

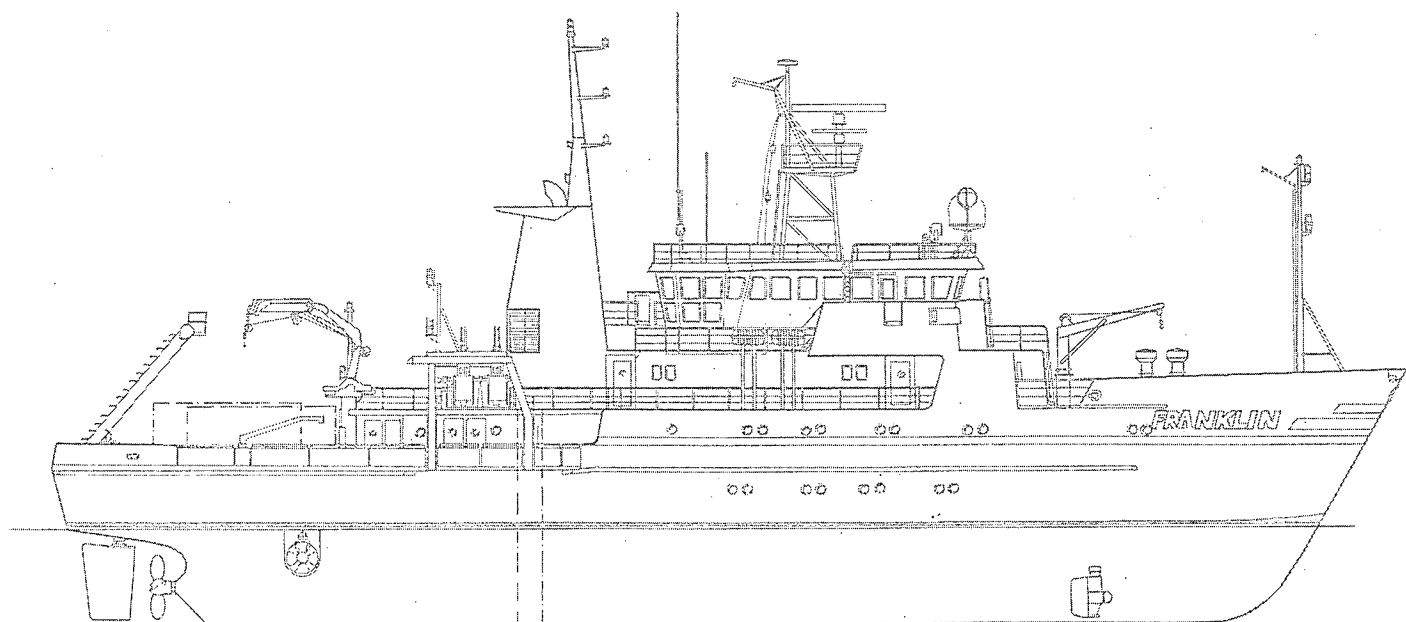
R.V. FRANKLIN

NATIONAL FACILITY
OCEANOGRAPHIC RESEARCH VESSEL

CRUISE PLAN

R.V. 'FRANKLIN'

FR 3/87



For further information contact

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R.V. FRANKLIN IS OWNED AND OPERATED BY CSIRO

Cruise Plan
R.V. Franklin
FR3/87

Itinerary

Depart Adelaide:	0800Hrs	24 January 1987
Arrive Bunbury:	1800Hrs	31 January 1987
Depart Bunbury:	0800Hrs	1 February 1987
Arrive Fremantle:	1800Hrs	17 February 1987

Scientific Program

This is the second of a series of cruises in the Leeuwin Current Interdisciplinary Experiment (LUCIE) (R.V. Soela completed the first in this series). This experiment is a dynamical study of the Leeuwin Current which seasonally flows southward along the coast of Western Australia then turns eastward at Cape Leeuwin.

Principal Investigator

Dr. J.S. Church
CSIRO Div. of Oceanography
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Cruise Objectives

FR3A/87

1. Complete two CTD sections, starting off Albany, while in transit from Adelaide to Bunbury.

FR3B/87

1. Service four current meter moorings on a line across the continental shelf, off Dongara.
2. Redeploy a moored meteorological buoy on the continental shelf-break, off Dongara.
3. Deploy four current meter moorings across the continental shelf, along a line of Latitude, 34°S. One of these will be a meteorological buoy, moored at the shelf-break.

4. Complete at least six CTD sections normal to the coast, each 120 n. miles in length.

Cruise Track

FR3A/87

Proceed due east from Adelaide to Albany, where the first of two CTD sections will be completed. Upon completion of the second section at 116°E, the ship will steam directly to Bunbury to refuel and exchange part of the scientific crew.

FR3B/87

A proposed cruise track is shown in Figure 1. The order of events depends on weather to a large degree, but we will first attempt to service the current meter moorings and meteorological buoy on the Dongara line. Next, we will proceed south to 34°S to deploy the new line of four moorings. The CTD sections will then be completed, starting at Cape Leeuwin, and heading north towards North West Cape. Upon completion of the maximum possible number of CTD sections, the ship will proceed to Fremantle.

Time Estimates

FR3A/87 (2 CTD Sections)

Steaming @ 11kt	5.1 days
CTD Stations	2.3 days
Port time	0.6 days

Sub-Total 8.0 days

FR3B/87 (6CTD Sections)

Steaming @ 11kt	7.8 days
CTD Stations	7.0 days
Mooring operations	2.5 days

Sub-Total 17.3 days

Combined Total 25.3 days

This total exceeds the time available by 0.9 days, but generous allowances for mooring operations and steaming have been made. It should be possible to achieve all the cruise objectives, given reasonable weather, and the fact that some

CTD work on both the Dongara and 34^{OS} lines can be accomplished concurrently with mooring operations.

Personnel

FR3A/87

R. Edwards (Chief Scientist)

N. White

A. Poole

K. Suber

M. Rayner

FR3B/87

J. Church (Chief Scientist)

N. White

F. Boland

K. Miller

D. McLaughlan

A. Poole

K. Suber

M. Rayner

This Cruise Plan is in accordance with the directions of the National Facility Steering Committee for the oceanographic research vessel RV 'Franklin'.



A.D. McEwan
CSIRO Division of Oceanography



D.H. Green
National Facility Steering Committee

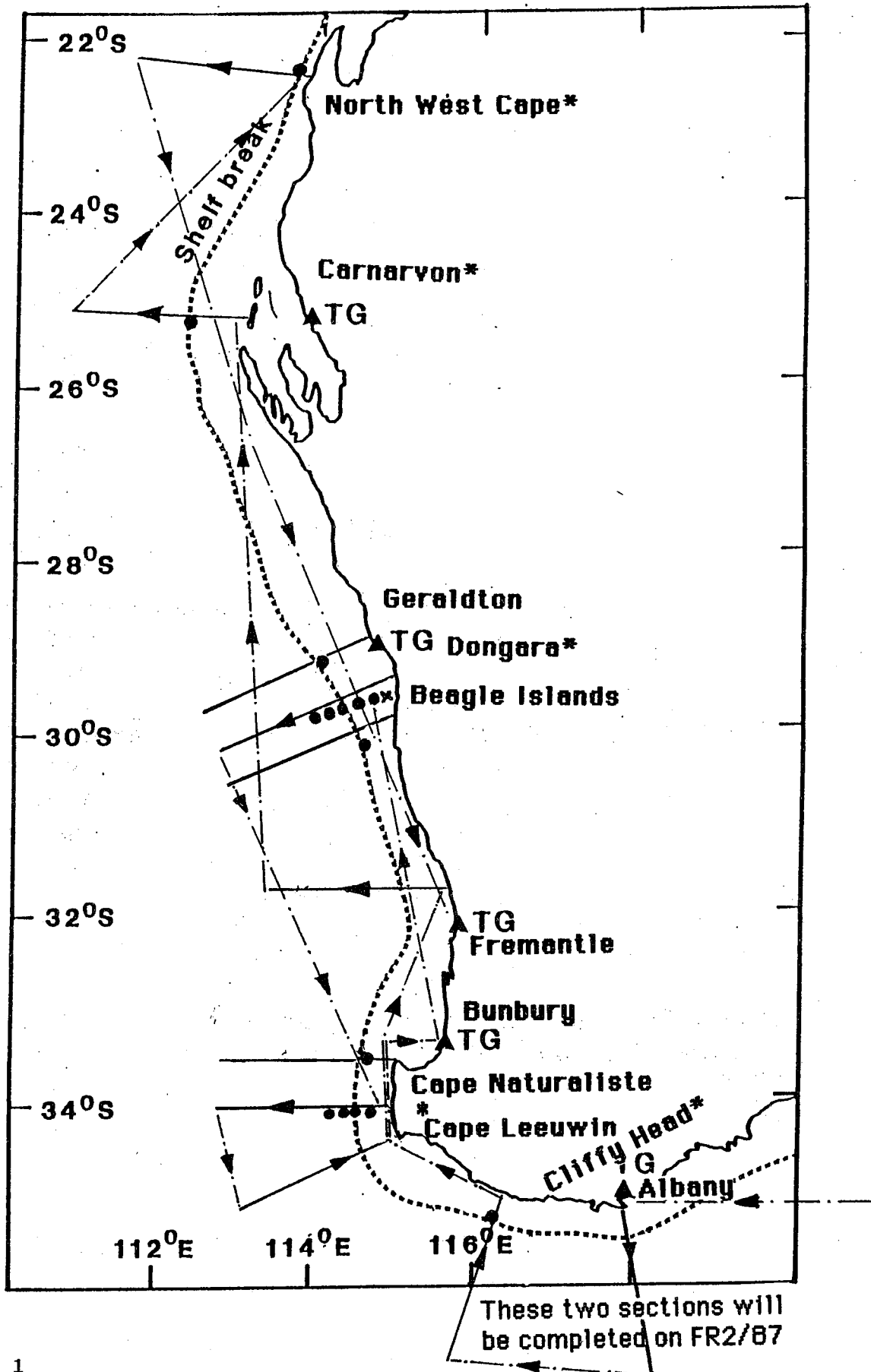


Figure 1

- Locations where shelf edge instruments are to be deployed in September 1986. This equipment is to remain in place for the complete experiment.

11 CTD sections are indicated. Those with * receive top priority. The cruise track is indicated by ————.