

Rec'd  
IN ADCRSY  
ADGPSY  
ADSESH

Date: November 17, 1987

To: B. Halley, H. Knebel, G. Hill, T. Aldrich, S. Barton,  
J. Newell, T. O'Brien, G. Sexton, N. Soderberg,  
B. Henry (DMA), R. Nolet (DMA), T. Cocke (State Department)

From: G. Driscoll

Subject: Cruise Report M/V Starella

Cruise No.: S7-87-AFR

Parent Project: Defense Mapping Agency Gravity

Funding Agency: Defense Mapping Agency

Funding Amount: \$185/nmi

Contract No.: HTC-PO-87-30 ANNEX D

Contract Start/End Dates: October 1, 1986 - open

Area of Operations: Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, Eq. Guinea

Cruise Start/End Dates, Ports: 24 Sept. 1987 - Abidjan, Ivory Coast  
20 Oct. 1987 - Douala, Cameroon

Chief Scientist: George Driscoll

Cruise Data Curator: George Driscoll

Scientific Party, Affiliation: (George Driscoll USGS-AMG  
Cathy Delorey USGS-AMG  
Nancy Soderberg USGS-AMG  
Robert Bowles Consultant

Ships Captains: John Nichols

Purpose: The purpose of this cruise was to collect gravity and bathymetry data off the west coast of Africa on a 5 nmi grid with an internal consistency of +/- 3 milligals.

Navigation Techniques: General Electric 810 Correlation Sonar, MK 29 Gyro Compass with Global Positioning System (satellite) control.

Equipment: USGS Gravity Data Logging System  
USGS Data Processing System  
LaCoste and Romberg Air/Sea Gravimeters S-26 and S-41  
Raytheon PTR 12KHz Bathymetry System  
General Electric 810 Correlation Sonar  
MK 29 Gyro Compass  
Magnavox System 5000 Integrated Navigation System

870 40rd

Tabulated Information:

Days at sea: 27

Kilometers surveyed: 6858 \* 3810nm

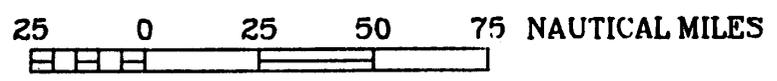
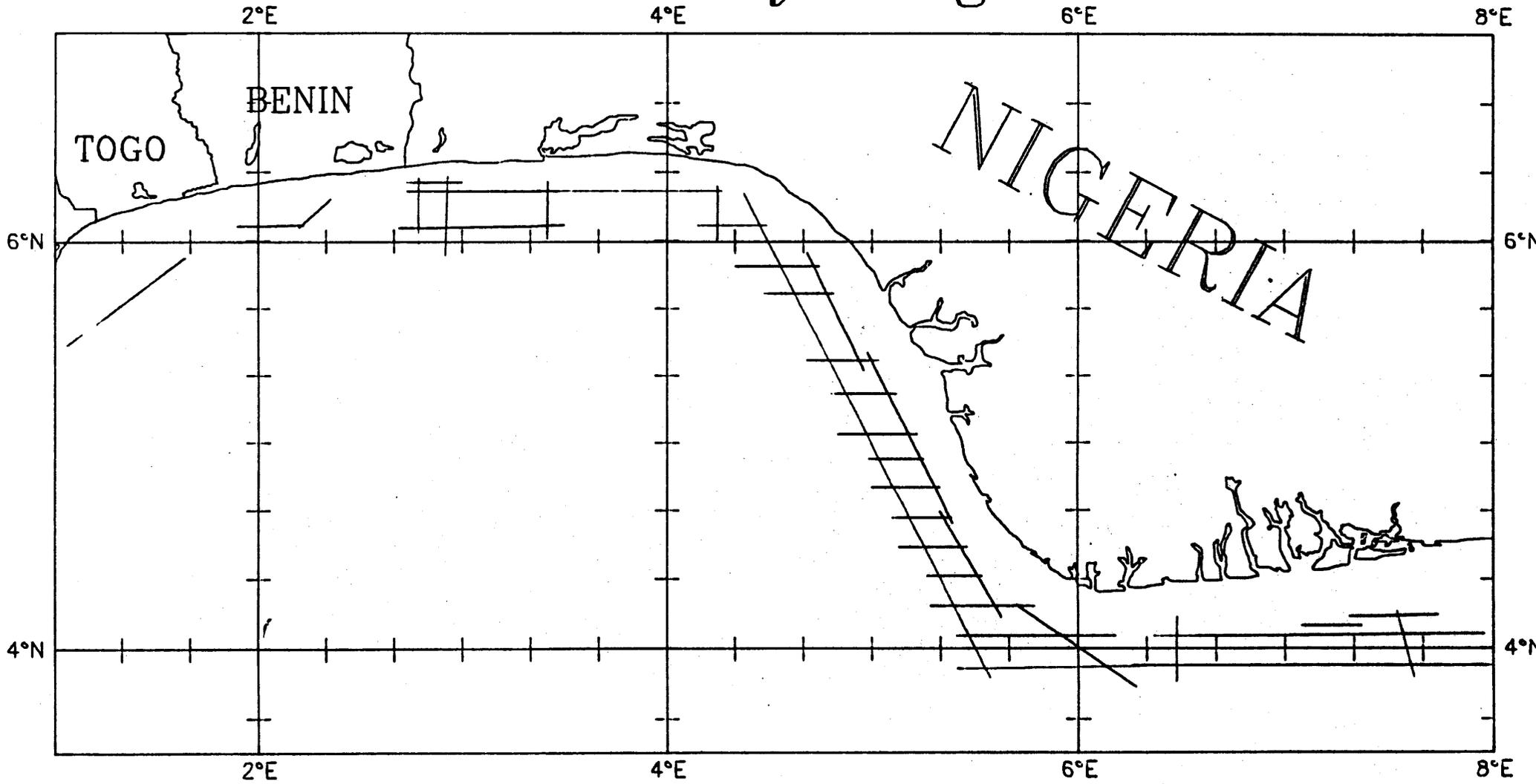
Kilometers steamed: 8701 \* 4834nm

**Narrative:**

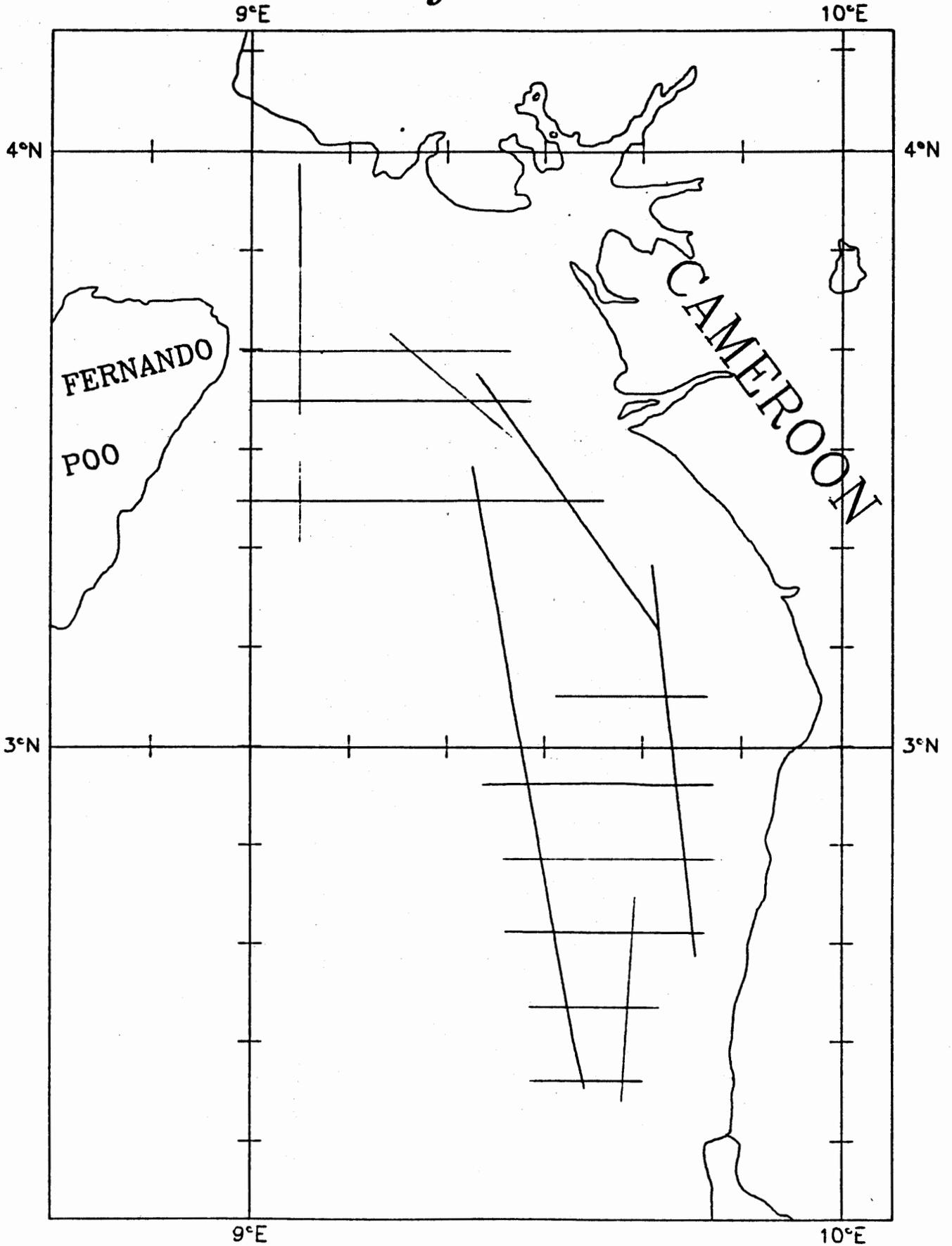
Departed Abidjan, Ivory Coast on 24 Sept. On 25 Sept. resurveyed 2 Ghana lines due to high cross checks. On 26 Sept surveyed 1 Togo line and 1 Benin line and started Nigeria survey. On 5 Oct. completed Nigeria and began Cameroon survey. On 8 Oct. completed Cameroon survey and began Gabon survey. 18 Oct. transit to Douala. 20 Oct. arrived Douala Cameroon for crew change and provisions.

The 810 Sonar/MK 29 Gyro system worked flawlessly as did gravimeters and all gravity processing equipment and software. Many lines had to be cut short on the eastern end due to shoals, or shifted due to restricted oil platform areas.

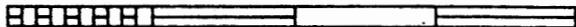
# DMA Gravity - Nigeria



# DMA Gravity - Cameroon



10 0 10 20 30 NAUTICAL MILES



Scale 1:1011400

# DMA Gravity - Gabon

