

NOTES ON BASE

This is one map in a set of topographic map sheets covering areas of special interest on Mars at nominal scale of 1:1,000,000 and 1:250,000 (Rosen, 1973). The major source of map data was the Mariner 9 television experiment (Marsky and others, 1970).

ADOPTED FIGURE

The figure of Mars used for the computation of the map projection is an oblate spheroid of 1952 with an equatorial radius of 3393.4 km and a polar radius of 3375.7 km.

PROJECTION

The transverse Mercator projection is used for this sheet, with a scale of 1:1,000,000 at 25° longitude. Longitudes increase to the west in accordance with usage of the International Astronomical Union (IAU, 1971). Latitudes are geographic (de Vancouleurs 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 Airy-0 (latitude 51° S) within the crater Airy. No simple statement is possible for the precision, but local consistency is 2 km.

MAPPING TECHNIQUE

A mosaic of rectified Mariner 9 pictures was assembled at 1:1,000,000. Shaded relief was compiled from the mosaic 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 (Levitt and others, 1973). The shading is not generalized and may be interpreted with photographic clarity (Hoge, 1972). Shaded relief analysis and representation were made by Patricia M. Bridges.

COLOR

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

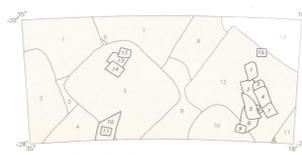
NOMENCLATURE

Names on this sheet are provisional, except for the following which has been approved by the International Astronomical Union (1974). Roman numerals bearing double letters in parentheses are designated by the same letters on the 1:500,000 Margaritifer Sinus sheet which covers the area. The prefix MAR- identifying the Margaritifer Sinus sheets is part of the complete designation list, or brevity, is not shown on most stars.

M IM -24/26 R. Abbreviation for Mars, 1:1,000,000 series; center of sheet, 24° S latitude, 26° longitude; shaded relief map, R.

REFERENCES

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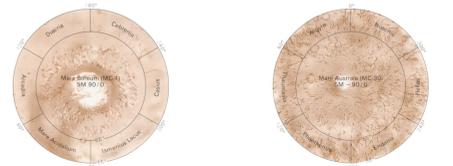
INDEX TO MARINER 9 PICTURES

The mosaic used to compile the positioning of features on this map was made with the Mariner 9 A camera pictures outlined above. Pictures other than those shown in the mosaic were used for portrayal in the unshaded areas.

Table with 2 columns: 'A camera pictures' and 'High resolution B camera pictures'. Each column lists picture numbers and their corresponding coordinates.



MAP OF THE MARGARITIFER SINUS QUADRANGLE SHOWING LOCATION OF THE ERYTHRAEUM REGION



QUADRANGLE LOCATION
Arrow indicates map area.

SHADED RELIEF MAP OF THE ERYTHRAEUM REGION OF MARS

M IM -24/26 R
1975