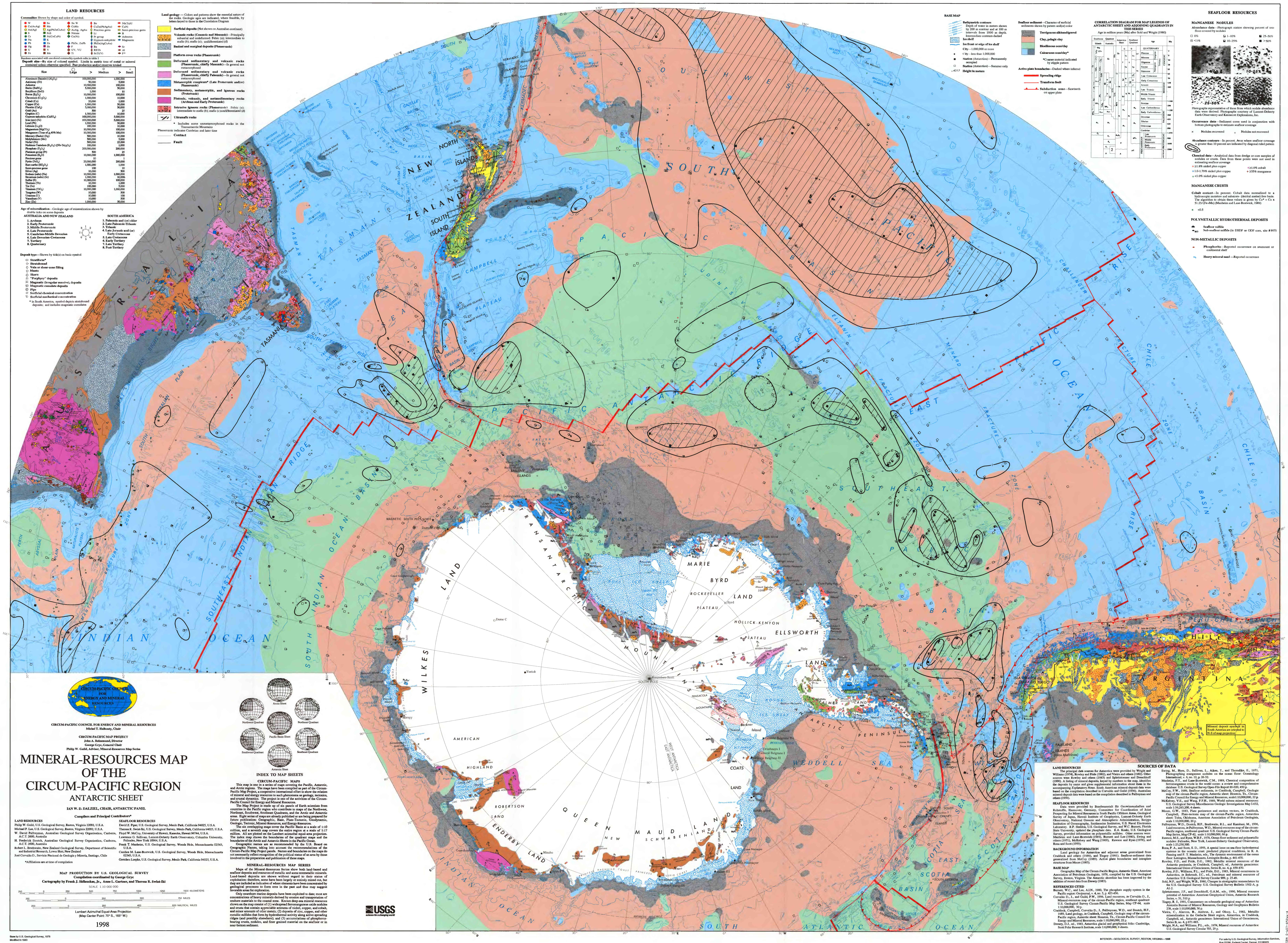
CIRCUM-PACIFIC MAP SERIES
MAP CP-47
Explanatory pamphlet accompanies map

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
Mark Schaefer, Interim Director



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MINERAL-RESOURCES MAP OF THE CIRCUM-PACIFIC REGION

ANTARCTIC SHEET

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MAP PRODUCTION BY U.S. GEOLOGICAL SURVEY
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SCALE 1:10 000 000
250 0 250 500 750 1000 1250 1500 KILOMETERS
250 0 250 500 750 MILES
200 0 200 400 600 NAUTICAL MILES
Lambert Azimuthal Equal-Area Projection
(Map Center Point: 70° S., 165° W.)

1998

Northwest Quadrant
Northeast Quadrant
Pacific Basin Sheet
Southwest Quadrant
Southeast Quadrant
Antarctic Sheet

INDEX TO MAP SHEETS

CIRCUM-PACIFIC MAPS

This map is one in a series of maps covering the Pacific, Antarctic, and Arctic regions. The maps have been compiled as part of the Circum-Pacific Map Project, a cooperative international effort to show the relation of mineral and energy resources to such phenomena as geology, tectonics, and crustal dynamics. The project is one of the activities of the Circum-Pacific Council for Energy and Mineral Resources.

The Map Project is made up of six panels of Earth scientists from countries in the Pacific region who contribute to maps of the Northwest, Northeast, Southwest, Southeast Quadrants, and the Arctic and Antarctic areas. Eight series of maps are already published or are being prepared for future publication: Geographic, Base, Plate-Tectonic, Geodynamic, Geologic, Tectonic, Mineral-Resources, and Energy-Resources.

The six overlapping maps cover the Pacific Basin at a scale of 1:10 million, and a seventh map covers the entire region at a scale of 1:17 million. All are plotted on the Lambert azimuthal equal-area projection. The index map shows the boundaries of the quadrant maps and the boundaries of the Arctic and Antarctic Sheets in the Pacific Ocean.

Geographic names are as recommended by the U.S. Board on Geographic Names, taking into account the recommendations of the Circum-Pacific Map Project panels. Names and boundaries on the maps do not necessarily reflect recognition of the political status of an area by those involved in the preparation and publication of these maps.

MINERAL-RESOURCES MAP SERIES

Maps of the Mineral-Resources Series show both land-based and seafloor deposits and resources of metallic and some nonmetallic minersls. Land-based deposits are shown without regard to their status of exploitation: therefore, some have been largely or entirely mined out, but they are included as indicative of where elements have been concentrated by geological processes to form ores in the past and thus may suggest favorable areas for exploration.

Only nearshore marine deposits have been exploited to date; most are concentrations of heavy minerals derived by erosion and transportation of onshore materials to the coastal zone. Known deep-sea mineral resources shown on the map consist of (1) widespread ferromanganese oxide nodules and crusts that contain appreciable amounts of nickel, copper, and cobalt, and minor amounts of other metals; (2) deposits of zinc, copper, and other metallic sulfides that form by hydrothermal activity along active spreading ridges (and possibly elsewhere); and (3) accumulations of phosphorus-bearing crusts, nodules, and finer grained material on the seafloor or in near-bottom sediment.

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SOURCES OF DATA

LAND RESOURCES

The principal data sources for Antarctica were provided by Wright and Williams (1974), Rowley and Pride (1982), and Vieira and others (1982). Other sources were Rowley and others (1983) and Splettstoesser and Dreschhoff (1990). A listing of mineral deposits, keyed by numbers to the map, identifies the deposits by name and gives supplemental information about them in the accompanying *Explanatory Notes*. South American mineral-deposit data were based on the compilation described in Corvalán and Guild (1996). Australian mineral-deposit data were based on the compilation described in Palfreyman and others (1996).

SEAFLOOR RESOURCES

Data were provided by Bundesanstalt für Geowissenshaften und Rohstoffe, Hannover, Germany, Committee for Coordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas, Geological Survey of Japan, Hawaii Institute of Geophysics, Lamont-Doherty Earth Observatory, National Oceanic and Atmospheric Administration, Scripps Institution of Oceanography, Smithsonian Institution, U.S. Naval Electronics Laboratory. R.P. Sheldon, U.S. Geological Survey, and W.C. Burnett, Florida State University, updated the phosphate data. R.A. Koski, U.S. Geological Survey, provided information on polymetallic sulfides. Other sources were: Manheim and Lane-Bostwick (1989), Burnett and Lee (1980), Ewing and others (1971), McKelvey and Wang (1969), Rawson and Ryan (1978), and Rona and Scott (1993).

BACKGROUND INFORMATION

Land geology for Antarctica and adjacent areas generalized from Craddock and others (1989), and Tingey (1991). Seafloor-sediment data generalized from McCoy (1989). Active plate boundaries and intraplate structures from Moore (1983).

BASE MAP

Geographic Map of the Circum-Pacific Region, Antarctic Sheet, American Association of Petroleum Geologists, 1978, compiled by the U.S. Geological Survey, Reston, Virginia. The Antarctic shoreline has been improved by the addition of recent data from Drewry (1983).

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