

IOS FIELD EXPERIMENT REPORT

VESSEL USED: M/L 'Excel' and inflatable.

LOCATION OF WORK: Morte Bay, Woolacombe, N Devon.

PERIOD: 11-13 May 1983.

PERSONNEL: A P Carr (Principal Scientist))
M W L Blackley) shore party
P J Hardcastle (12 May only))

A J Marks)
E J Moore) diving and
B M Norman) boat party
L Whitlock)

OBJECTIVES: The principal objective was to replace the offshore marker buoy mooring, which came ashore during gales in March, with a new mooring incorporating greater ballast and less buoyancy. In addition, depending upon time and conditions it was planned to:

- a. Check coordinates for Rigs 1 and 2.
- b. Develop a calibration technique for determining the absolute height of the digiquartz transducer mounted on offshore Rig 1.
- c. Echosound offshore extensions of the 4 section lines regularly surveyed down to LWM.
- d. Carry out land survey of sections.

PROCEDURE AND METHODS

The launch 'Excel' and inflatable were based at Ilfracombe harbour. With the exception of the calibration technique for Rig 1 all methods were standard and do not require explanation.

Wednesday 11 May (pm). The equipment was transported to Woolacombe or Ilfracombe, as applicable and deployed as appropriate.

Thursday 12 May. The launch 'Excel' and inflatable sailed to Woolacombe and deployed the new buoyed mooring at the (nominal) original site using the Trisponder microwave system for location. The launch then went to the approximate site of each rig and marked these with small buoys. The precise bearing for Rig 1 was provided from shore using a Wild theodolite (and EDM). Thereafter a calibration pole was tested at LW. This consists of a cap to fit over the rig tripod head at the pole's base and a Maltese pattern of 4 x 3" (7.5 cm) acrylic reflectors at the pole's top. In spite of the conditions (small/medium breakers) it proved possible to handle the tubing but in doing so the reflectors became flooded with water and prevented a return signal being obtained by the EDM. Nevertheless it was possible to record vertical (and horizontal)

angles to the rig site. Assuming that the rig distance had not changed since deployment (and the bearing angle suggests this) it was possible to obtain the height of the pole target and, hence, that of the transducer.

Deteriorating conditions meant that it was impossible to confirm the precise location of Rig 2 nor was it possible to carry out the echosounding.

Friday 13 May. Conditions were similar to late Thursday but it was possible to undertake the land survey of the 4 sections at LW. [Also for trials of the bedform monitor in Ilfracombe harbour]. All personnel and equipment returned to Taunton.

EQUIPMENT
PERFORMANCE:

Except for the problems of the acrylic reflectors all equipment performed satisfactorily.

RESULTS:

a. The replacement marker buoy mooring was deployed satisfactorily.

b. Rig 1 was located (approximately one third buried) and the calibration technique proved feasible. It is intended to recalibrate the rigs in, or about, July 1983 when EDM prisms will be used.

c. It was not possible because of the conditions to locate Rig 2 nor to do the echosounding. This will be incorporated with the next calibration.

d. The beach section lines were surveyed.

ITINERARY:

Not applicable.

STATION LIST:

The deployed positions are as follows:

		<u>National Grid</u>	<u>Latitude</u>	<u>Longitude</u>
<u>Marker Buoy</u>	East	(2)44781)	approx	51° 09' 56"N
	North	(1)43096)		
<u>Tripod Rig 1</u>	East	(2)44826	51° 09' 52"N	4° 13' 07"W
	North	(1)42972*		
<u>Tripod Rig 2</u>	East	(2)44867	51° 09' 55"N	4° 13' 05"W
	North	(1)43075		

*Previously recorded using prism on launch as (1)42971

REPORT PREPARED BY A P Carr

APPROVED BY K R Dyer

DATE 17 May 1983