed for trials in Southampton Water in the late morning and the trials having proved to be satisfactory, the ship sailed about midday on 27 May to resume sparking and magnetometer work. On account of the time lost R.V.U. arranged for the cruise to continue until 3 June instead of 1 June as laid down in the programme.

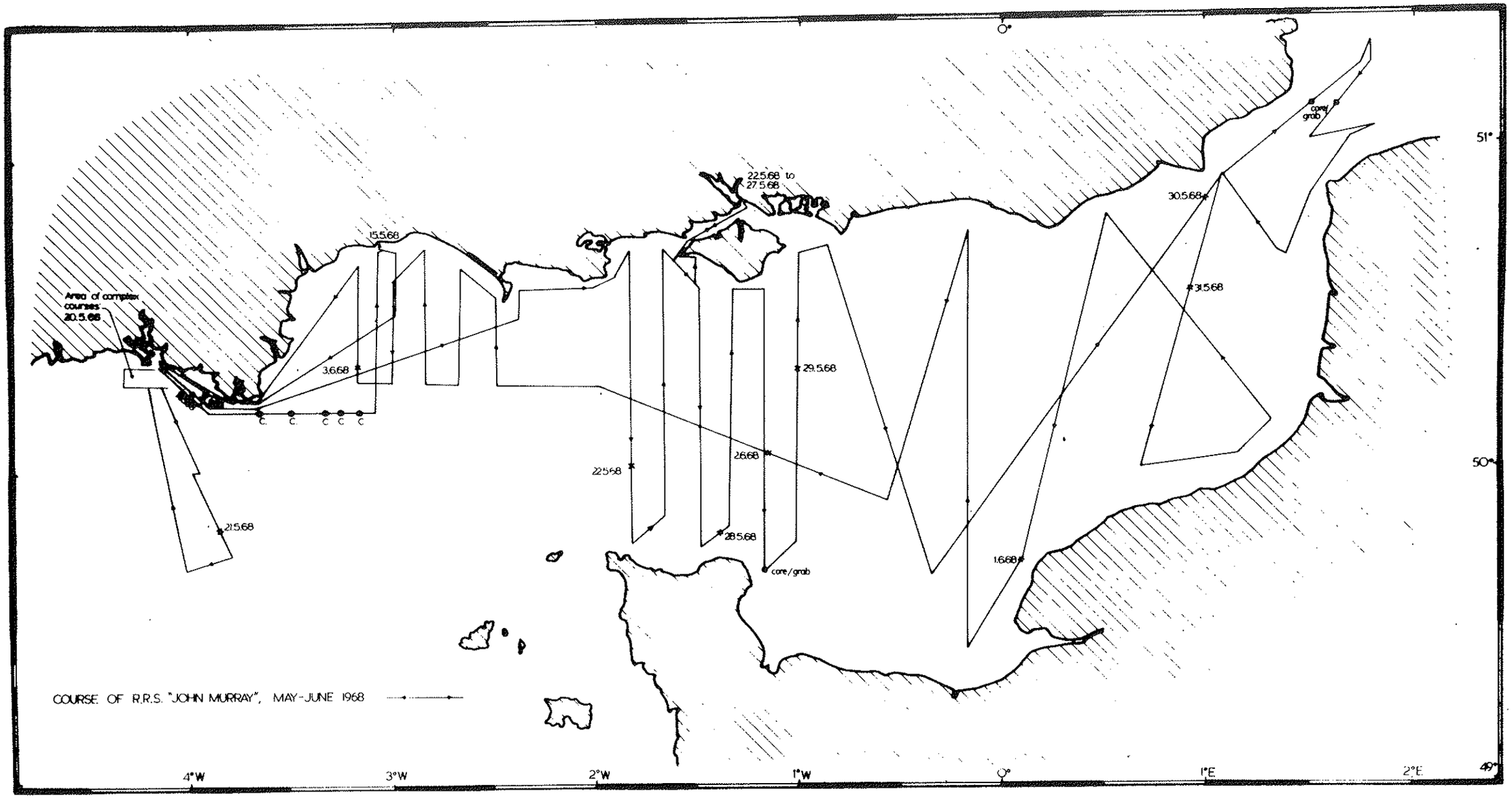
From this time to the end of the cruise on 3 June there is little to report - regular watches were kept and continuous records of depth and

seismic and magnetic properties of the sub-bottom were made. All the gear worked well and a series of fine records was achieved. Coring was attempted, not successfully, at two localities - off Barfleur (Cherbourg Peninsula) and in the Straits of Dover. Some grab samples were taken in the latter locality.

Early on the morning of 3 June we made a seismic survey of the Skerries Bank, east of Start Point. This was made at the request of Dr. Cooper, F.R.S. (M.B.A. Laboratory, Plymouth). The records revealed a series of ridges of unconsolidated material resting on a near level, planed, surface of solid rock.

Scientific work ceased as we passed Start Point and the John Murray proceeded to Plymouth where we docked about 8.00 a.m. on 3 June.

The ship's track is shown in the accompanying diagram. Approximately 1300 nautical miles of sparker and magnetometer survey were covered.


Area of complex courses 20.5.68
15.5.68
3.6.68
22.5.68 to 27.5.68
30.5.68
31.5.68
29.5.68
26.6.68
22.5.68
21.5.68
28.5.68
core/grab
1.6.68
core/grab
COURSE OF R.R.S. "JOHN MURRAY", MAY-JUNE 1968
0°
51°
50°
49°
4°W
3°W
2°W
1°W
0°
1°E
2°E

12½