

R.V. FRANKLIN

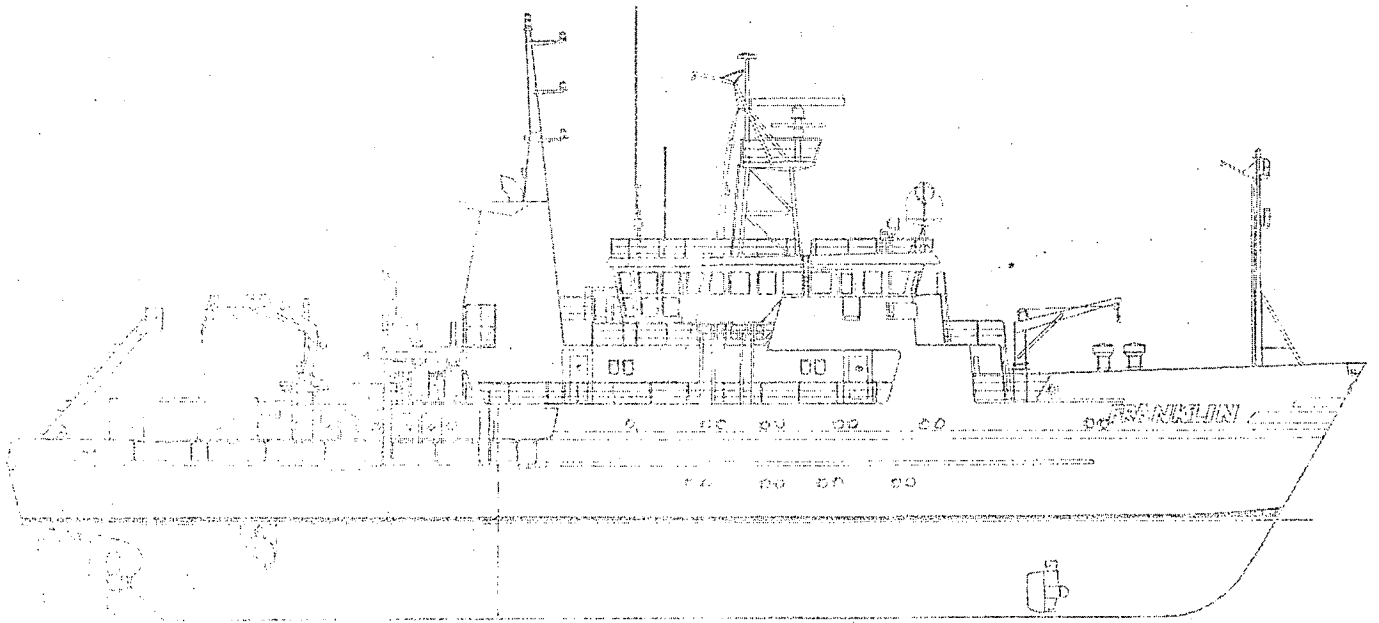
NATIONAL FACILITY
OCEANOGRAPHIC RESEARCH VESSEL

Original

CRUISE PLAN

R.V. 'FRANKLIN'

FR 7/86



For further information contact

ORV Operations Manager

c/- CSIRO Division of Oceanography

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R.V. FRANKLIN IS OWNED AND OPERATED BY CSIRO

DV/TJM

Date

**CRUISE PLAN
R.V. 'FRANKLIN'
FR 7/86**

ITINERARY

Depart Hobart	1000 hrs	Friday 5 September 1986
Arrive Sydney	1400 hrs	Friday 19 September 1986

SCIENTIFIC PROGRAM

1. Erosion and deposition of sediment in Bass Canyon and adjacent abyssal fans.
2. Late-Quaternary sedimentary history of Bass Basin.
3. Seamounts of the Tasman Sea: Geochronology, geochemistry and origin.

PRINCIPAL INVESTIGATORS

1. Dr. C.J. Jenkins,
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University of Sydney,
NEW SOUTH WALES, 2006
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2. Dr. J.B. Keene,
Department Geology & Geophysics,
University of Sydney,
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Tel: (02) 692-2915
- 3A. Dr. I. McDougall,
R.S.E.S.,
A.N.U., G.P.O. Box 4,
CANBERRA, ACT 2600
Tel: (062) 49-4136

3B. Prof. D.H. Green,
Department of Geology,
University of Tasmania,
G.P.O. Box 252C,
HOBART, 7001
Tel: (002) 202-103

CRUISE OBJECTIVES

1. To collect visual evidence of sediment erosion and movement by using underwater photography to analyse surface texture of the sea floor, biological activity and sedimentary structures.
2. To sample (dredge and core) sediments from the sea floor in Bass Basin, Bass Canyon and the adjacent abyssal fan to determine their origin, composition, age and processes of deposition. This will then be used to deduce the changes caused by the recent rise in sea level.
3. To sample volcanic rocks from the Tasmantid Seamount chain. These will be analysed to document the age progression in the Seamount chain and characterise their petrology and isotopic composition.

CRUISE TRACK

A total of 2,500 n.m. as shown in Figure 1. Proceed from Hobart to three stations out from the continental slope. The ship then steams into Bass Strait for 10 stations followed by 7 stations in the Bass Canyon/fan area. The third project necessitates steaming north to Moreton Seamount and sampling other seamounts down to Taupo Bank before transit to Sydney.

R.V. EQUIPMENT

G.P.S. navigation
Navigation plotted in real time; scales 1:50,000 to 1:250,000
Mainwinch 4,600 m 12 mm cable
Tensionmeter with chart recorder and wire-out meter for main winch
Oceanographic winch
Cold room, (f 3°C)
Precision depth recorder (to 5 km, 2 second sweep)
Bottom-finding pinger with clamps for 12 mm wire
Smith-Macintyre Grab
Photographic dark-room, black and white developing and printing facilities

EQUIPMENT PROVIDED BY USERS

Sydney University

Deep-sea camera and strobe
Camera frame
Gravity corers and plastic liners
Piston corer and plastic liners
Tension and wire-out block
Side-scan sonar
Underway sampler
12 KHz pinger
Smith-Mcintyre Grab
Binocular microscope

A.N.U. & University of Tasmania

dredges

ONBOARD ANALYSIS

Black and white film developing and printing chemicals
Microscope examination of rock and sediment samples

TIME ESTIMATES (Derived from Table 1)

Hobart to Banks Strait	2.0 days
Bass Basin	2.6 days
Bass Canyon and fan	2.7 days
Steaming Bass Canyon to Barcoo Seamount	1.5 days
Sea mount sampling	3.5 days
Moreton Seamount to Sydney	2.0 days
	<hr/>
	14.3 days
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Allocation of time to projects (adjustments may be made during cruise for bad weather).

Project 1 2.5 days
Project 2 2.5 days
Project 3 2.0 days

STEAMING: 7.3 days

14.3 days

PERSONNEL

Department of Geology and Geophysics, University of Sydney

Jock Keene (Chief Scientist)
Wilma Blom
Michael Makilides

Ocean Science Institute, University of Sydney

Chris Jenkins
Jun Garces
Peter Harris

Research School of Earth Sciences, A.N.U./Department of Geology
University of Tasmania

Ian McDougall - A.N.U.
Bob Duncan - A.N.U./University of Tasmania
Steven Eggins - University of Tasmania

CSIRO Marine Laboratories

David Vaudrey (Cruise Manager)
Alan Poole (Electronics)

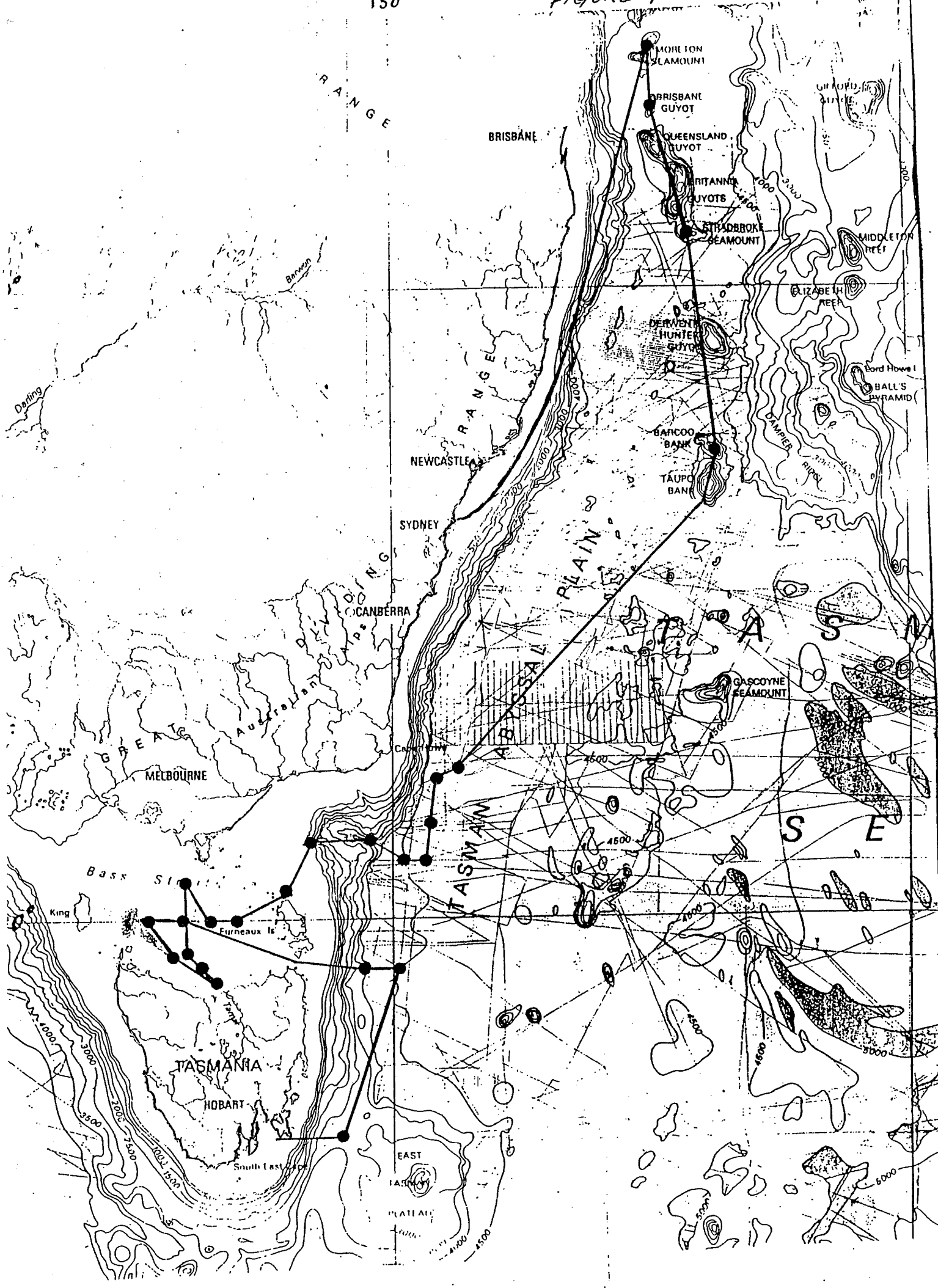
This Cruise Plan is in accordance with the directions of the National Facility Steering Committee for the oceanographic research vessel RV 'FRANKLIN'.



A.D. McEwan
CSIRO Division of Oceanography



D.H. Green
National Facility Steering Committee



TENTATIVE SCHEDULE FR7/86

DAY	DATE	0000	0600	1200	1800	2400
1	5/9		HOBART	1000	90 nm steaming	Stn 1.
2	6/9		150 nm steaming		Stn 2.	30 nm Stn 3. steam
3	7/9	Stn 3.	60 nm steam	SWAN IS	BASS BASIN SAMPLING	
4	8/9		450 nm (40 hrs) to FLINDERS ISLAND + 10 stations		BASS BASIN SAMPLING	
5	9/9		(15 hrs) + 6 hrs survey		BASS BASIN SAMPLING	
6	10/9		SAMPLING 7 Stations (42 hrs)			
7	11/9		CANYON FAN SAMPLING			
			250 nm (hrs)			
8	12/9		CANYON FAN SAMPLING			385 nm
			COMPLETE			
9	13/9		TO BARCOO			
			STEAMING			
10	14/9		BARCOO		210 nm	
			DREDGING		Steaming	
11	15/9			STRADBROKE		130 nm
			Steaming		DREDGING	
12	16/9			BRISBANE		50 nm
			Steaming		DREDGING	
13	17/9		MORTON		LEAVE MORETON	
			DREDGING	1300	STEAMING	
14	18/9		SEAMOUNT AND SAIL FOR SYDNEY			
			STEAMING			
15	19/9		480 nm	1400		SYDNEY
			STEAMING			