DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

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
1:250,000 TOPOGRAPHIC SERIES
CANBERRA REGION
M 250 K 48/226 CM, 1977
I-1060

NOTES ON BASE

This is one photomosaic in a set of topographic map sheets covering areas of special interest on Mars at nominal scales of 1:1,000,000 and 1:250,000 (Batson 1973, 1976). The major source of map data was the Viking 1 spacecraft.

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 transverse Mercator projection is used for this sheet, with a scale of 1:250,000. Longitudes increase to the west in accordance with the usage of the International Astronomical Union (IAU, 1971). Latitudes are areographic (de Vaucouleurs and others, 1973). The first meridian passes through the crater Airy-O (lat. 5.19° S) within the crater Airy.

CONTROL

Planimetric control was derived from the primary network (Davies, 1973). Two Mariner 9 frames (DAS 11976589 and DAS 11976729) were transformed and scaled to the transverse Mercator projection and fitted to the Mariner 9 control net. The placement of Viking 1 frames shown in the index was controlled by matching images on the Viking 1 and Mariner 9 frames.

IMAGE PROCESSING

Six Viking 2 frames were specially processed and mosaicked in the computer. Processing included artifact and noise removal, contrast enhancement and spatial filtration to remove camera shading and to enhance fine details in the image.

NOMENCLATURE

Names on this sheet are proposed, except for the following which has been approved by the International Astronomical Union (1974): Utopia Planitia.

The Viking mission was planned, in part, to honor the bicentennial celebration of the United States of America (1776-1976) and the names chosen for the two Viking maps at a scale of 1:250,000 honor this event. Names on the first Viking landing site map commemorate the thirteen American colonies and the ports and countries that traded with them and from which expeditions originated in 1776. Names on the second Viking landing site map honor the launch facilities, tracking stations, and mission control centers concerned with the exploration of space in 1976, including the Viking mission.

NAME	TYPE	COUNTRY
Baykonyr	Launch	USSR
Canaveral	Launch	USA
Canberra	Tracking	Australia
Evpatorya	Tracking	USSR
Goldstone	Tracking	USA
Hamaguir	Launch	Algeria, Africa
Houston	Mission Control	USA
Hsüanch'eng	Launch	China
Johannesburg	Tracking	Union of S. Africa
Jodrell	Tracking	United Kingdom
Kagoshima	Launch	Japan
Kaliningrad	Mission Control	USSR
Kourou	Launch	French Guiana, S. Am. (France)
Madrid	Tracking	Spain
Tsukuba	Mission Control	Japan
Volgograd	Launch	USSR
Wallops	Launch	USA
Woomera	Launch	Australia

M 250K 48/226 CM: Abbreviation for Mars, 1:250,000 series; center of sheet, 48° N latitude, 226° longitude; controlled mosaic, CM.

SPACECRAFT LOCATION

The spacecraft location shown on the map (47.968° N, 225.71 W) was derived by Doppler tracking of spacecraft radio signals (Michael and others, 1976). The approximate precision of the location is ± .08 deg. latitude and ± .22 deg. longitude. The location has not yet been identified unambiguously by comparision of pictures taken from orbit with those taken by the lander.

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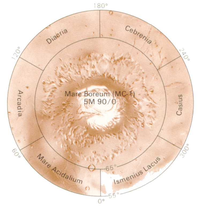
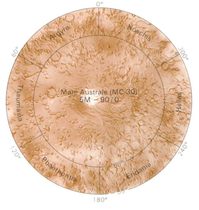
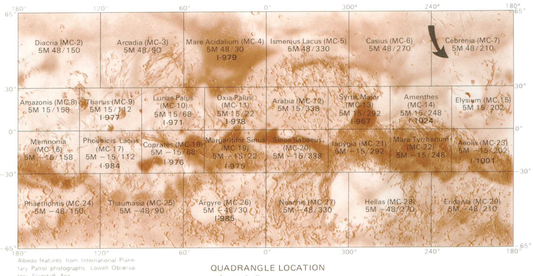
Interior—Geological Survey, Reston, Va.—1977—G77056

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

SCALE 1:250,000
TRANSVERSE MERCATOR PROJECTION
5 0 KILOMETERS 5 10 15 20 25 30







Albedo features from International Planetary Patrol photographs, Lowell Observatory, Flagstaff, Ariz.

QUADRANGLE LOCATION
Arrow indicates map area
Number preceded by I refers to published topographic map

MAP OF CEBRENIA QUADRANGLE SHOWING
LOCATION OF VIKING 2 LANDING SITE

INDEX TO VIKING 2 PICTURES
USED IN THE MOSAIC

CONTROLLED MOSAIC OF THE CANBERRA REGION OF MARS
(VIKING 2 LANDING SITE)
M 250 K 48/226 CM
1977

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