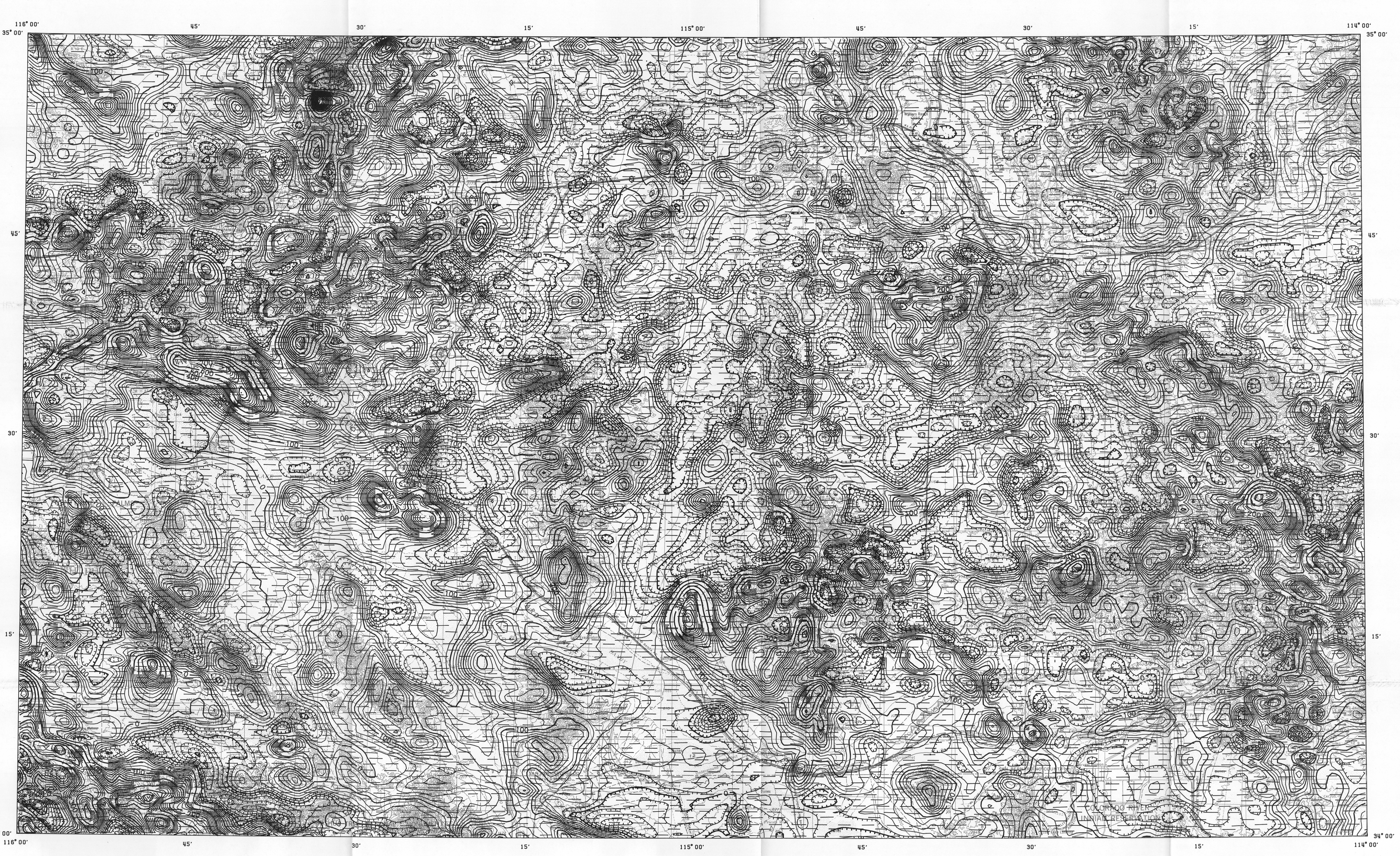
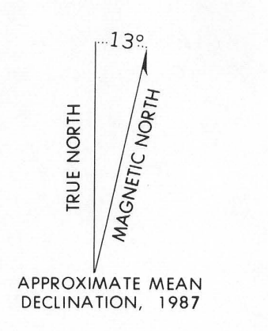
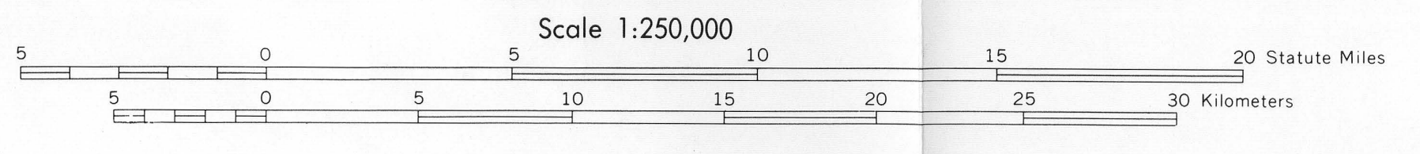
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF–2023
SHEET 3 OF 3


116° 00'
45'
30'
15'
115° 00'
45'
30'
15'
114° 00'
35° 00'
45'
30'
15'
34° 00'
100
200
0

Base from U.S. Geological Survey, Needles, 1956
Universal Transverse Mercator projection

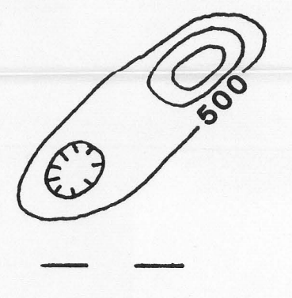

13°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1987


Scale 1:250,000
5 0 5 10 15 20 Statute Miles
5 0 5 10 15 20 25 30 Kilometers

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
TRANSVERSE MERCATOR PROJECTION
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

MERGED AEROMAGNETIC MAP, NEEDLES QUADRANGLE



EXPLANATION

MAGNETIC CONTOURS : Contours show total residual magnetic intensity of the earth's field in nanoteslas (nT). Hachures indicate direction of decreasing intensity within closed magnetic lows. Contour interval is 20 nT with index contours at 100 nT.

FLIGHT PATH : Showing location and spacing of data. Flight paths are not shown where line spacing is less than 0.80 km.

Blank areas represent regions with no data coverage.

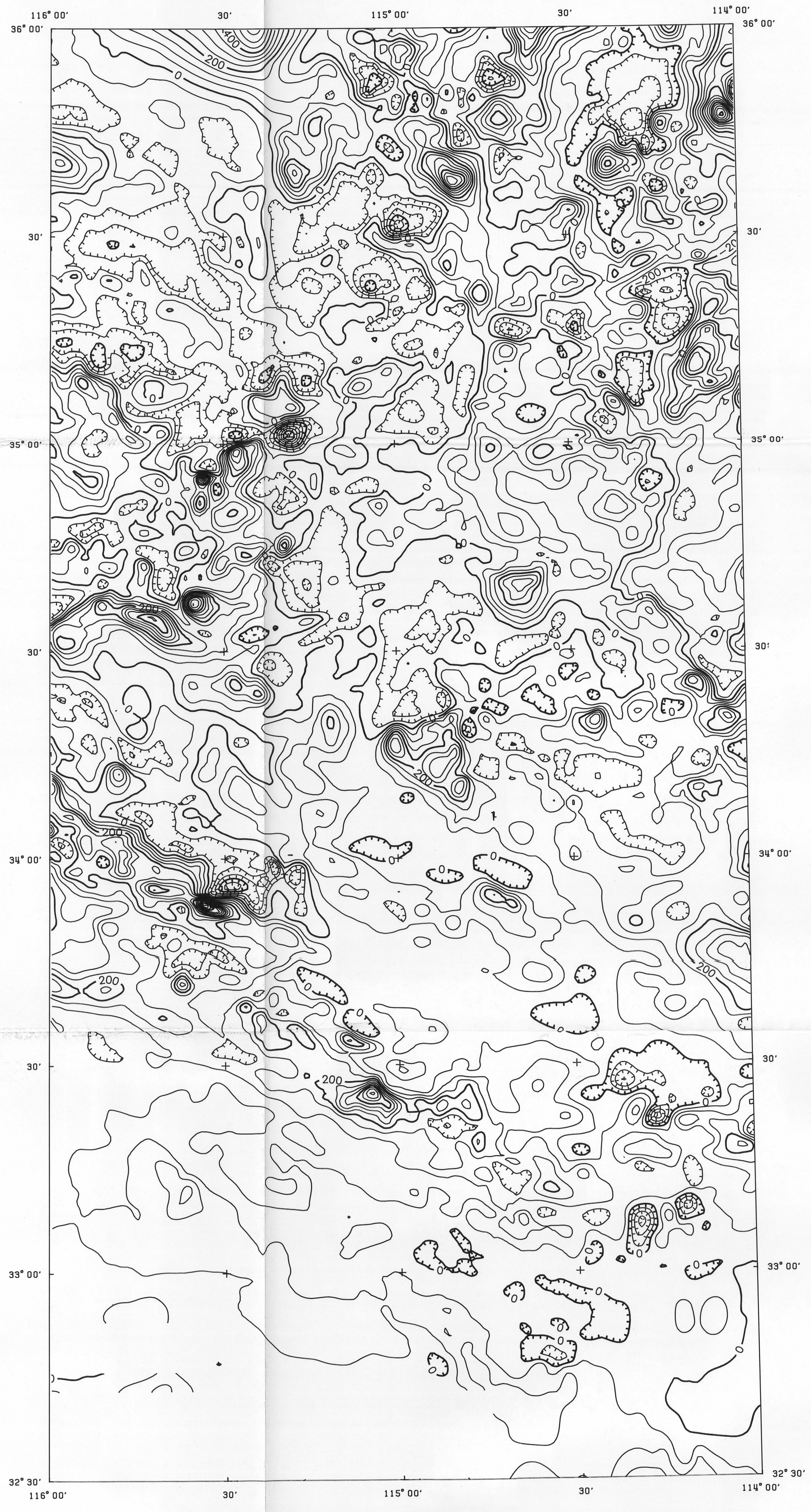
This map is an aeromagnetic map of the Needles 1° by 2° quadrangle compiled from a single survey flown during March, 1980 (U.S. Geological Survey, 1981). Total intensity magnetic data were collected along east-west oriented flight lines spaced approximately 0.80 km apart. The survey was flown at an average height of 305 meters above the terrain.

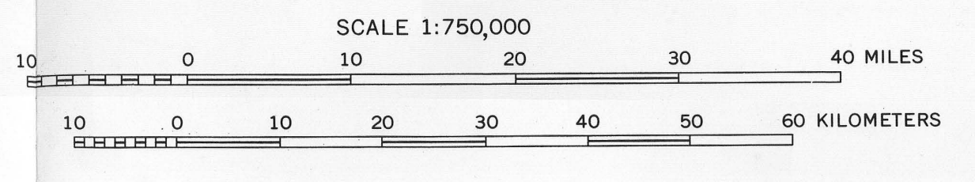
Residual magnetic anomalies were generated by subtracting the International Geomagnetic Reference Field (IGRF) (updated to the date flown) (Peddie,1983) from the data. The final map was contoured by computer at a 20 nT interval using a grid with an interval of 1 km.

References cited

Peddie, N.W., 1983, International geomagnetic reference field--its evolution and the difference in total field intensity betwwen new and old models for 1965-1980: Geophysics, V.48, no.12, p.1691-1696.

U. S. Geological Survey, 1981, Aeromagnetic map of the Needles 1° x 2° quadrangle, California and Arizona, U.S. Geological Survey Open-File Report 81-85, scale 1:250,000.


116° 00'
30'
115° 00'
30'
114° 00'
36° 00'
30'
35° 00'
30'
34° 00'
30'
33° 00'
32° 30'
400
200
0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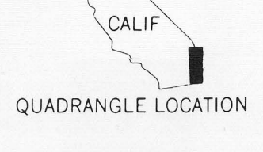
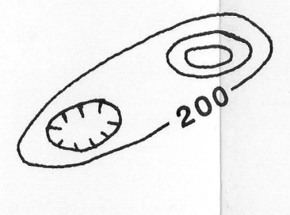
10 0 10 20 30 40 50 60 KILOMETERS


CALIF
QUADRANGLE LOCATION

MOSAICKED AEROMAGNETIC MAP, KINGMAN, NEEDLES, SALTON SEA, AND EL CENTRO QUADRANGLES



MAGNETIC CONTOURS : Contours show total residual magnetic intensity of the earth's field in nanoteslas (nT). Hachures indicate direction of decreasing intensity within closed magnetic lows. Contour interval is 50 nT with index contours at 200 nT.

Blank areas represent regions with no data coverage.

This map is a mosaic of the merged aeromagnetic maps of the Kingman, Needles, Salton Sea, and El Centro quadrangles. The data were gridded with an interval of 1 km and then upward continued 1 km to produce a regionally continous data set. The upward continuation, using the standard upward continuation filter in the Fourier transform domain, is not strictly valid because the observations lie on a nonplanar surface, but the distortions are judged to be small, and the result yields a map that enhances regional features. The final map was contoured by computer at an interval of 50 nT.

AEROMAGNETIC MAPS OF THE COLORADO RIVER REGION INCLUDING THE KINGMAN, NEEDLES, SALTON SEA, AND EL CENTRO 1^0 by 2^0 QUADRANGLES, CALIFORNIA, ARIZONA, AND NEVADA

By

John Mariano and V.J.S. Grauch