

NOTES ON BASE
This is one map in a series of topographic map sheets covering the entire surface of Mars at nominal scales of 1:2500000 and 1:5000000 (Barton, 1973, 1974). The major sources of map data were the Mariner 9 television experiment (Maurasy and others, 1970) and Viking Orbiter pictures.

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 3395.8 km and a polar radius of 3375.7 km.

PROJECTION
The Lambert conformal conic projection is used for this sheet with standard parallels at -35.6° and -52.2°. A scale of 1:4336000 at lat -30° was chosen to match the scale at lat -30° of the adjacent Mercator projections. Longitudes increase to the west in accordance with usage of the International Astronomical Union (IAU, 1973). Latitudes are areographic (de Vaucouleurs and others, 1973).

CONTROL
Planimetric control is provided by photogrammetric triangulation using Mariner 9 pictures (Davies, 1973; Davies and Arthur, 1973) and the radio-tracked position of the spacecraft. The first meridian passes through the crater Atrio-O (lat -5.1°P) within the crater Atrio. No simple statement is possible for the precision, but local consistency is about 10 km.

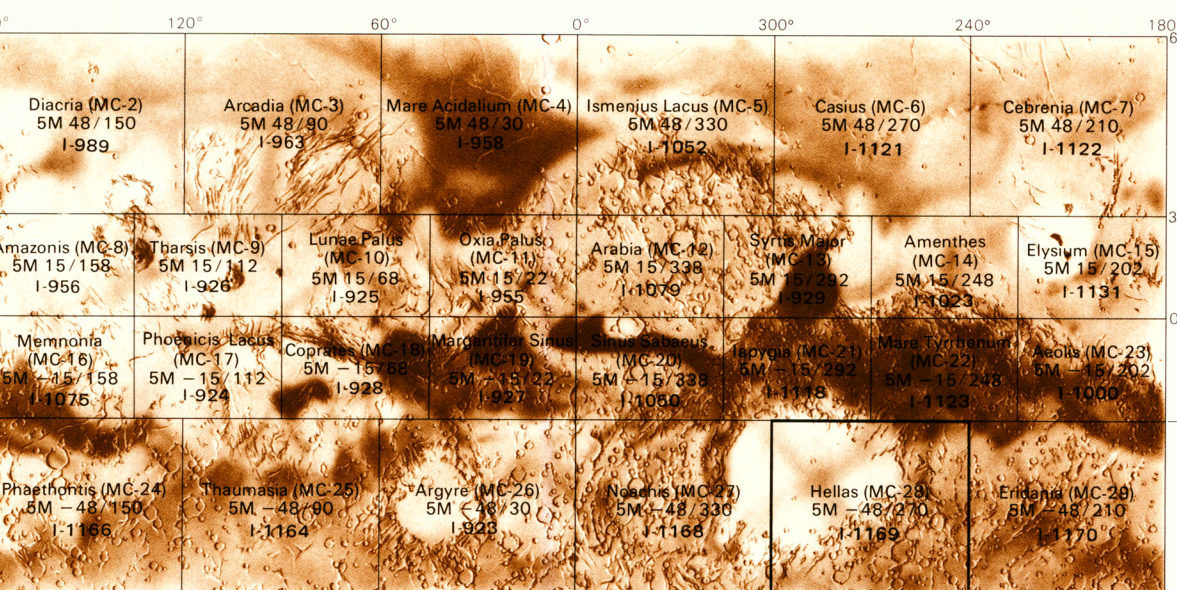
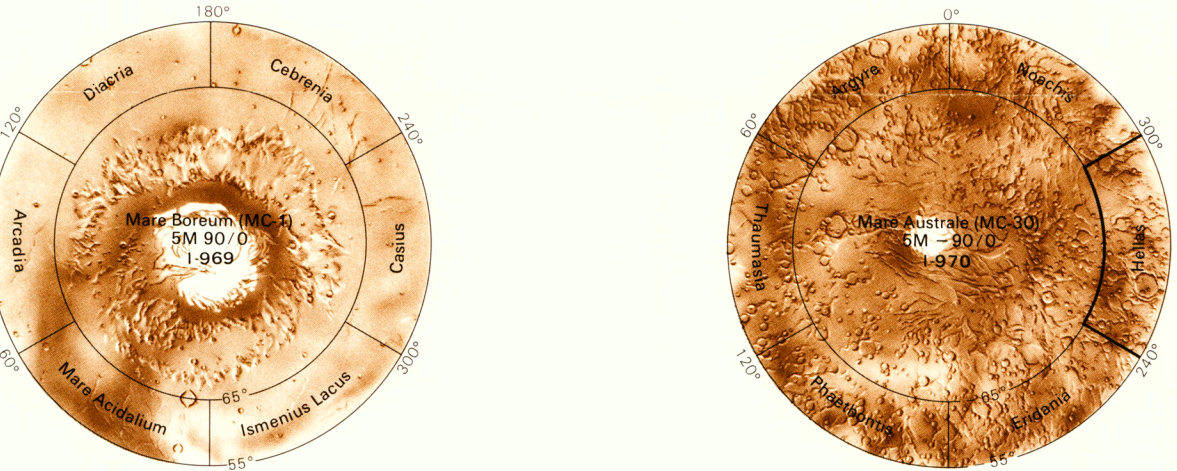
MAPPING TECHNIQUE
A series of mosaics of Mariner 9 pictures was assembled at 1:5000000, on Lambert conformal conic projections. Shaded relief was portrayed with uniform illumination with the sun to the west, using airbrush techniques described by Inge (1972) and Inge and Bridges (1976). Size, shape, and position of features were taken from the base mosaic. Computer enhancements of many Mariner 9 and Viking Orbiter pictures besides those in the base mosaic were examined in an attempt to portray the surface as accurately as possible. (Computer enhancement of Mariner 9 pictures is described by Levintal and others, 1973, and Green and others, 1973.)

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

NOMENCLATURE
All names on this sheet are approved by the International Astronomical Union (IAU, 1974, 1980). Double and triple letter designations for craters refer to position on the map and are derived from a grid based on equidistant meridians and parallels, the alphabet (I and O omitted) runs in the direction of increasing longitude (W) and latitude (N). The complete designation of a crater is the name of the quadrangle followed by double or triple letters. The prefix HEL (identifying the Hellas quadrangle) is part of the complete designation but, for brevity, is not shown on most craters. Some craters have commemorative names; letter designations for these craters are shown in parentheses. Where craters lie exactly on the boundary of two maps, their letters are derived from the eastern or southern map.

MC-28 Abbreviation for Mars Chart 28.
M 5M-48/270 R: Abbreviation for Mars 1:5000000 series, center of sheet, lat -48°, long 270°; shaded relief map, R.

REFERENCES
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QUADRANGLE LOCATION
Number preceded by 1 refers to published shaded relief map.

Shaded features from International Planetary Photographic Library, Lowell Observatory Flagstaff, Ariz.

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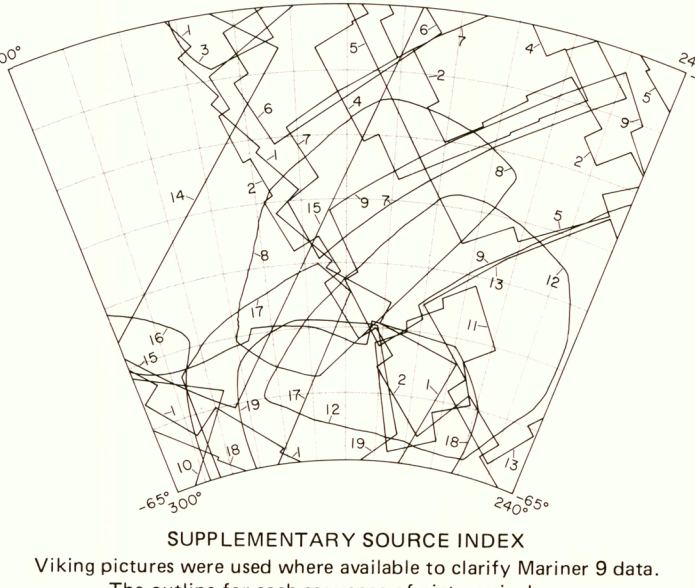
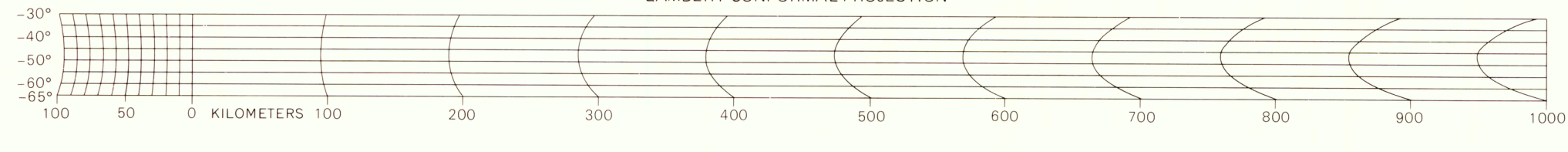
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NOTE TO USERS
Users noting errors or omissions are urged to indicate them on the map and to forward it to Astrogeologic Studies, Geologic Division, 2285 North Gemini Drive, Flagstaff, Arizona 86001. A replacement copy will be returned.



SUPPLEMENTARY SOURCE INDEX
Viking pictures were used where available to clarify Mariner 9 data. The outline for each sequence of pictures is shown.

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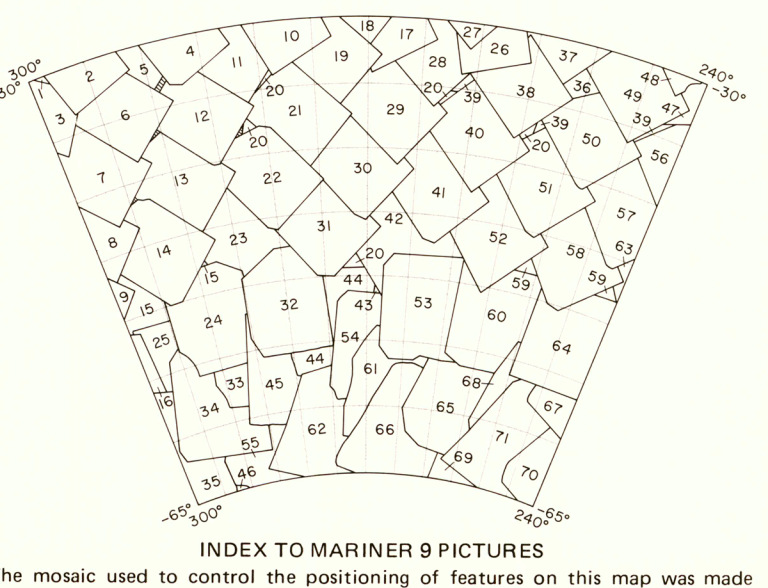
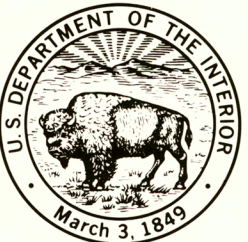
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VIKING 1				VIKING 2			
Index No.	Picture No.	Index No.	Picture No.	Index No.	Picture No.	Index No.	Picture No.
1	95A29	1	95A71	2	97A50	4	97A76
2	95A30	2	95A81	3	97A51	5	97A77
3	95A31	3	95A82	4	97A52	6	97A78
4	95A32	4	95A83	5	97A53	7	97A79
5	95A33	5	95A84	6	97A54	8	97A80
6	95A34	6	95A85	7	97A55	9	97A81
7	95A35	7	95A86	8	97A56	10	97A82
8	95A36	8	95A87	9	97A57	11	97A83
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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. Useful coverage is not available in the crosshatched areas. The DAS number may vary slightly locally by 61 among various versions of the same picture.

The mosaic used to control the positioning of features on this map was made with the Mariner 9 A-camera pictures outlined above. Useful coverage is not available in the crosshatched areas. The DAS number may vary slightly locally by 61 among various versions of the same picture.

The mosaic used to control the positioning of features on this map was made with the Mariner 9 A-camera pictures outlined above. Useful coverage is not available in the crosshatched areas. The DAS number may vary slightly locally by 61 among various versions of the same picture.