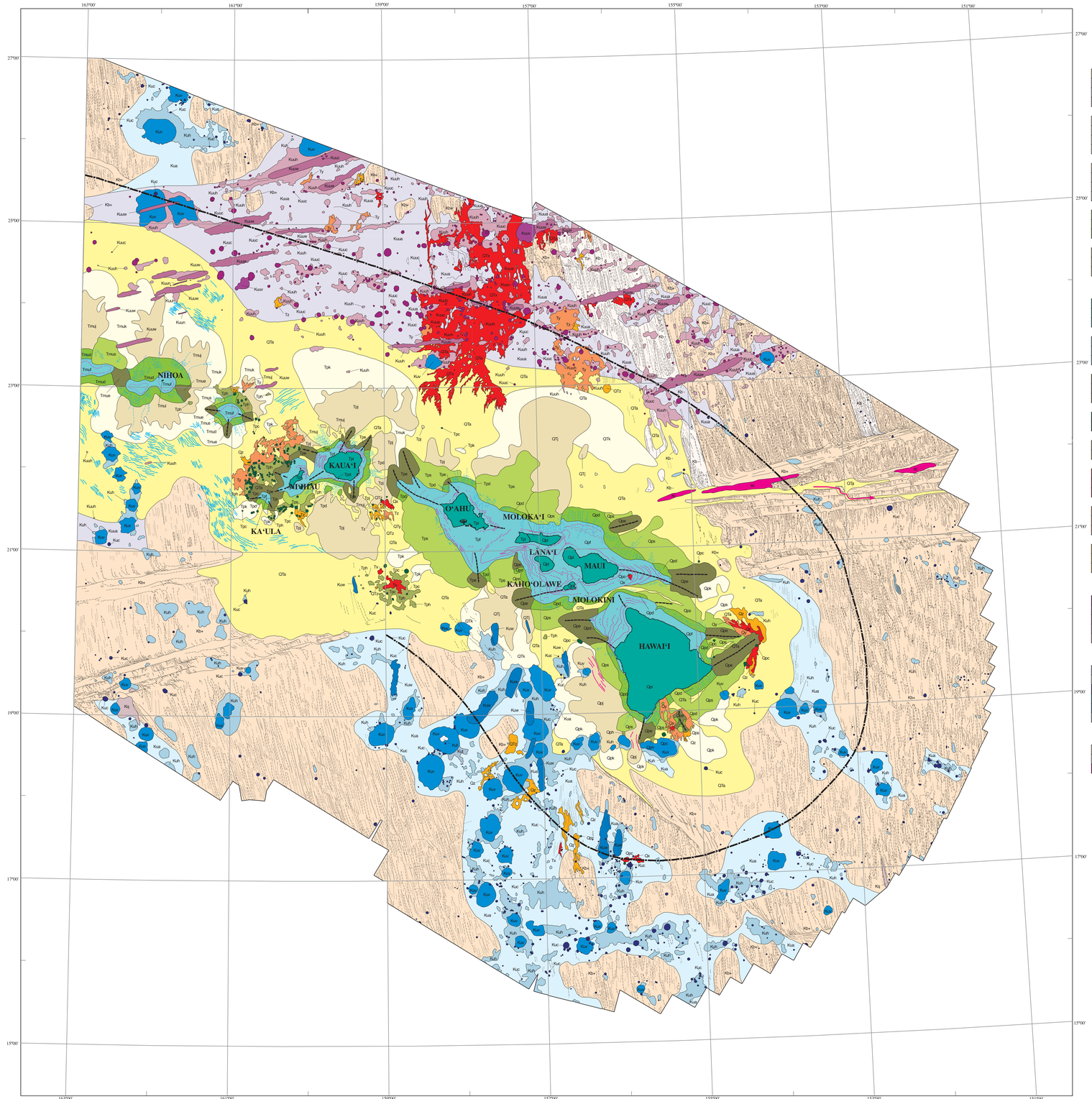
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

SCIENTIFIC INVESTIGATIONS MAP 2824
Pamphlet accompanies map



Lambert Conformal Conic Projection
Standard Parallels 18° N, 29° N
Central Meridian 160° W
Projection Origin 15° N
Spheroid Clarke 1866

NOT TO BE USED FOR NAVIGATION

MAP LOCATION

APPROXIMATE MEAN DECLINATION AT CENTER OF MAP, 2004

SCALE 1:2 000 000
50 0 50 100 150 200 MILES
50 0 50 100 150 200 250 KILOMETERS

Maps of Hawaiian Islands Exclusive Economic Zone Interpreted from GLORIA Sidescan-Sonar Imagery

By

Robin T. Holcomb and Joel E. Robinson

2004

LIST OF MAP UNITS

[See LETTER CODE FOR STRATIGRAPHIC UNITS and DESCRIPTION OF MORPHOLOGIC DIVISIONS in accompanying pamphlet for detailed descriptions of unit labels]

Sedimentary deposits

- QTa — Smooth archipelagic apron (Quaternary and (or) Tertiary)
- Kuua — Smooth apron (latest Cretaceous)
- Kua — Smooth apron (late Cretaceous)
- Kq — Sonar-dark sediment pond (Cretaceous)
- Qpk — Fine debris avalanche (Pleistocene)
- QTk — Fine debris avalanche (Quaternary and (or) Tertiary)
- Tpk — Fine debris avalanche (Pliocene)
- Tmuk — Fine debris avalanche (late Miocene)
- Qps — Coarse debris avalanche (Pleistocene)
- QTj — Coarse debris avalanche (Quaternary and (or) Tertiary)
- Tpj — Coarse debris avalanche (Pliocene)
- Tmuj — Coarse debris avalanche (late Miocene)
- Qpd — Debris flank (Pleistocene)
- Tpd — Debris flank (Pliocene)
- Tmud — Debris flank (late Miocene)
- Qps — Slump (Pleistocene)
- Tps — Slump (Pliocene)
- Tmus — Slump (late Miocene)

Hawaiian volcanism

- Qpc — Present island (Pleistocene)
- Tpc — Present island (Pliocene)
- Tmuc — Present island (late Miocene)
- Qpf — Former island (Pleistocene)
- Tpf — Former island (Pliocene)
- Tmuf — Former island (late Miocene)
- Qpe — Intact flank (Pleistocene)
- Tpe — Intact flank (Pliocene)
- Tmue — Intact flank (late Miocene)
- Qpc — Small central volcano (Pleistocene)
- Tpc — Small central volcano (Pliocene)
- Qph — Undivided volcanic terrain (Pleistocene)
- Tph — Undivided volcanic terrain (Pliocene)
- Qx — Lava field of strong backscatter (Quaternary)
- QTx — Lava field of strong backscatter (Quaternary and (or) Tertiary)
- Tx — Lava field of strong backscatter (Tertiary)
- Qy — Lava field of intermediate backscatter (Quaternary)
- QTy — Lava field of intermediate backscatter (Quaternary and (or) Tertiary)
- Ty — Lava field of intermediate backscatter (Tertiary)
- Qz — Lava field of weak backscatter (Quaternary)
- QTz — Lava field of weak backscatter (Quaternary and (or) Tertiary)
- Tz — Lava field of weak backscatter (Tertiary)

Latest Cretaceous volcanism

- Kuuc — Small central volcano
- Kuuv — Large central volcano
- Kuun — Narrow volcanic ridge
- Kuuw — Wide volcanic ridge
- Kuuh — Undivided volcanic terrain

Late Cretaceous volcanism

- Kul — Landslide deposit
- Kuf — Former island
- Kuc — Small central volcano
- Kuv — Large central volcano
- Kuw — Wide volcanic ridge
- Kuh — Undivided volcanic terrain

Cretaceous lineated seafloor

- Kb+ — Normal magnetic polarity
- Kb- — Reverse magnetic polarity
- Kz — Diapiric ridge (Cretaceous)

MAP SYMBOLS

[See DESCRIPTION OF MAP SYMBOLS in accompanying pamphlet for detailed descriptions of symbols]

- Contact, internal contact denotes individual volcanic centers
- Fault, certain
- Fault, approximately located
- Fault, inferrred
- Levee
- Leveed channel of distal debris avalanche (arrow indicates flow direcion)
- Sediment chute
- Archipelagic streak
- Axis of volcanic rift zone
- Carbonate reef, strong backscatter
- Carbonate reef, weak backscatter
- Carbonate reef, uncertain
- Hawaiian Arch axis

Geology Mapped by Robin Holcomb 1986 - 1996

Digital compilation by Joel E. Robinson, Michael R. Hamer, Molly Gowen Groome, Andrew J. Stevenson, Christina E. Gutmacher, Harry Lucky, Carolyn H. Deghan, Florence L. Wong

Edited by Jan Zigler

Digital cartography by Joel E Robinson

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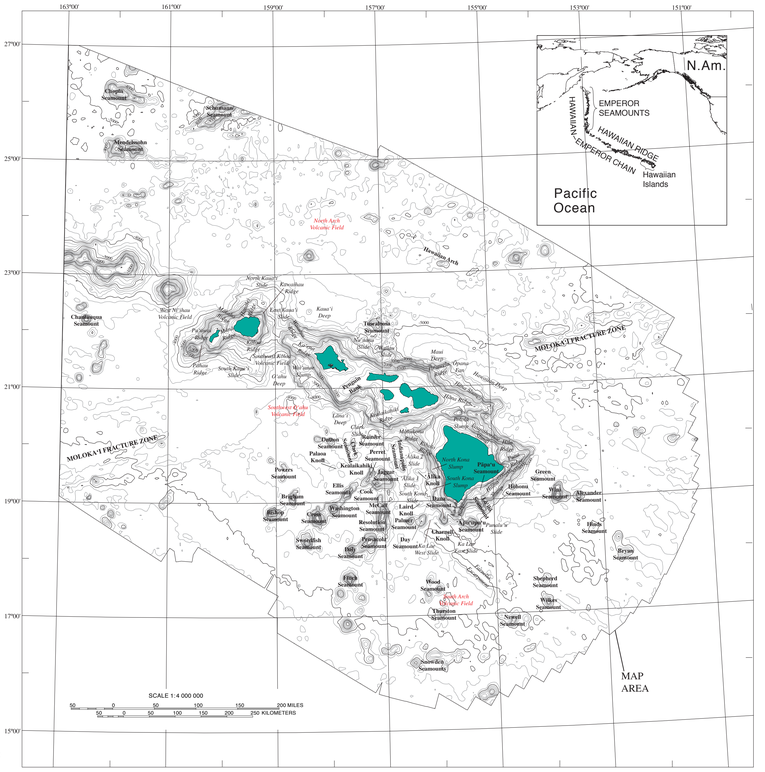
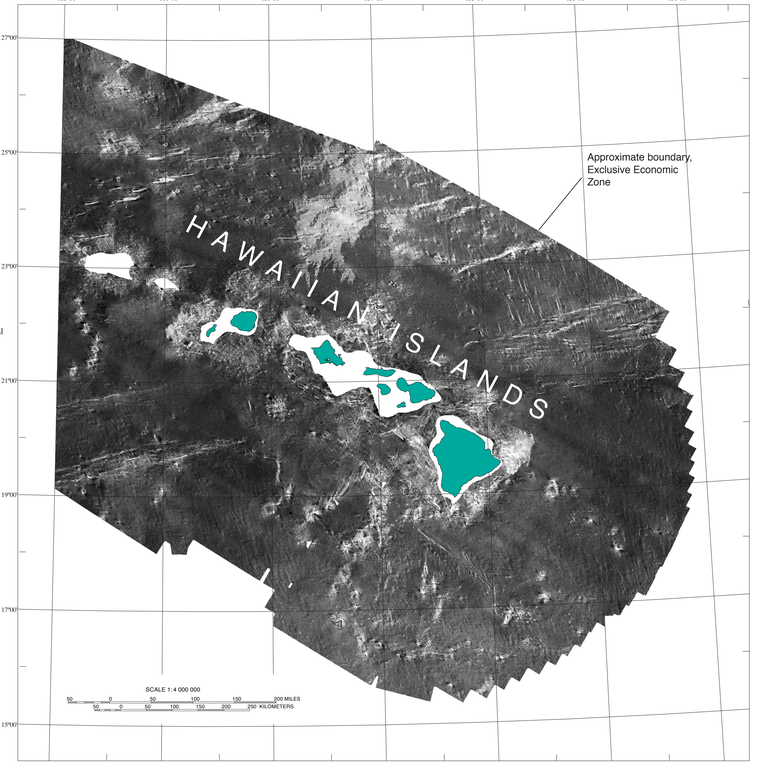


Base from Smith and Sandwell, 1997; http://topex.ucsd.edu/marine_topo/mar_topo.html

Figure 1. Map showing selected geologic features and bathymetric contours (contour interval 250 m) around the Hawaiian Islands. Names in **bold** are officially recognized geographic names; theses in *italics* are names used commonly in scientific literature.



Base from Groome and others, 1997; http://pubs.usgs.gov/of/of97-540/

Figure 2. GLORIA data collected in 1986-1989 from the southeastern Hawaiian Ridge EEZ. The mosaic covers over 1,000,000 km² of sea floor.

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