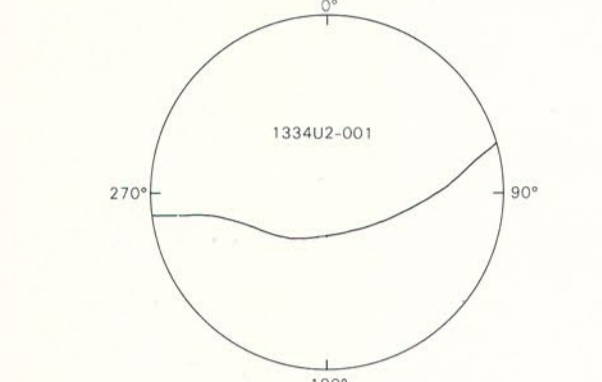


**CONTROLLED PHOTOMOSAIC OF UMBRIEL**  
Uu 10M-90/0 CM

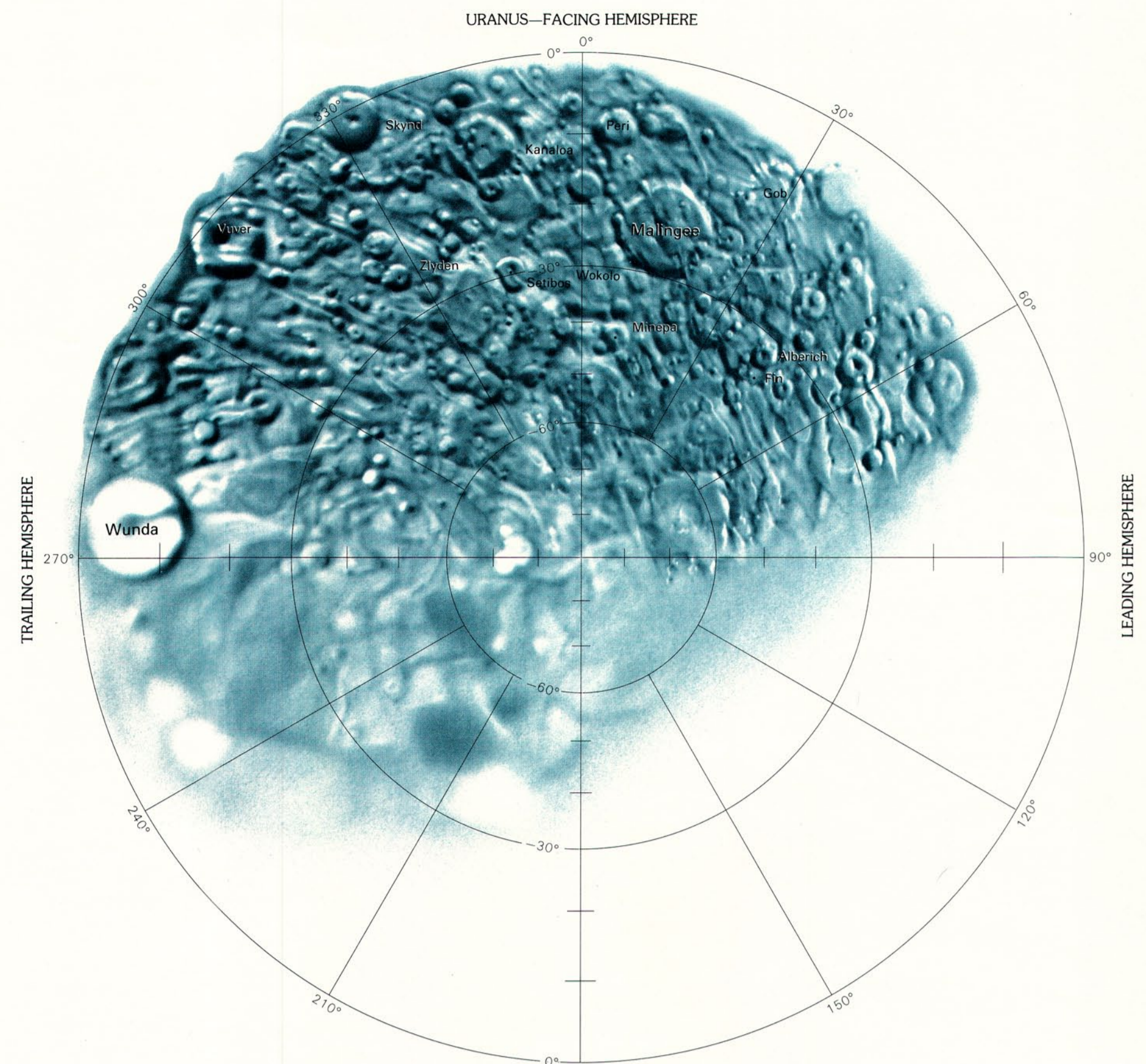
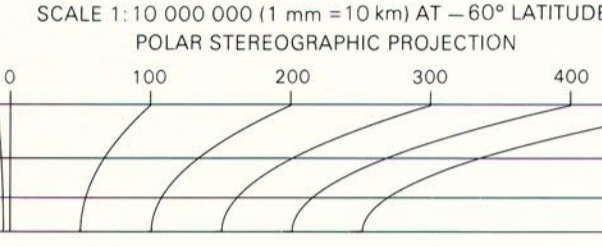
**NOTES ON BASE**  
These maps were compiled from Voyager 2 images of Umbriel, Titania, and Oberon. The pictorial maps are based on a preliminary photomosaic compiled prior to the establishment of control. Polar Stereographic projections used for these maps are based on spheres with diameters of 172 km (Umbriel), 1580 km (Titania), and 1524 km (Oberon). Average position error with respect to control (Davies and others, 1987) is less than 15 km (Umbriel), 11 km (Titania), and 18 km (Oberon). All landforms are shown as if illuminated from the south using portrajal and interpretation techniques described by Inge (1972) and Inge and Bridges (1976). Surface markings are also shown. Variations in image resolution precluded map portrajal at uniform levels of detail. Image details for the maps of Umbriel and Titania were copied manually, grid cell by cell, from corresponding cells of scaled grids superposed over orthographic pictures of each satellite. Positions of features for the map of Oberon were taken from the preliminary photomosaic. Airbrush representation was made by Jay L. Inge (Umbriel and Oberon) and Patricia M. Bridges (Titania).

**NOMENCLATURE**  
All names shown on the reduced base mosaic are approved by the International Astronomical Union. Abbreviation for Uranus, Umbriel satellite, 1 and 0 are used for Titania and Oberon); 1:10,000,000 series; center of map lat 90° S, long 0°; controlled photomosaic (CM), or shaded relief with albedo markings (A), nomenclature (N).

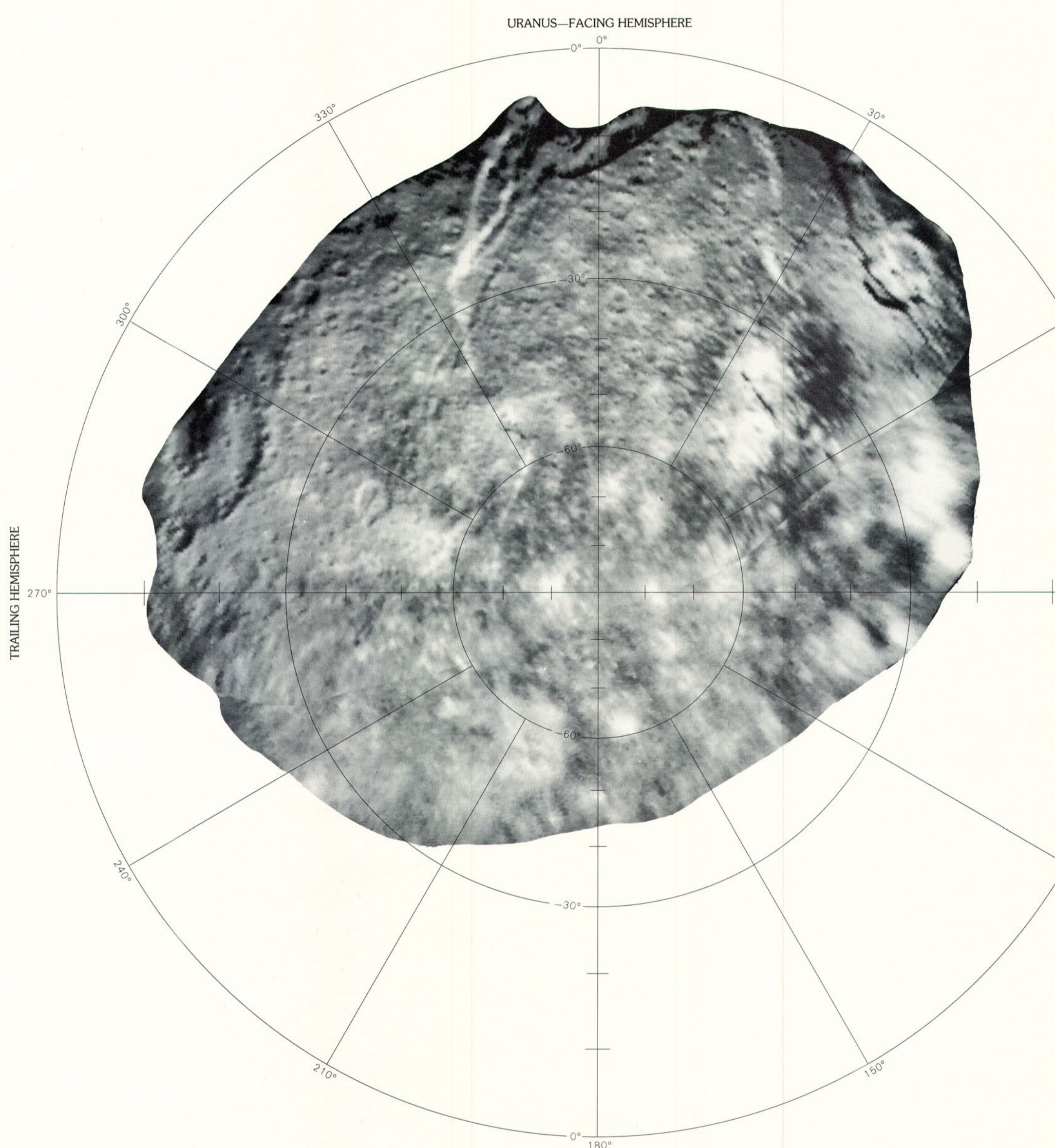
**REFERENCES**  
Davies, M.E., Colvin, T.R., Katayama, F.Y., and Thomas, P.C., 1987. The control networks of the satellites of Uranus. *J. Geophys. Res.*, v. 92, no. 1, p. 137-147.  
Inge, J.L., 1972. Principles of lunar illustration. *Aeronautical Chart and Information Center Reference Publication RP-72-1*, 60 p.  
Inge, J.L., and Bridges, P.M., 1976. Applied photointerpretation for airbrush cartography. *Photogrammetric Engineering and Remote Sensing*, v. 42, no. 6, p. 749-760.



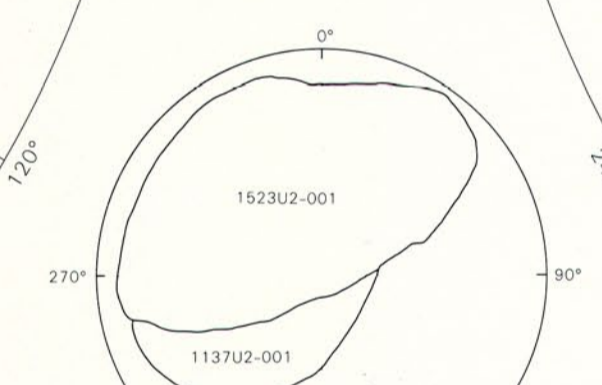
**INDEX OF VOYAGER 2 PICTURES**  
The mosaic was made with the Voyager 2 pictures outlined above. Copies of various enhancements of these pictures are available from National Space Science Data Center, Code 601, Goddard Space Flight Center, Greenbelt, MD 20771.



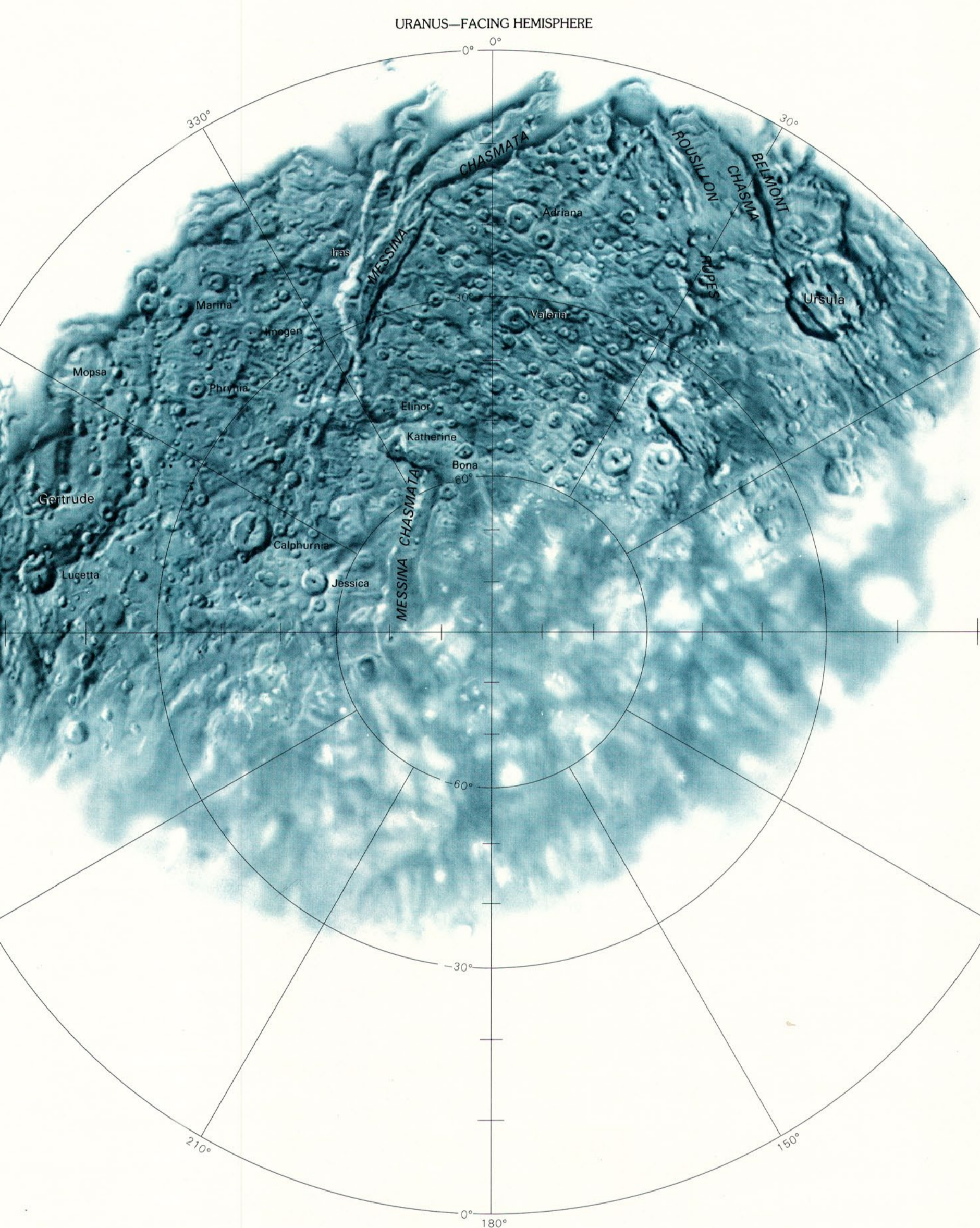
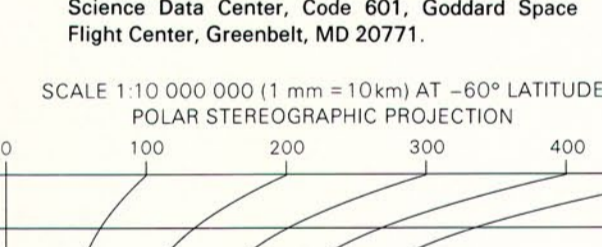
**PICTORIAL MAP OF UMBRIEL**  
Uu 10M-90/0 AN



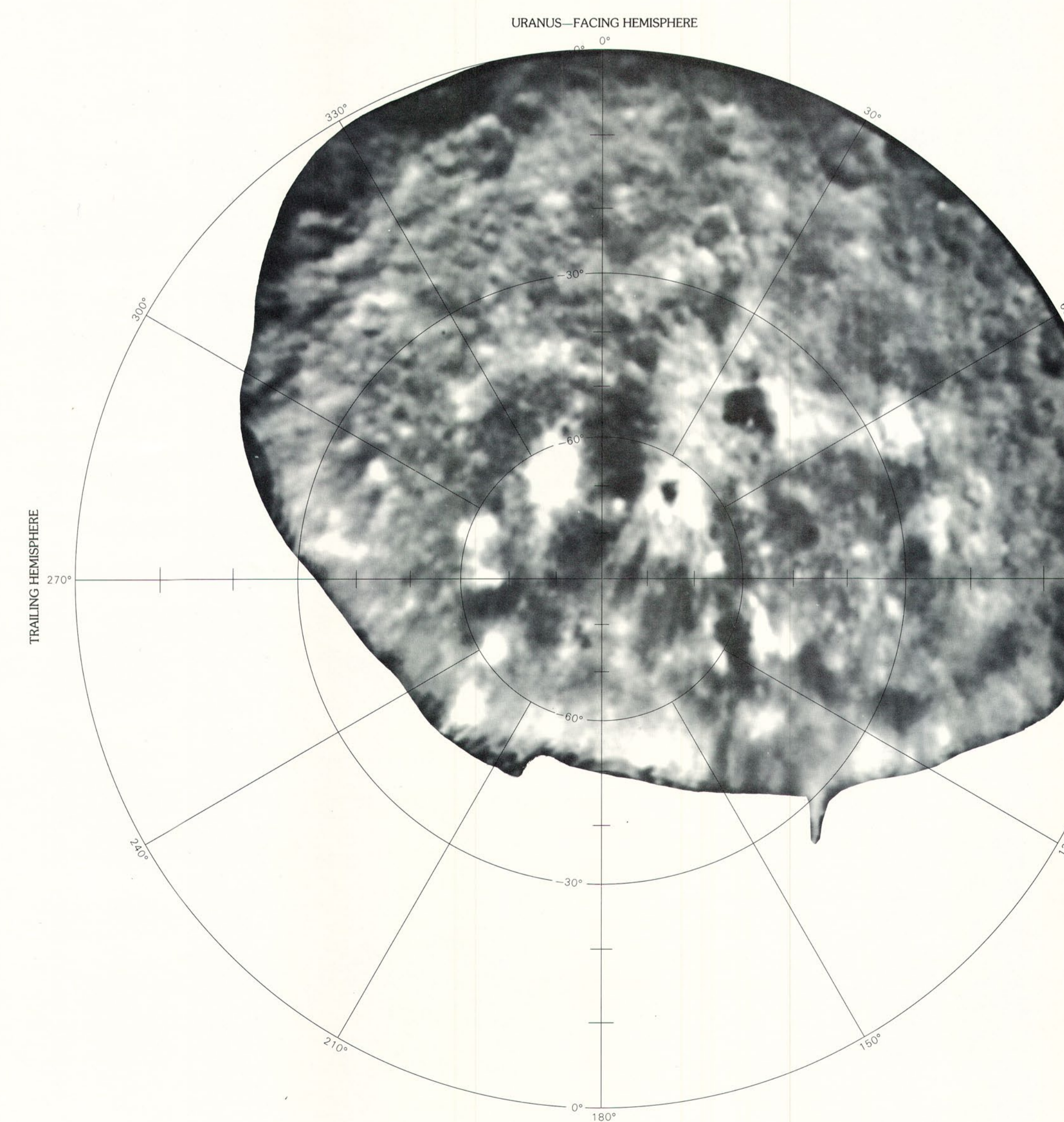
**CONTROLLED PHOTOMOSAIC OF TITANIA**  
Ut 10M-90/0 CM



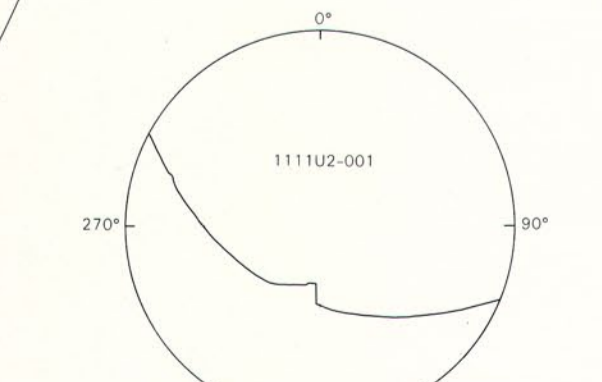
**INDEX OF VOYAGER 2 PICTURES**  
The mosaic was made with the Voyager 2 pictures outlined above. Copies of various enhancements of these pictures are available from National Space Science Data Center, Code 601, Goddard Space Flight Center, Greenbelt, MD 20771.



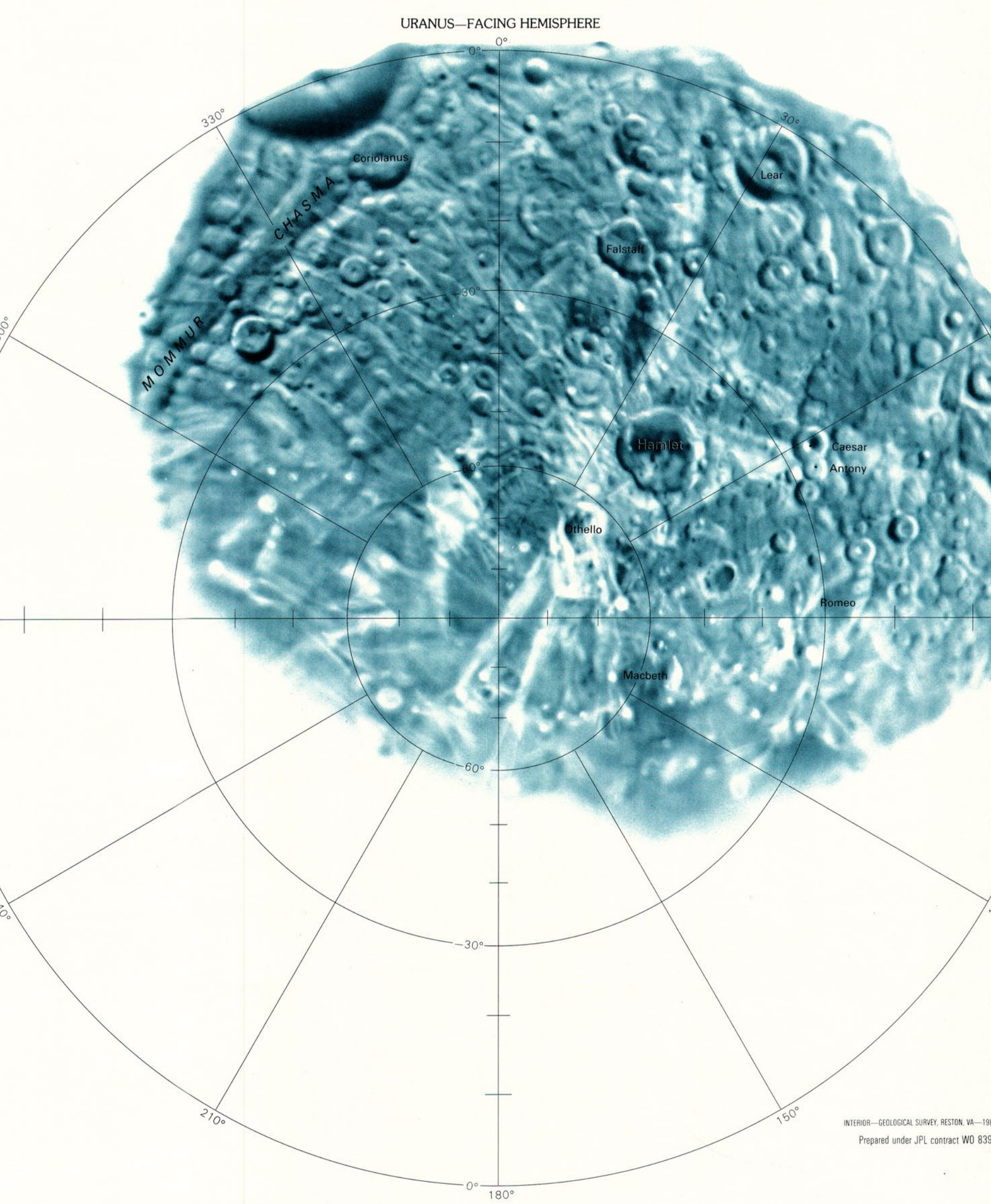
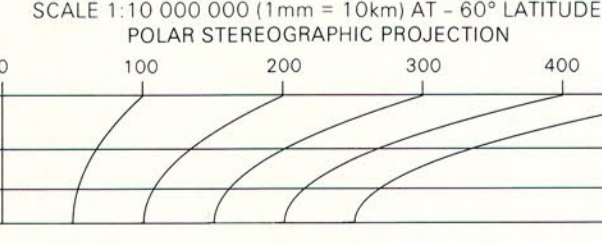
**PICTORIAL MAP OF TITANIA**  
Ut 10M-90/0 AN



**CONTROLLED PHOTOMOSAIC OF OBERON**  
Uo 10M-90/0 CM



**INDEX OF VOYAGER 2 PICTURES**  
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**PICTORIAL MAP OF OBERON**  
Uo 10M-90/0 AN

**NOTE TO USERS**  
Users noting errors or omissions are urged to indicate them on the map and to forward it to U.S. Geological Survey, Building 4, Room 454, 2255 North Gemini Drive, Flagstaff, Arizona 86001. A replacement copy will be returned.