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United States Department of the Interior

GEOLOGICAL SURVEY

MEMORANDUM

Date: July 17, 1984

From: Jim Robb Jim Robb

Subject: Provisional Cruise Report, EGABRAG II 84-1, Enewetak Project

To: Red Bailey

1. Ship name: R.V. EGABRAG II
2. Cruise number: 84-1
3. Parent project: PEACE (Pacific Enewetak Atoll Crater Exploration)
4. Funding agency: DNA (Defense Nuclear Agency)
5. Funding amount: N/A
6. Contact number: N/A
7. Contract start/end date: N/A
8. Area of operations: Enewetak Atoll, Marshall Islands, Trust Territory of the Pacific Islands (TTPI)
9. Cruise start/end dates, ports: Depart Kwajelein, TTPI, 10 June 84
   Arrive Kwajelein, TTPI, 8 July 84

   In Enewetak Lagoon, 12 June-5 July;
   on survey, following navigation set up
   and area reconnaissance, 19 June-4 July.
10. Chief scientist: David Folger
11. Cruise curator: James Robb
12. Scientific party:

David Folger	geologist	USGS
James Robb	geologist	USGS
Greg Miller	technician	USGS
Ken Parolski	technician	USGS
Dann Blackwood	photographer	USGS

13. Ship's captain: Ray Lee Wilson

14. Purpose of cruise: Geologic investigations of two nuclear craters.

15. Navigation techniques: Motorola Mini-Ranger Falcon-IV system using responder stations on islands of Lojwa (Ursula), Engebi (Janet), Bogallua (Alice), and Biken (Leroy). Navigation is referenced to the Ivy grid, a local, transverse Mercator, x-y grid, in feet, established in 1952. Navigation was performed by Meridian Ocean Systems, Ventura, CA.

16. Scientific equipment employed:
Raytheon 200 kHz echosounder.
Huntec profiling system (500-2500 Hz records).
Klein 100 kHz mapping sidescan-sonar system operated at 100 m range (200 m swath).

17. Tabulated information:

Days at sea: 29	
Bathymetry data along line:	350 km
Sidescan-sonar data along line:	210 km
Sub-bottom profiler (Huntec) data:	115 km

18. Brief description of operation:

This operation was the first of several phases of investigation of two nuclear-test craters, OAK and KOA, in the northern part of Enewetak atoll. Data were acquired in parallel-line grids having nominal line spacings of 26 km (85 ft) for bathymetry, and 76 m (250 ft) for sidescan-sonar and sub-bottom (Huntec boomer) profiles. Tie-line data were also acquired. Additional bathymetric data were acquired by small boat. The ship was operated only during daylight hours because hazards from shallow-water and proximity to the reef required maximum visibility. A mosaic of the sidescan-sonar images was constructed from the field data during the operation. A tide gauge was deployed in each of the craters for bathymetric corrections although only the KOA gauge appears to have operated successfully.

cc: Bill Dillon
Dave Folger
Dave Leeds
Jack Hampson
John Grow
Gail Folger