Gilbraith

F17/7

5/76

<u>In confidence:</u> Not to be quoted without reference to the Laboratory

CRUISE REPORT

FRV MARA

5 - 9 July 1976

Personnel:

R D Galbraith	SO (in charge)
J Main	HSO
G I Sangster	SO
E Wright	ASO
W R Leys	PTO IV
A Tough	PTO IV

OBJECTIVES:

1. To study the engineering performance and gear geometry of the laboratory 200 h.p. four panel trawl (Lossie J) and that of a commercially available 200 h.p. trawl (Boris Mystic), with particular reference to the relationships between available towing power, gear drag, otterboard size and type and bridle angle.

2. To obtain cine film and still photographs of both gears for subsequent analysis.

3. To test the diver's underwater distance measuring instrument.

NARRATIVE:

The scientific staff joined "Mara" at Buckie on Monday 5 July when the instrumentation was installed on the ship and the fishing gear made ready for sea.

The trials commenced on Tuesday 6th in Spey Bay test area and continued until the evening of Thursday 8 July when a fire in the forward accommodation damaged the vessel and the cruise had to be terminated and the scientific staff returned to Aberdeen on Friday 9 July.

RESULTS:

Due no doubt to the exceptionally warm weather, the presence of large quantities of jelly fish on the grounds limited the value of the gear measurements made. Even with the codends open the jelly fish clogged up the meshes and caused the gear to lift off the bottom, and although groundrope weighting and rigging were altered to achieve bottom contact the gear still tended to be light on the ground.

The lack of visibility due to fog made diving operations impossible for 2 of the hauls. Nevertheless during the three working days seven instrumented hauls were carried out and on five of these divers were able to make observations and measurements. A quantity of underwater cine film of the gear in action, some

of it on hard ground, was shot, but much of this was destroyed or damaged in the fire.

The new diver's underwater distance measuring instrument was found to be subject to faulty triggering due to vibration and further modifications will be required to remedy this fault.

R D Galbraith
16 September 1976

Seen in draft .....