GRAVITY AND AEROMAGNETIC MAPS OF THE FISHHOOKS, THE BLACK ROCK, AND THE NEEDLES EYE WILDERNESS STUDY AREAS,
IN GRAHAM AND GILA COUNTIES, ARIZONA

ISOSTATIC RESIDUAL GRAVITY MAPS OF THE FISHHOOKS, THE BLACK ROCK, AND THE NEEDLES EYE WILDERNESS STUDY AREAS,
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EXPLANATION

Isostatic corrections calculated assuming complete local compensation by the Airy-Hilbergen system. Calculations performed by computer (Simpson, Jakub, and Nakley, 1983) out to a radius of 966.7 km from each station using a modification of the nonlinear algorithm proposed by Parker (1974) which uses the fast Fourier transform. Crustal thickness calculated from topography averaged over 5x5 minute compartments (assumed density of topography to be 1.67 g/cc, average crustal thickness of 25 km, and a 0.0 g/cc density contrast between the crust and the mantle). Gravity stations were obtained from existing Defense Mapping Agency (DMA) files and recent U.S. Geological Survey gravity data collected outside of the San Carlos Indian Reservation, Arizona.

References