

NOTES ON BASE
This is one map in a series of topographic map sheets covering the entire surface of Mars at nominal scales of 1:2,500,000 and 1:5,000,000 (Barton, 1973). The major source of map data was the Mariner 9 television experiment (Mausury and others, 1970).

ADOPTED FIGURE
The figure of Mars used for the computation of the map projection is an oblate spheroid (flattening of 1/192) with an equatorial radius of 3393.4 km and a polar radius of 3275.7 km.

PROJECTION
The Lambert conformal conic projection is used for this sheet with standard parallels at 35.8° and 59.2°. A scale of 1:4,336,000 at lat 30° was chosen to match the scale at lat 30° of the adjacent Mercator projection. Longitudes increase to the west in accordance with usage of the International Astronomical Union (IAU, 1971). Latitudes are areographic (de Vanousoirs and others, 1973).

CONTROL
Planimetric control is provided by photogrammetric triangulation using Mariner 9 pictures (Davies, 1972; Davies and Arthur, 1973) and the radio-tracked position of the spacecraft. The first meridian passes through the crater Airy-0 (lat 5.19° S) within the crater Airy. No simple statement is possible for the precision of local consistency is about 10 km.

MAPPING TECHNIQUE
A series of mosaics of Lambert conformal conic projections of Mariner 9 pictures was assembled at 1:5,000,000.

Shaded relief was copied from the mosaics and portrayed with uniform illumination with the sun to the west. Many Mariner 9 pictures besides those in the base mosaic were examined to improve the portrayal (Levinthal and others, 1973). The shading is not generalized and may be interpreted with photographic reliability (figs. 1972).

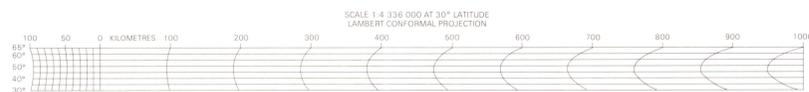
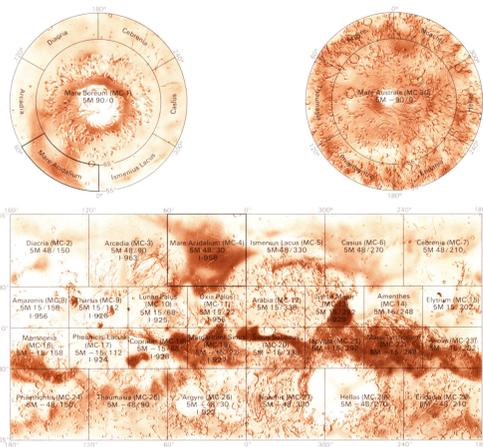
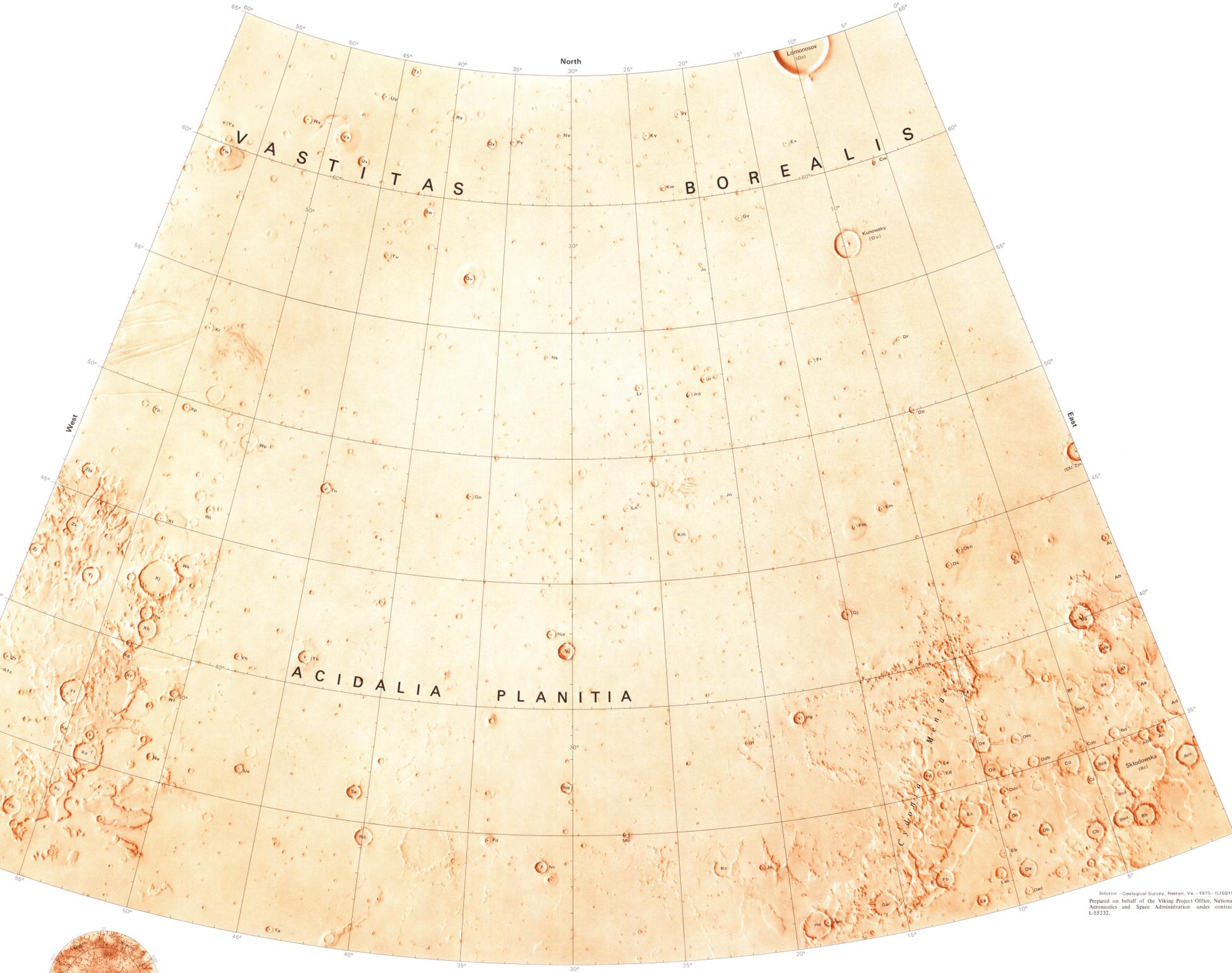
Shaded relief analysis and representation were made by Jay L. Inge.

COLOR
No attempt was made on the map to precisely duplicate the color of the Martian surface, although the color used does approximate it.

NOMENCLATURE
Names on this sheet are provisional, except for the following which has been approved by the International Astronomical Union (1974): Acidalia Planitia. Named craters bearing double letters in parentheses are designated by the same letters on the 1:5,000,000 Mare Acidalium sheet which covers this area. The prefix ACI identifying the Mare Acidalium sheet is part of the complete designation but, for brevity, is not shown on most craters.

MC-4 Abbreviation for Mars Chart 4.
M 5M 48/30 R Abbreviation for Mars 1:5,000,000 series; center of sheet, 48° latitude, 30° longitude; shaded relief map, R.

REFERENCES
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INDEX TO MARINER 9 PICTURES
The mosaic used to control the positioning of features on this map was made with the Mariner 9 A-camera pictures outlined above.

Index No.	Grid No.	Index No.	Grid No.
1	9200124	14	8029054
2	9200224	15	8029054
3	9102244	16	8029054
4	8090224	17	8029054
5	8084224	18	8131154
6	8084224	19	8131154
7	8074224	20	1201700
8	9200124	21	1201700
9	8090224	22	1201700
10	8090224	23	1201700
11	8010224	24	1201700
12	8084224	25	1201700
13	8084224	26	1201700
14	8074224	27	1201700

SHADED RELIEF MAP OF THE MARE ACIDALIUM QUADRANGLE OF MARS
MC-4
M 5M 48/30 R
1975

For sale by U.S. Geological Survey
Denver, Colo. 80225; and Reston, Va. 22092; Price \$1.00

Mars (Mare Acidalium quad). Relief. 1:5,000,000. 1975.
Fig. 1

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I-758
Fig. 1

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