DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN-FILE REPORT
81-657

EXPLANATION

Gravity data from Cordell and others (1978 and 1981), and from C. L. Aiken and G. R. Keller (unpublished data).

Data reduced to the Bouguer anomaly and gridded through standard U.S.G.S. computer programs (reduction equations described in Cordell and others, 1981). 1930-71 used as gravity base (Moritz, 1974). Theoretical gravity from the 1967 Reference System formula (International Association of Geodesy, 1971). Reduction density 2.40 g/cm^3. Terrain-corrected for zones between 0.895 and 167 km using digital terrain data and the computer program by Plouff (1977). No terrain correction made closer than 0.895 km to station (Hammer zones A-F).

Contours computer-drawn from a 1 km x 1 km grid. Contour interval 2 milligals. Hachured contours express gravity lows. Small x's represent station localities. Contoured features in areas lacking stations are questionable.

Lambert conic conformal map projection, standard parallels 33° and 45°, central meridian 108°.

REFERENCES

Cordell, Lindrith, G. R. Keller and T. G. Hildenbrand, 1978, Bouguer gravity map of the Rio Grande rift: U.S. Geological Survey Open-File Report 78-958, scale 1:1,000,000.

_____, 1981, Bouguer gravity map of the Rio Grande rift: U.S. Geological Survey Geophysical Investigations Map GP-949, scale 1:1,000,000.

International Association of Geodesy, 1971, Geodetic Reference System 1967: International Association of Geodesy Special Publication, no. 3, 116 p.

Moritz, H., (Ed.), 1974, The International Gravity Standardization Net 1971: International Association of Geodesy Special Publication, no. 4, 194 p.

Plouff, D., 1977, Preliminary documentation for a FORTRAN program to compute gravity terrain corrections based on topography digitized on a geographic grid: U.S. Geological Survey Open-File Report 77-535, 45 p.

38° 00'
37°30'
37°00'
36°30'
36°00'
35°30'
35°00'
34°30'
34°00'
110°00'
109°30'
109°00'
108°30'
108°00'
107°30'
107°00'
106°30'
106°00'

BOUGUER GRAVITY MAP OF THE SAN JUAN BASIN AREA, COLORADO, ARIZONA, AND NEW MEXICO

BY

V. J. SUITS AND LINDRITH CORDELL

1981

SCALE 1:500000

10 0 10 20 30 40 50 MILES

10 0 10 20 30 40 50 KILOMETERS