



PRODUCED BY THE U. S. GEOLOGICAL SURVEY  
Base map prepared by Defense Mapping Agency by photogrammetric methods. Field checked 1955. Revised by the U. S. Geological Survey from aerial photographs taken 1979 and other source data. Revised information not field checked. Map dated 1981.  
Selected hydrographic data from NOS charts. This information is not intended for navigational purposes.  
Transverse Mercator Projection. 10,000-meter Universal Transverse Mercator grid, zone 16. 100,000-foot grid ticks based on Michigan coordinate system, central and north zones. 1927 North American Datum. To place on the predicted North American Datum 1983, move the projection lines 3 meters north and 2 meters east.  
Location of geodetic control established by government agencies is shown on corresponding 1:250,000-scale Geodetic Control Diagram.  
There may be private inholdings within the boundaries of the National or State reservations shown on this map.

**LEGEND**  
Figures in red denote approximate distances in miles between stars.

**POPULATED PLACES**  
Over 500,000  
100,000 to 500,000  
25,000 to 100,000  
5,000 to 25,000  
1,000 to 5,000  
Less than 1,000  
Standard gauge  
Narrow gauge  
Single track  
Double or Multiple track  
Railroad  
Boundary  
International  
State  
County  
Municipality  
Park or reservation  
Mine  
Spot elevation in feet

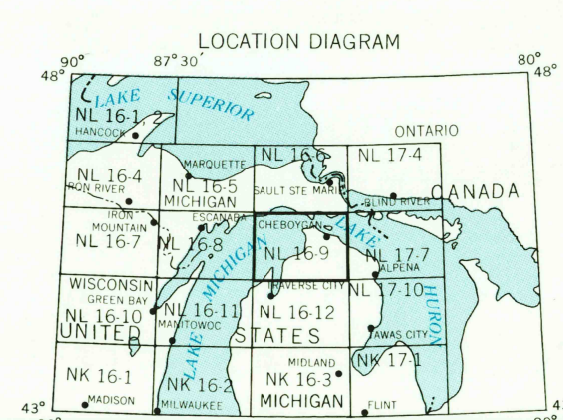
**ROADS**  
Primary, all-weather, hard surface  
Secondary, all-weather, hard surface  
Light-duty, all-weather, hard or improved surface  
Fair or dry weather, unimproved surface  
Trail  
Interchange  
Bypass  
Ferry  
Landing area  
Seaplane anchorage  
Orchard  
Power line  
Woods brushwood  
Marsh or swamp

**Other symbols**  
Landmark: School, Church, Other  
Depth curve in feet  
Limit of danger, Reef  
Rocks: Awaik, Sunken  
Foresore flat  
Intermittent or dry stream  
Marsh or swamp

Scale 1:250,000  
5 10 15 20 25 30 Statute Miles  
5 10 15 20 25 30 Kilometers  
15 Nautical Miles

CONTOUR INTERVAL 50 FEET  
WITH SUPPLEMENTARY CONTOURS AT 25 FOOT INTERVALS

1981 MAGNETIC DECLINATION FROM TRUE NORTH VARIES FROM 34° 60' MILS WESTERLY FOR THE CENTER OF THE WEST EDGE TO 6° 1' 00' MILS WESTERLY FOR THE CENTER OF THE EAST EDGE  
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092



SECTIONIZED TOWNSHIP											
6	5	4	3	2	1						
7	8	9	10	11	12						
13	14	15	16	17	18						
19	20	21	22	23	24						
25	26	27	28	29	30						
31	32	33	34	35	36						

**GRID ZONE DESIGNATION**  
18T  
100,000 M. SQUARE IDENTIFICATION  
SAMPLE POINT: WOLVERINE

1. Read letters identifying 100,000 meter square in which the point lies.  
2. Locate first VERTICAL grid line to LEFT of point and read LARGE figure labeling the line either in the top or bottom margin, or on the line itself.  
3. Estimate tenths from grid line to point.  
4. Locate first HORIZONTAL grid line BELOW point and read LARGE figure labeling the line either in the left or right margin, or on the line itself.  
5. Estimate tenths from grid line to point.  
6. Combine the letters and figures to form the 100,000 M. Square Identification.  
7. Example: 49Q0000

**TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 1000 METERS**  
SAMPLE REFERENCE: 49Q0000

1. Read letters identifying 100,000 meter square in which the point lies.  
2. Locate first VERTICAL grid line to LEFT of point and read LARGE figure labeling the line either in the top or bottom margin, or on the line itself.  
3. Estimate tenths from grid line to point.  
4. Locate first HORIZONTAL grid line BELOW point and read LARGE figure labeling the line either in the left or right margin, or on the line itself.  
5. Estimate tenths from grid line to point.  
6. Combine the letters and figures to form the 100,000 M. Square Identification.  
7. Example: 49Q0000