

DEPARTMENT OF THE INTERIOR  
UNITED STATES GEOLOGICAL SURVEY

**NOTES ON BASE**  
This is one map in a series of topographic map sheets covering the entire surface of Mars at nominal scales of 1:25,000,000 and 1:5,000,000 (Baton, 1973). The major source of map data was the Mariner 9 television experiment (Masursky 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 3375.7 km.

**PROJECTION**  
The Mercator projection is used for this sheet, with a scale of 1:5,000,000 at the equator and 1:4,336,000 at lat 30°. Longitudes increase to the west in accordance with usage of the International Astronomical Union (IAU, 1971). Latitudes are areographic (de Vaucouleurs 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 Ary-O (lat 5.19° S) within the crater Ary. 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 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 (Inge, 1973). 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.

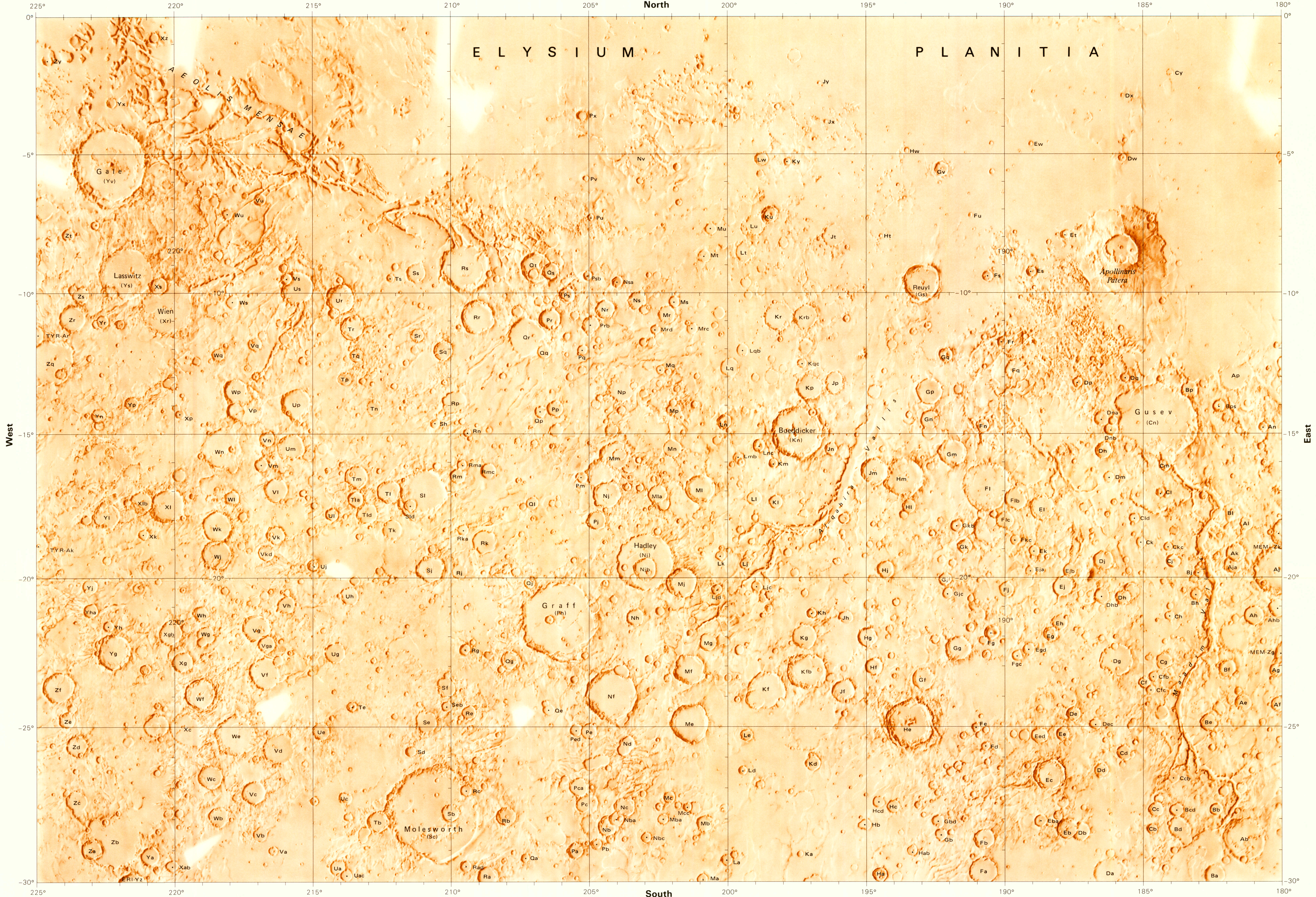
**NOMENCLATURE**  
All names on this sheet are approved by the International Astronomical Union (IAU, 1974), except the following names which are proposed: Aeolis Mensae, Gueve, Lasswitz and Wien. Double and triple letter designations for craters refer to position on the map. Some craters have commemorative names: letter designations for these craters are shown in parentheses. Where craters lie mostly on an adjoining map, their letters are derived from the other map; where craters lie exactly on the boundary of two maps, their letters are derived from the eastern or southern map.

**REFERENCES**  
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Masursky, Harold, Baton, R. M., Borgeson, W. T., Carr, M. H., McCauley, J. E., Milton, D. J., Wides, R. L., Wilhelms, D. E., Murray, B. C., Horowitz, N. H., Leighton, R. B., Sharp, R. V., Thompson, T. W., Briggs, G. A., Chaverson, P., Shipley, E. N., Sagan, Carl, Pollack, J. B., Lederberg, Joshua, Levinthal, E. C., Hartmann, W. K., McCord, T. B., Smith, R. A., Davies, M. E., de Vaucouleurs, G. D., and Leovy, C. B., 1970. Television experiment for Mariner Mars 1971: Icarus, v. 12, no. 1, p. 10-45.  
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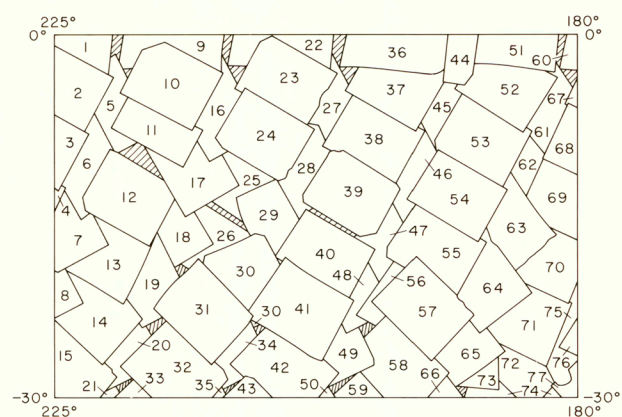
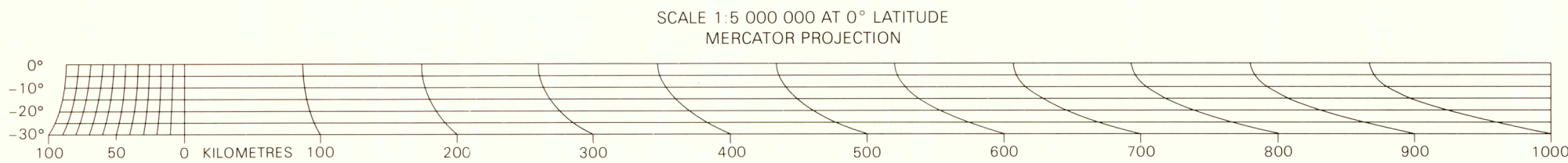
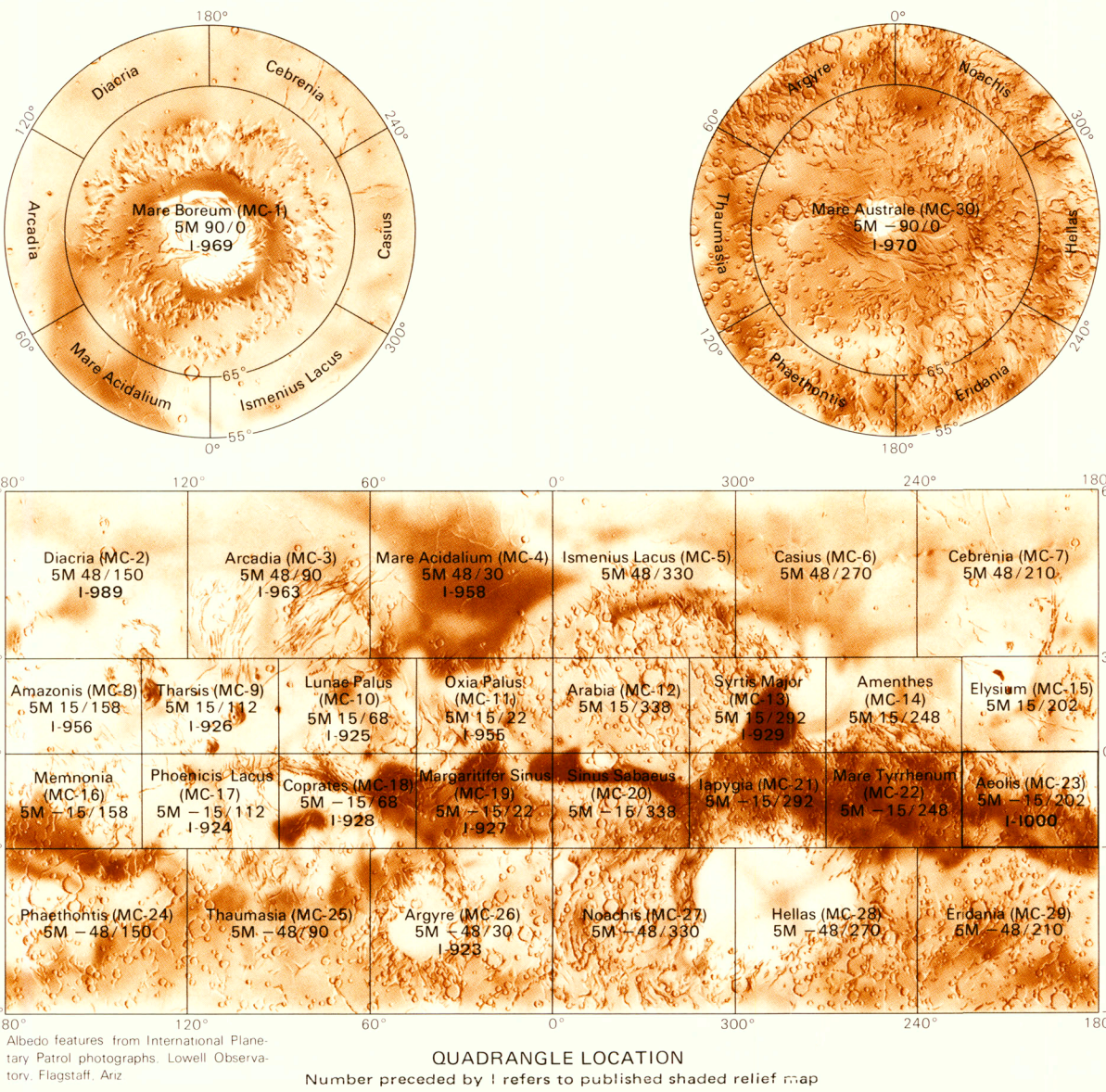
Abbreviation for Mars Chart 23, M 5M-15/202R: Abbreviation for Mars 1:5,000,000 series center of sheet, 15° S latitude, 202° longitude; shaded relief map, R.

Prepared in Cooperation with the  
JET PROPULSION LABORATORY CALIFORNIA INSTITUTE OF TECHNOLOGY  
FOR THE LANGLEY RESEARCH CENTER  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ATLAS OF MARS  
1:5,000,000 TOPOGRAPHIC SERIES  
AEOLIS QUADRANGLE  
M 5M-15/202 R, 1976  
1:1000 (MC-23)



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Prepared on behalf of the Viking Project Office, National  
Aeronautics and Space Administration under contract L-55232



A camera pictures					
Index No.	DAS No.	Index No.	DAS No.	Index No.	DAS No.
1	7850823	27	9268809	53	7937863
2	7750472	28	9268809	54	7937863
3	7850803	29	9268809	55	7937863
4	7850823	30	9268809	56	7937863
5	9125169	31	6398893	57	6344773
6	9125099	32	6398893	58	6344773
7	9125029	33	6398893	59	6344773
8	9125099	34	9268809	60	6344773
9	7722712	35	9268809	61	8099713
10	7722363	36	7866493	62	8099713
11	7722363	37	7866493	63	8099713
12	7722363	38	7866493	64	8099713
13	7722363	39	7866493	65	8099713
14	6319003	40	7866493	66	8099713
15	6319003	41	7866493	67	8099713
16	9187009	42	6462713	68	6608013
17	9186809	43	6462713	69	6608013
18	9186819	44	1232631	70	6006773
19	9186809	45	9340509	71	9340509
20	9186779	46	9340509	72	9340509
21	9186779	47	9340509	73	9340509
22	7784803	48	9340509	74	9340509
23	7784293	49	9340509	75	9340509
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25	7784113	51	7938363	77	9275773
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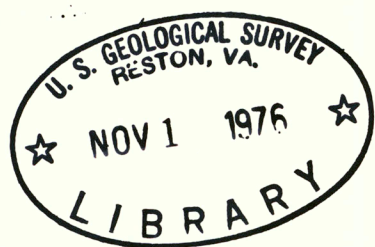
**INDEX TO MARINER 9 PICTURES**  
The mosaic used to control the positioning of features on this map was made with the Mariner 9 A camera pictures outlined above. Useful coverage is not available in some cross hatched areas. Pictures other than those shown in the mosaic were used for portrayal in the other cross-hatched areas.

## SHADED RELIEF MAP OF THE AEOLIS QUADRANGLE OF MARS

MC-23

M 5M-15/202 R  
1976

For sale by U.S. Geological Survey,  
Denver, CO. 80225; and Reston, VA. 22092, price \$1.00



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