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In Confidence: Not to be quoted without reference to the laboratory

FRV "Goldseeker"  
Cruise 2/84

REPORT

15 February - 9 March 1984

OBJECTIVE

To carry out sea trials of the Marine Laboratory's towed underwater vehicle.

NARRATIVE

Goldseeker loaded on 15 March and sailed early the following day for Burghead, picking up on the way the water sample for caesium analysis. The sea trials of the underwater vehicle began on Friday and continued until 8 March, only on two days was the vessel confined to port by gale force winds. Burghead proved a suitable base and tidal restrictions did not interfere with the work. However limited space between the aft rail and the stern gantry presented real problems making shooting and recovery difficult. A proposal that the headroom be increased by 0.5m is being considered.

RESULTS

The vehicle worked well, and was reliable throughout the trip, no major component failures being experienced. Two systems for control were thoroughly tested and both were found to be workable. One system is more suitable for use with our present umbilical as it makes more efficient use of the available conductors. Instruments for measuring the vehicle attitude, and which give a continuous display of depth, speed, roll and pitch were used and the data recorded. This will be published elsewhere or can be made available on request.

Figures for drag, measured at the attachment point of the towing wire to the vehicle, are published here.

Speed -2.5knots	Mean load -0.093(T)
3.0	0.149
3.5	0.184
4.0	0.238

The table below gives in a condensed form the vehicles increase in depth when fully powered at different towing speeds. The tow length was 100metres.

Vehicle	Speed in knots
	3 3.5 4 4.5 5 5.5
Depth (unpowered)	10 8 6 4 4 2 metres
(full power)	26 25 22 21 20 19 metres
Increase	16 17 16 17 16 17 metres

The transmissometer which had come back from America after a major overhaul was tested and found to be in order.

R Priestley  
20 March 1984

seen in draft  
W B Reid