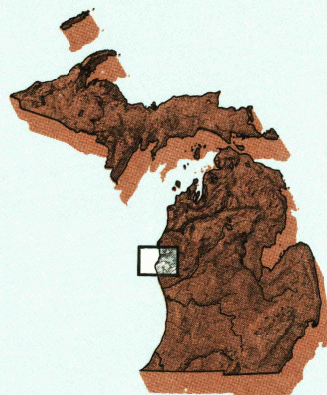


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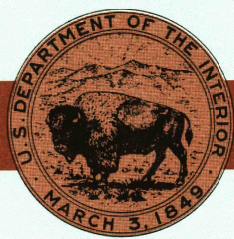
1:100 000-scale metric
topographic map



30 X 60 MINUTE QUADRANGLE
SHOWING

- Contours and elevations in meters
- Highways, roads and other manmade structures
- Water features
- Woodland areas
- Geographic names

8/10/84



GEOLOGICAL SURVEY

1983

Produced by the United States Geological Survey
Compiled from USGS 1:24 000 and 1:62 500-scale topographic maps dated 1958-1983. Planimetry revised from aerial photographs taken 1981 and other source data. Revised information not field checked. Map edited 1983
Projection and 10 000-meter grid, zone 16, Universal Transverse Mercator
25 000-foot grid ticks based on Michigan coordinate system, south and central zones
1927 North American Datum
To place on the predicted North American Datum 1983, move the projection lines 2 meters north and 3 meters east
There may be private inholdings within the boundaries of the National or State reservations shown on this map

CONTOUR INTERVAL 10 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ELEVATIONS SHOWN TO THE NEAREST METER

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

CONVERSION TABLE		DECLINATION DIAGRAM	ADJOINING MAPS		
Meters	Feet		1	2	3
1	3.2808		1	2	3
2	6.5617		4	5	
3	9.8425		6	7	8
4	13.1234				
5	16.4042				
6	19.6850				
7	22.9659				
8	26.2467				
9	29.5276				
10	32.8084				
To convert meters to feet multiply by 3.2808		UTM grid convergence (GN) and 1983 magnetic declination (MN) at center of map. Diagram is approximate.	1	2	3
To convert feet to meters multiply by 0.3048			4	5	6
			7	8	9
			10	11	12
			13	14	15
			16	17	18

Topographic Map Symbols

Primary highway, hard surface.....	
Secondary highway, hard surface.....	
Light duty road, principal street, hard or improved surface.....	
Other road or street; trail.....	
Route marker: Interstate; U.S. State.....	
Railroad: standard gage; narrow gage.....	
Bridge: overpass; underpass.....	
Tunnel: road; railroad.....	
Built up area; locality; elevation.....	
Airport: landing field; landing strip.....	
National boundary.....	
State boundary.....	
County boundary.....	
National or State reservation boundary.....	
Land grant boundary.....	
U.S. public lands survey: range, township, section.....	
Range, township, section line: protracted.....	
Power transmission line: pipeline.....	
Dam; dam with lock.....	
Cemetery; building.....	
Woods; water well; spring.....	
Mine shaft; salt or cave; mine, quarry; gravel pit.....	
Campground; picnic area; U.S. location monument.....	
Ruins; cliff dwelling.....	
Distorted surface: strip mine; lava; sand.....	
Contours: index; intermediate; supplementary.....	
Barometric contours: index; intermediate.....	
Stream, lake; perennial; intermittent.....	
Rapids, large and small; falls, large and small.....	
Area to be submerged; marsh, swamp.....	
Land subject to controlled inundation; woodland.....	
Scrub; mangrove.....	
Orchard; vineyard.....	

A pamphlet describing topographic maps is available on request

RETURN TO:
USGS AND HISTORICAL MAP ARCHIVES



LUDINGTON, MICHIGAN

30 X 60 MINUTE SERIES (TOPOGRAPHIC)

LUDINGTON, MICHIGAN

43086-E1-TM-100

1983