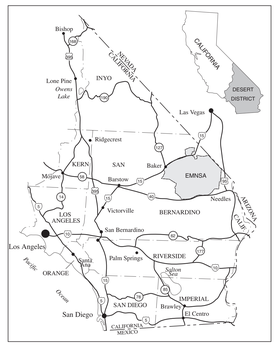
U.S. Department of the Interior
U.S. Geological Survey



INDEX MAP SHOWING LOCATION OF EAST MOJAVE NATIONAL SCENIC AREA (EMNSA)

Base from U.S. Geological Survey, 1:100,000, Davis Dam, 1982; Amboy, Ivanpah, Mesquite Lake, Needles, 1985; Soda Mountains, 1993
Universal Transverse Mercator projection

EXPLANATION

Isostatic residual gravity contours—Contour interval 2 mGal. Hachures indicate closed gravity low. Reduction density 2.67 g/cm^3. Terrain corrections to 167 km. Assumed thickness of normal crust 25 km. Assumed density contrast between crust and upper mantle 0.4 g/cm^3

Gravity station

Quaternary and Tertiary sedimentary rocks and surficial deposits

Quaternary and Tertiary volcanic rocks

Mesozoic plutonic rocks

Mesozoic to Late Proterozoic sedimentary and volcanic rocks

Proterozoic plutonic and metamorphic rocks

Contacts—Faults have been omitted for simplicity

Approximate boundary of Woods Mountains caldera—From McCurry (1988)

Boundary of East Mojave National Scenic Area (EMNSA, this report)

Boundary of Mojave National Preserve (current as of March 2007)

SOURCES OF GRAVITY DATA

Mariano, John, Helferty, M.G., and Gage, T.B., 1986, Bouguer and isostatic residual gravity maps of the Colorado River region, including the Kingman, Needles, Salton Sea, and El Centro quadrangles: U.S. Geological Survey Open-File Report 86–347, 6 sheets, scale 1:250,000; 1 sheet, scale1:750,000.

Snyder, D.G., Roberts, C.W., Saltus, R.W., and Sikora. R.F., 1982, A magnetic tape containing the principal facts of 64,026 gravity stations in the state of California: U.S. Geological Survey NTIS PB–82–168287 (available from U.S. Department of Commerce, National Technical Information Service, Springfield, Virginia 22152).

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 2007

SCALE 1:125 000
2 0 2 4 6 8 10 MILES
2 0 2 4 6 8 10 KILOMETERS
TOPOGRAPHIC CONTOUR INTERVAL 20 AND 50 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Geology generalized from Plate 1 of this report
Digital database by R.J. Miller
Edited by T.A. Lindquist and J.L. Zigler
Digital cartography by R.D. Koch
Manuscript approved for publication September 11, 1996

Isostatic Residual Gravity Map of the East Mojave National Scenic Area, California

By
John Mariano, Robert C. Jachens, and Robert J. Miller
2007

Theodore, T.G., ed., 2007, Geology and mineral resources of the East Mojave National Scenic Area, San Bernardino County, California: U.S. Geological Survey Bulletin 2160

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