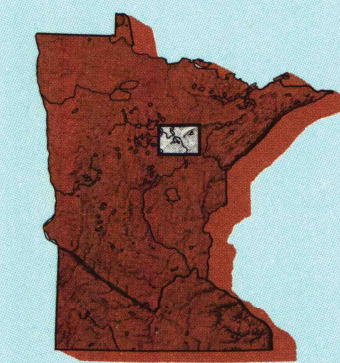


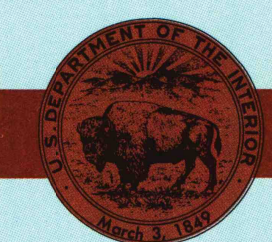
30 X 60 MINUTE SERIES (TOPOGRAPHIC)

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



GEOLOGICAL SURVEY

1992

Produced by the United States Geological Survey

Compiled from USGS 1:24 000-scale topographic maps dated 1952-1976. Planimetry revised from aerial photographs taken 1987 and other source data. Revised information not field checked. Map edited 1991. Projection and 10 000-meter grid, zone 15

Projection and 10 000-meter grid, zone 15
Universal Transverse Mercator

25 000-foot grid ticks based on Minnesota coordinate system, north and central zones

1927 North American Datum
To place on the predicted North American Datum 1983, use

To place on the predicted North American Datum 1983, move the projection lines 7 meters north and 17 meters east

There may be private inholdings within the boundaries of the National or State reservations shown on this map.

the National or State reservations shown on this map

CONTOUR INTERVAL 20 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ELEVATIONS SHOWN TO THE NEAREST METER

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

CONVERSION TABLE

Meters	Feet
1	3.2808
2	6.5617
3	9.8425
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

To convert feet to meters multiply by 0.3048

DECLINATION DIAGRAM

UTM grid convergence (GN) and 1992 magnetic declination (MN) at center of map
Diagram is approximate

ADJOINING MAPS

1	2
6	7

- 1 Blackduck
- 2 Bigfork
- 3 Vermilion La
- 4 Cass Lake
- 5 Hibbing
- 6 Pine River
- 7 Aitkin
- 8 Duluth

FOR SALE BY U. S. GEOLOGICAL SURVEY
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22091

U.S. Regional
Depository Copy
DO NOT DISCARD

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	
Road, township; section line; protracted	
Power transmission line; pipeline	
Can; dam with lock	
Cemetery; building	
Windmill; water wheel; spring	
Mine shaft; adit or cave; mine; gravel pit	
Campground; picnic area; U.S. location monument	
Ruins; cliff dwelling	
Disturbed surface: strip mine, lava, and	
Contour interval: intermediate, supplementary	
Stathemetic contours: index; intermediate	
Swamp, 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

AUG 30 1993

SET

BOO 6-9/2